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FARKLI ZEMİN SINIFLARI VE FARKLI PERDE TİPLERİNE GÖRE YÜKSEK YAPI GÜÇLENDİRİLMESİ VE BUNLARIN KARŞILAŞTIRILMALI ANALİZİ

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DOKÜMANTASYON MERKEZİ

İnşaat Mühendisi İnan ÇETİNKAYA

FBE İnşaat Mühendisliği Anabilim Dalı Mekanik Programında Hazırlanan

YÜKSEK LİSANS TEZİ

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İÇİNDEKİLER

SİMGE LİSTESİ

A_c	Eleman Kesit Alanı
A_s	Kolonlarda Toplam Boyuna donatı alanı ve kirişlerde açıklık ve ort. mesnet çekme donatılarının toplamı
$A_{s,g}$	Gerekli donatı alanı
b	Kolon Kesit Genişliği
d	Etkin Kesit Yüksekliğidir
d_i	Binanın i 'inci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yer değiştirme
d_{i-1}	Binanın i-1'inci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yer değiştirme
Δ_i	Binanın i 'inci katında göreli kat ötelemesi
$(\Delta_i)_{ort}$	Binanın i 'inci katındaki ortalama göreli kat ötelemesi
$(\Delta_i)_{max}$	Binanın i 'inci katında maksimum göreli kat ötelemesi
f_{ck}	Beton Karakteristik Basınç Dayanımı
f_{yk}	Çelik Karakteristik Akma Dayanımı
h_i	Binanın i 'inci katının kat yüksekliği
k	Rijitlik
m	Kütle
N_d	Eksenel Kuvvet
$N_{d,max}$	Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
$N_{d,x/y}$	x/y yönünde en büyük momente ($M_{d,x/y}$) sahip kombinasyonun eksenel yükü
η_{bi}	i 'inci katta tanımlanan burulma düzensizliği kat sayısı
η_{ci}	i 'inci katta tanımlanan Dayanım Düzensizliği Katsayısı
η_{ki}	i 'inci katta tanımlanan Rijitlik Düzensizliği Katsayısı
r_m	Mevcut donatı oranı
R	Yapı Davranış Katsayısı
T	Bina doğal titreşim periyodu
δ_x	Deplasman
θ_i	i 'inci katta tanımlanan İkinci Mertebe Gösterge Değeri

KISALTMA LİSTESİ

ABYYHY	Afet Bölgelerinde yapılacak Yapılar Hakkında Yönetmelik
A.Ş.	Anonim Şirketi
P1Z1	P1 tipi Z1 Zemin Sınıfı
P1Z2	P1 tipi Z2 Zemin Sınıfı
P2Z1	P2 tipi Z1 Zemin Sınıfı
P2Z2	P2 tipi Z2 Zemin Sınıfı
TS500	Türk Standartları 500

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ÇİZELGE LİSTESİ

ÖNSÖZ

Bu yüksek lisans bitirme tezinde farklı iki tip zemin sınıfı ve farklı iki tip perde için yüksek yapı güçlendirilmesi yapılmış ve sonuçlar karşılaştırılıp en uygun yönteme karar verilmiştir. Mevcut Proje ve Güçlendirme Projelerinde; Periyotların Karşılaştırılması, Göreli Kat Ötelemelerinin Karşılaştırılması, Düzensizliklerin Karşılaştırılması, Kolon ve Perde Kapasitelerinin Karşılaştırılması, Metrajların Karşılaştırılması yapılmıştır.

Yapı taşıyıcı sistemi ve temeli 1997 Afet Bölgelerinde Yapılacak Yapılar Hakkında Yönetmeliğe göre incelenmiş kusurları tespit edilmiştir. Bu kusurların ortadan kaldırılması ve yapının mevcut yönetmelik hükümlerine göre güçlendirme yöntemiyle yapıyı bugünkü güvenlik mertebesinin üzerine çıkararak, şu anda taşıdığı yükler veya olası deprem yükleri altında oluşabilecek arızaları en aza indirmek, bu arızaların lokal sınırlarda kalmasını sağlamak ve mevcut yönetmelik hükümlerinin öngördüğü performansa yaklaştırılmaya çalışılmıştır.

Ayrıca Betonarme Yapıların Onarım ve Güçlendirilmesinde genel ilkelere değinilmiş, güçlendirme yöntemi olarak perde ilavesi yöntemi seçilmiştir. Gerekli elemanlarda perde takviyesinin yanı sıra mantolama yöntemine de gidilmiştir.

Bu projenin hazırlanmasında yardımcı olan danışmanım Sayın Prof. Sinan ÇAĞDAŞ 'a teşekkürü bir borç bilirim. Bu tezin yapım aşamasında bilgilerinden ve tecrübelerinden faydalandığım İnş. Müh. Gülsun PARLAR, İnş. Müh Niyazi PARLAR ve Sayın Hocam Prof. Zekeriya POLAT 'a ayrıca teşekkürlerimi sunarım.

ÖZET

1975 yönetmeliğine göre yapılmış bir yüksek yapı projesinin incelenmesiyle proje bazındaki hatalar tespit edilmiştir.98 yönetmeliğine göre muhtemel yetersizlikler göstereceği aşikar görülmüş ve yapının mevcut yönetmelik ve standartlar dahilinde projesi tekrar girilip analiz edilmiştir. Yapıya ait projede zaten bu bitirme tezinde kullanılan paket programın o dönemki sürümüne aittir.

Analiz sonucunda görülen yetersizliklerin yok edilip yapıyı mevcut yönetmeliğinde öngördüğü bugünkü güvenlik mertebesinin üzerine çıkarabilecek, olası hataları lokal sınırlarda tutabilecek bir takviye yöntemi olan perde yerleşimine karar verilmiştir.

Yapı, 2 farklı zemin sınıfı için (Z1 ve Z2) ve farklı 2 tip perde yerleşimi yapılarak mevcut yapı çözümüyle 5 kez analiz edilmiştir. Perde takviyelerinin yanı sıra yapıda mantolama yöntemine de gidilmek suretiyle yapıda olası deprem yüklerinin en az %70 'lik kısmının perdelerle taşınacağı tespit edilmiştir.

Elde edilen analiz sonuçlarına göre Z1 ve Z2 zemin sınıfları için uygun perde yerleşiminin hangisi olabileceği; Periyotların Karşılaştırılması, Göreli Kat Ötelemelerinin Karşılaştırılması, Düzensizliklerin Karşılaştırılması, Kolon ve Perde Kapasitelerinin Karşılaştırılması, Metrajların Karşılaştırılmasıyla belirlenmiştir.

Bu yapıda ,Burulma rijitliği açısından daha etkin olacak olan L tipi perde yerleşiminin aslında I tipine göre elverişsiz olduğu görülmüştür.

ABSTRACT

By examining the existing project of a multistory high structure according to the regulation of 1975, the defaults of project were found. It was clearly seen that according to the regulation of 1998, probable insufficiencies would be shown by using existing structure regulation and standarts with reanalysing. Anyway, the project of structure is belonging to that turn version of packet programme used in this post graduated theisis.

It was decided to use the shearwall settlement, a reinforcement method, that could hold up the probabale errors in local limits, that could exterminate the insufficincies due to results of analysis and that could increase the structure above nowadays security degree according to the existing regulation.

The structure was analysed for 5 times for 2 different soil classes (Z1 and Z2) and 2 different shearwall settlement by using the existing regulation. It was found that, beside the shearwall reinforcement method, by using using the method of covering of column, the earthquake loads were carried about at least 70 % by the shearwalls.

The answer of question which one of the shearwall settlement can be used for Z1 and Z2 soil classes; Comparation of Periods, Comparation of Relative Floor Displacements, Comparation of Disorder, Comparation of Shearwall and Column Capacities, Comparation of Costs were determined according to the results of analysis.

In this structure, it was seen that the L type shearwall settlement which was more effective in order to bending stiffness was clearly unsuitable according to I type.

1. GİRİŞ

Bu bitirme tezi içinde 1975 Afet Bölgelerinde Yapılacak Yapılar Hakkında Yönetmelik kullanılarak hazılanmış bir yüksek yapı projesi ele alınmıştır. Bu yapının, farklı zemin sınıfları için iki tip perde yerleştirimi yaparak güçlendirme projesi yapılmıştır. Yapıya ait hazırlanan güçlendirme projeleri, mevcut durumu ve zemin cinsleri için MEVCUT YAPI, P1Z1, P1Z2, P2Z1, P2Z2 başlıkları altında isimlendirilmiştir.

MEVCUT : Mevcut yapı analizi

P1Z1 : Birinci tip perde yerleşiminin Z1 zemin sınıfına göre analizi

P1Z2 : Birinci tip perde yerleşiminin Z2 zemin sınıfına göre analizi

P2Z1 : İkinci tip perde yerleşiminin Z1 zemin sınıfına göre analizi

P2Z2 : İkinci tip perde yerleşiminin Z2 zemin sınıfına göre analizi

P1 : I Tipi Perde

P2 : L Tipi Perde

Z1 : Yerel Zemin Sınıfı (T_A=0.10 s - T_B=0.30 s).

Z2 : Yerel Zemin Sınıfı (T_A=0.15 s - T_B=0.40 s).

Bitirme tezim içinde yapının rasyonel olduğu kabul edilmiştir. Bu bitirme tezi sadece üst yapıya ait güçlendirmeyi ve üst yapının temele bağlantısını içermekte olup yapıya ait temelde takviye yöntemine gidilmemiştir. Fakat yapının gerekli parametreler ele alınarak temeli yinede incelenmiş. Kabul edilen zemin emniyet gerilmesinin gerekli koşulları sağladığı görülmüştür. Yapının çözümü sırasında kullanılan parametreler yapı statik çıktıları olan Ek 'te gösterilmiştir.

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2. YAPI HAKKINDA

Gökyüzü Blokları Koşuyolu 'nda Soyak Holding A.Ş. ye ait 1985 yılında inşasına başlanmış; 2 si bodrum, 1 zemin ve 11 normal kattan oluşan 14 katlı bir yapıdır.Soyak Holding A.Ş. tarafından Üsküdar Belediyesinden kat karşılığı alınmış arsa üzerine 3 adet blok olarak inşa edilmiştir. Müşavirliği uygulayıcı firmayla aynıdır.

Bu bitirme tezinde yapı rölöve çalışması yapılmamış fakat yapı yerinde incelenmeye çalışılmıştır. Taşıyıcı sistemde dıştan görünen bir hasar tespit edilememiştir.

2.1 Yapı Zemin Durumu

Yapıya ait zemin raporları elde edilememiştir.Bu durumda tahmini veya yapı çevresindeki diğer yapılara ait zemin raporları proje aşamasında uygulanabilir. Fakat bu tezin içeriği açısından mevcut zemin koşulu dikkate alınmayacaktır.

2.2 Yapı Malzeme Durumu

Yapıya ait proje üzerindeki verilen beton ve donatıya ait malzemeler olduğu gibi alınacaktır. Ancak tezin içeriği açısından yapıya ait karot alımı ve donatı incelenmesi yapılamadığından beton ve çelik güvenlik faktörleri azaltılarak dikkate alınacaktır Zira yapının güçlendirme projesi normlarına sokmak mümkün olamayacak, yapı sadece proje bazında incelenmiş olabilecektir. Yapıya yapılacak ilave perde ve mantolar için gerçek güvenlik faktörleri alınacaktır. Yapının malzemesinin bizim için oldukça önemli olduğunu vurgulamak gerekir. Malzeme güvenlik faktörlerimiz eski elemanlar için şu şekilde alınmıştır;(TS 500)

Beton Güvenlik Faktörü : 1.3

Çelik Güvenlik Faktörü : 1.1

2.3 Projenin İncelenmesi

Yapının projesinin mevcut paket programlardan birisi ile çözüldüğü tespit edilmiştir.Bu data girimi sırasında alınmış yük durumlarının incelenmesi hesap raporlarının bulunamaması nedeniyle gerçekleştirilememiştir. 7 yıllık süreç zarfında program içindeki değişikliklerin dahi çözümlerde farklılık yaratabileceği tespit edilmiştir.

Eski yönetmeliğin dahi izin vermediği hataların proje üzerinde uygulandığı görülmüştür. Hiçbir mimari koşul ilk 2 katta 50x90 'lık bir kolonun daha üst katlarda 30x130 olarak devam

etmesini gerektirmemektedir.Biz projenin incelenmesi için yapının da rasyonel olduğunu kabul ederek bu tip hataları olması gereken duruma getirip takviye projesi çözümü içine almadık. Bu kolonlara mantolama yapılmak suretiyle çözüm aşılabilecektir. Ancak bu durumda kolon rijitliğinin dolayısıyla iç kuvvet dağılımının değişeceği unutulmamalıdır.. Kolon mantosunun, kiriş-kolon birleşim bölgesini sarması ve donatıdaki çekme ve basınç kuvvetlerinin temele aktarılması için donatının temel bloğuna kenetlenmesi önemlidir. (Structural Analysis For Computer Aided Design Version 9.0 Versiyon Notları) Biz yapının genel olarak kapasitesinin artırılması ve deplasmanın belirli normlar içinde kalmasını baz alarak bir güçlendirme projesi gerçekleştirmekteyiz.

Yapıda konsolların büyük tutulduğu ve konsollardaki asmolen döşemede (nervürlü) yük aktarım yönünün yanlış yapıldığı dikkat çekmektedir.

Projede bazı yerlerde döşemelerden kirişlere veya perdelere yük aktarımı için gerekli detaylarda hatalar olduğu bununda muhtemelen özensiz bir proje çıkarıldığından kaynaklandığını tahmin etmekteyim.Zira nervürlü döşemelerden yük aktarımının nervürden yapılması gerekirken 7 cm lik döşeme bölümünden yapılmış şekilde gösterilmesi projede belirlenen hatalardan birisidir.

Yine yük aktarımında özellikle asansör merdiven çekirdeği etrafindaki kirişlerin yük aktarımı açısından yanlış olduğu tespit edilmiştir.

Yapı projesinde en üst kata ait kalıp planı proje içine dahil edilmemiştir.Bazı yerlerde 2 m 'ye varan konsollara yapının yerinde incelenmesi sırasında en az 1 m'lik saçaklarında eklendiği görülmüştür ,bu durumda 3 m 'lik konsollar mevcut olacaktır. Son kat kalıp planının olmaması nedeniyle en son kata ait kalıp planı normal kattakilerle aynı alınmış fakat yırtık kısımlar kapatılmıştır.

Asansör çekirdeğindeki zımbalamanın büyük olacağı tahmin edilmekte ve bu tip bir çekirdeğin burulma rijitliği açısından verimli olmasına rağmen zımbalamasından dolayı tercih edilmemesi gerektiği düşünülmüştür.

Yapıda ötelenmelere karşı eleman yerleştirimi doğru görünmesine rağmen burulma rijitliğinin sadece asansör-merdiven çekirdeği ile aşılmaya çalışılması yüksek bir yapı açısından verimli görünmemektedir.

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3. UYGULANABİLECEK YÖNTEM SEÇİMİ

Kolonların mantolanması ve/veya perde ilavesi ile taşıyıcı sistem güçlendirmesi esas alınmıştır. Taşıyıcı sistemin toplam deprem güvenliği, kolonların mantolanması ile oluşturulabileceği gibi, güçlendirme perdelerinin öngörülmesi ile de sağlanabilir. Ancak yüksek yapılarda ve asmolen döşemeli yapılarda güçlendirme perdesi konulmadan yönetmeliğin yerdeğiştirme için koyduğu şartların sağlanması oldukça zordur.(Polat Z.) Perde ile güçlendirmeye karar verildiğinde, perde yerlerinin seçiminde perdelerin banyo hacimlerine ve tesisat bağlantılarına bitişik olmamasına özen gösterilmelidir. Ben yapıda güçlendirme tekniği olarak perdelerin yerleştirimini tercih ettim. İki tip perde yerleştirimi yapılmıştır. Bu iki tipte iki farklı zemin sınıfı için çözülmüştür. Aynı zemin cinslerinde daha geniş bir spektrumda olaya bakılabilmesi için bir I tipi ve birde L tipi perde seçilmiştir.Bundan amaç sadece kapasiteleri ve deplasmanları incelemekten öte I tipi perdelerde ötelenmelere karşı alınan tedbirin L tipinde de aynı kapasiteyi sağladığını,bundan ziyade burulma rijitliği açısından da L tipinin I tipine karşı dönmede daha etkili olduğunu göstermektir.

Güçlendirme için bina dışına veya içine eksenel veya dışmerkez perde yerleştirilerek sistem çözülür. Güçlendirme perdeleri her iki doğrultuda en az ikişer tane olmalı ve bina yüksekliğince devam etmelidir.Bu perdelerin mümkün olduğunca binanın kenarlarında ve simetrik olması tercih edilmelidir.

Perdelerin dışında eğer gerekecek olursa bazı kolonlara mantolama yapılabilecektir.Genellikle katta kolon mantolamasına ihtiyaç varsa, bu temele kadar inmeli ve manto donatısı temele filizlerle bağlanmalıdır.Kolonun mantolaması ile değişen rijitlik, daha büyük deprem momentlerinin kolonda dolayısıyla temelde oluşmasına neden olur.Bu durumda temelin incelenmesi gerekebilir.(Celep, Z., Polat, Z., Karadoğan, F., Altay, G., Özgen, K., Öztorun, N.K.)

Kesit kontrollerinde eğilme kapasiteleri kadar kesme kapasitelerinin de önemli olduğunu bu proje sırasında dikkate alacağız.

Taşıyıcı sistemin durumuna göre süneklikle ilgili konular (etriye sıklaştırması,beton kalitesi,donatı düzenindeki özen gibi) ve kapasite tasarımı ile ilgili konular (kuvvetli kolon tasarımı,kiriş-kolon birleşim bölgesi,kesme kuvveti hesabının mevcut eğilme donatısı kapasitesine göre yapılması gibi); taşıyıcı sitem davranış katsayısı, çerçeve türünde yapılar için R=4 (normal süneklikte yapı) ve R=8 (yüksek süneklikte yapı) arasında bir değer seçilerek gözönüne alınacaktır. (Celep, Z., Kumbasar, N.)

Mevcut yapı, mukavemet koşullarını yerine getirmesi yanında, yanal yerdeğiştirme sınırlandırmalarını da kontrol edilerek güçlendirme kapsamına karar verilebilir. Bu konuda 1998 ABYYHY sınırlandırmaları esas alınmalıdır.

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4. GÜÇLENDİRME PROJESİNİN İLKELERİNİN BELİRLENMESİ

4.1 Taşıyıcı Sistemin Depremden Önceki Durumunun İncelenmesi :

Mevcut taşıyıcı sistemin kusurlarının tespiti için binanın depremden hasar görmemiş durumu TS500 ve 1998 ABYYHY esas alınarak düşey yük ve deprem etkisi altında çözümlenmesi gerekir. Kesit kontrolünde eğer binanın projesi yoksa sınırlı sayıda donatı okuma gözönüne alınmak zorunda kalınılacaktır. Yapılan inceleme ve kesit kontrolü ile tespit edilen hasar sebepleri hakkında yorum yapılması mümkün olacak ve deprem yüklemesi altındaki taşıyıcı sistemin davranışı anlaşılacaktır.

4.2 Güçlendirilmiş Taşıyıcı Sistemin Çözümlenmesi

Hasar belirleme raporu göz önüne alınarak mantolanacak kolonlar tespit edilir. Güçlendirme için bina dışına veya içine, eksenel veya dışmerkez perde yerleştirilerek sistem çözülür. Daha öncede belirttiğim gibi güçlendirme perdeleri her iki doğrultuda ve en az ikişer tane olmak üzere yerleştirilecektir. Perdeler bina boyunca devam edecek, mümkün olduğunca bina kenar akslarında tespit edilecek ve simetrik yerleştirilecektir. Ancak, perde yerleştirimi seçiminde gerekli olacak temel düzeni de gözönünde tutulmalıdır.

Yapılacak çözümlemede mevcut taşıyıcı sistem ile eklenen güçlendirme elemanlarının malzeme özellikleri (elastisite modülü, dayanım gibi) farklılığı göz önüne alınmalıdır. Bu durum mevcut elemanlarla güçlendirme elemanları arasındaki yük paylaşımında etkili olacaktır.

Betonarme veya çelik mevcut ve eklenen eklenen güçlendirme perdelerinin, deprem etkisinden oluşan taban kesme kuvvetinin mevcut yapının durumuna göre en az %70 'lik bir bölümünü karşılaması sağlanacaktır. (Polat, Z)

Güçlendirilecek sistemde mevcut perdeler söz konusu ise, bunların karşılayabileceği kesme kuvvetinin kapasiteleri ile sınırlı kalması unutulmamalıdır. Bu oranın mevcut taşıyıcı sistem kolon ve kirişlerinde ek güçlendirme gerektirmeyecek şekilde belirlenmesi uygun olur. Belirlenecek bu koşul perde sayısı ve boyutlarının belirlenmesinde etkili olacaktır. Genel olarak mevcut sistemin normal süneklikte olduğu kabul edilerek ve güçlendirme elemanlarını yüksek süneklikte projelendirilerek, deprem etkisi hesabında yapı davranış katsayısı R=4 ve deprem bölgesine bağlı olarak A_0 katsayısı dikkate alınmalıdır.

Elde edilen çözüm sonuçları esas alınarak, mevcut taşıyıcı sistemle, güçlendirme sistemi arasındaki kuvvet akışının sağlandığı gösterilmelidir: Perde uç donatılarının katlar arası sürekliliğinin sağlanması, deprem yüklerinin kat kirişlerinden perdelere geçmesi ve kolonlarla perdenin bütünleşmesinin sağlanması gibi. Perde gövde donatısının sürekliliği, kolonu ve kirişi geçen veya delen tek sıra, kolonlarda (minimum ϕ16 / 300 mm) ve kirişlerde (minimum ϕ16 / 400 mm) uygun kenetlenme boyuna sahip (minimum 10ϕ) dikiş donatısı ile sağlanabilir. Dikiş donatıları temelde daha büyük bir kenetlenme boyuna (minimum 20ϕ) sahip olmalıdır. Kenetlenme donatılarının delik çapı ϕ+5 mm olmalıdır. Kolon donatıları hesaba katılarak perde uç donatıları azaltılabilir. Perdede her iki yüzde ve her iki doğrultuda (minimum ϕ10 / 200 mm) gövde donatısı bulunmalıdır.

Güçlendirilmiş yapıda mevcut kolon ve kiriş gibi mevcut taşıyıcı sistem elemanlarının kontrolünde, aşağıda verilen koşulların sağlanmaması durumunda, kolon ve kirişlerin güçlendirilmesi gerekebilir:

A_s (gerekli) $\leq (1.20 \sim 1.50) \times A_s$ (mevcut) (kolon-donatı biliniyorsa)

A_s (gerekli) $\leq (0.012 \sim 0.015) \times A_c$ (mevcut) (kolon-donatı bilinmiyorsa)

A_s (gerekli) $\leq (1.00 \sim 1.25) \times A_s$ (mevcut) (kiriş-donatı biliniyorsa)

A_s (gerekli) $\leq (0.015 \sim 0.020 \times A_c$ (mevcut) (kiriş-donatı bilinmiyorsa)

Burada A_c eleman kesit alanı, A_s kolonlarda toplam boyuna donatı alanı ve kirişlerde açıklık ve ortalama mesnet çekme donatılarının toplamıdır. Deprem yüklerinin önemli bir kısmı güçlendirme perdeleri ile taşındığı için, kolonlar için yapılan betonarme kesit hesabında

$$N_d / (b \times d) \leq 0.6 f_{ck} \qquad (4.1)$$

(b ve d kolon kesit genişliği ve etkin kesit yüksekliğidir.)

gibi minimum bir koşul esas alınarak, güçlendirmeye karar verilebilir. .(Polat, Z)

Mevcut ve/veya güçlendirilmiş bir yapı, mukavemet gereklerini yerine getirse bile, rijitlik gereklerini yerine getirip getirmediğine bakarak da yapının güçlendirilmesine ve güçlendirme miktarına karar verilebilir. Bununla beraber 1997 ABYYH Yönetmeliğinin öngördüğü deplasman kısıtlamalarına itibar edilmesi gerekir.

1997 ABYYH Yönetmelik, yerdeğiştirme sınırlandırmaları Madde 6.10 da şu şekilde tariflenmektedir:

4.3 Göreli kat Ötelenmelerinin Sınırlandırılması

Herhangi bir kolon veya perde için, ardışık iki kat arası yerdeğiştirme farkını ifade eden göreli kat ötelenmesi (Rölatif kat deplasmanları), Δ_i ile elde edilir.

$$\Delta_i = d_i - d_{i-1} \tag{4.2}$$

d_i : Binanın i'nci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yerdeğiştirme

d_{i-1} : Binanın i-1'nci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yerdeğiştirme

Her bir deprem doğrultusu için, binanın herhangi bir i'nci katındaki kolon ve perdelerde, $\Delta_i = d_i - d_{i-1}$ ile hesaplanan rölatif kat ötelenmelerinin kat içindeki en büyük değeri $(\Delta_i)_{max}$, aşağıdaki koşulların elverişsiz olanını sağlayacaktır.

$$(\Delta_i)_{max} / h_i \leq 0.0035 \tag{4.3}$$

$$(\Delta_i)_{max} / h_i \leq 0.02 / R \tag{4.4}$$

Her durumda güçlendirme perdelerine gelen deprem momentlerinin ve mantolanan kolon etkilerinin güvenli bir şekilde temele ve zemine iletildiği gösterilmelidir. Temel hesabında zeminin çekme gerilmeleri taşımadığı unutulmamalıdır. Binada düzgün sürekli temeller veya radye temel mevcutsa, perdeler bu temellere mesnetlendirilebilir. Eğer perde deprem etkilerinin bu temeller tarafından alındığı gösterilebilirse, ilave bir temel güçlendirmesine ihtiyaç yoktur. Diğer durumlarda mevcut temelin güçlendirilmesi veya mevcut üzerine yeni temel yapılması gerekebilir. Her iki durumda da mevcut ve yeni temelin bütünleşmesi için tedbir alınmalıdır. (Ersoy, U.)

5. SONUÇLAR ve KARŞILAŞTIRMALI ANALİZ

Bu bölümde önceki sayfalardaki koşullar göz önüne alınarak analizi yapılmış, projeler ele alınarak karşılaştırma yapılmaktadır. Bu karşılaştırma ;

- Periyotların Karşılaştırılması
- Göreli Kat Ötelemelerinin Karşılaştırılması
- Düzensizliklerin Karşılaştırılması
- Kolon ve Perde Kapasitelerinin Karşılaştırılması
- Metrajların Karşılaştırılması

olarak yapılmıştır. Karşılaştırma aynı zemin sınıfına ait 2 tip perde yerleşimi için mevcut olacaktır. Yetersiz olduğu hesap sonucu görünen MEVCUT yapı için P1Z1-P2Z1 ve P1Z2-P2Z2 karşılaştırmaları söz konusudur.

5.1 Periyotların Karşılaştırılması

Mevcut yapıda 1.mod periyoduna baktığımızda aslında periyodun çok düşük olduğunu dolayısıyla yapının rijitliğinin zaten yüksek olduğunu söyleyebiliriz. Bu durumda öncelikli hedefimizin yapının rijitliğini artırmaktan uzak olacağını söyleyebiliriz. Ama yapıya yeni ilave perde takviyesi ve mantolama ile zaten yapının rijitliği artacaktır. Dolayısıyla periyotlarda küçülecektir. Yerleştirilen 2 tip perde ve zemin durumları için belirtilen periyotlar incelendiğinde L tipi perde ile takviyede yapının rijitliğinin daha fazla arttığını söyleyebiliriz. Z2 için periyotların daha düşük çıkmasınıda ek perde takviyelerinden başka mantolama yönteminede gidilmek zorunluluğu doğmasından dolayı yapının rijitliğinin arttığını görüyoruz. Bu yorumu

$$T = 2\pi\sqrt{\frac{m}{k}} \tag{5.1}$$

bağıntısıyla açıklıyoruz.

Çizelge 5.1 İlk 9 Mod İçin Yapı Periyotları

	Mod	1.mod	2.mod	3.mod	4.mod	5.mod	6.mod	7.mod	8.mod	9.mod
	Yön	Y	b	x	b	y	x	b	y	X
Mevcut	T (s)	1.407	1.315	0.992	0.44	0.351	0.263	0.243	0.161	0.12
P1-Z1	T (s)	1.092	1.044	0.732	0.291	0.269	0.195	0.135	0.117	0.089
P1-Z2	T (s)	1.092	1.044	0.732	0.291	0.269	0.195	0.135	0.117	0.089
P2-Z1	T (s)	0.816	0.798	0.661	0.171	0.168	0.156	0.07	0.067	0.067
P2-Z2	T (s)	0.777	0.75	0.639	0.168	0.164	0.152	0.07	0.066	0.066

5.2 Göreli Kat Ötelemesi Sınırlandırılması

1997 ABYYH Yönetmelik, yerdeğiştirme sınırlandırmaları Madde 6.10 da şu şekilde tariflenmektedir:

Göreli kat Ötelenmelerinin Sınırlandırılması : Herhangi bir kolon veya perde için, ardışık iki kat arası yerdeğiştirme farkını ifade eden göreli kat ötelenmesi (Rölatif kat deplasmanları), Δ_i ile elde edilir.

$$\Delta_i = d_i - d_{i-1} \qquad (5.2)$$

d_i : Binanın i'nci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yerdeğiştirme

d_{i-1} : Binanın i-1'nci katında herhangi bir perde veya kolon uçundaki hesaptan elde edilen yatay yerdeğiştirme

Her bir deprem doğrultusu için, binanın herhangi bir i'nci katındaki kolon ve perdelerde,

$\Delta_i = d_i - d_{i-1}$ ile hesaplanan rölatif kat ötelenmelerinin kat içindeki en büyük değeri $(\Delta_i)_{max}$, aşağıdaki koşulların elverişsiz olanını sağlayacaktır.

$$(\Delta_i)_{max} / h_i \leq 0.0035 \qquad (5.3)$$

h_i : Kat Yüksekliği

$$(\Delta_i)_{max} / h_i \leq 0.02 / R \qquad (5.4)$$

R : Yapı davranış katsayısı

Bu maddeye göre yapıda mevcut ve diğer durumlar için elde edilen kat ötelemeleri ve göreli kat ötelemeleri Ek 1'de görülmektedir.

Mevcut ve diğer durumlar için max(di/hi)=0.0035 ile 0.02/R =0.005 bağıntıları ile yönetmeliğin sınırladığı yerdeğiştirme sınırlandırılması incelenmiştir. Sonuçlarda da görüldüğü üzere kat deplasmanları yönetmeliğin sınırladığı değerlere uymuştur.

5.3 Düzensizliklerin Karşılaştırılması

5.3.1 A1 Burulma Düzensizliği :

Birbirine dik iki deprem doğrultusunun herhangi biri için, herhangi bir katta en büyük göreli kat ötelemesinin o katta aynı doğrultudaki ortalama göreli ötelemeye oranını ifade eden Burulma Düzensizliği Katsayısı η_{bi} 'nin 1.2 'den büyük olması durumu.

5.3.2 A4 Taşıyıcı Eleman Eksenlerinin Paralel Olmaması :

Taşıyıcı sistemin düşey elemanlarının plandaki asal eksenlerinin, gözönüne alınan birbirine dik yatay deprem doğrultularına paralel olmaması durumu.

A1 ve A4 düzensizlikleri yönetmelikte planda düzensizlik durumu olarak belirtilmektedir. Bizim yapımızda bu düzensizliklere rastlanılmamıştır. Plandaki düzensizliklerin dışında Düşey doğrultuda düzensizlik durumu incelendiğinde ;

5.3.3 B1 Komşu Katlar Arası Dayanım Düzensizliği (Zayıf Kat) :

Betonarme binalarda, birbirine dik iki deprem doğrultusunun herhangi birinde, herhangi bir kattaki etkili kesme alanı 'nın, bir üst kattaki etkili kesme alanı'na oranı olarak tanımlanan Dayanım Düzensizliği Katsayısı η_{ci} 'nin 0.80 'den küçük olması durumu.

5.3.4 B2 Komşu Katlar Arası Rijitlik Düzensizliği (Yumuşak Kat) :

Birbirine dik iki deprem doğrultusunun herhangi biri için, herhangi bir i'inci kattaki ortalama göreli kat ötelemesinin bir üst kattaki ortalama kat ötelemesine oranı olarak tanımlanan Rijitlik Düzensizliği Katsayısı η_{ki} 'nin 1.5 'tan fazla olması durumu.

Projemizde yapılan analizler sonucunda düzensizliklerin kontrolünde mevcut yapıda B1 türü düzensizliğe rastlanmış fakat yapılan takviye sonucu bu düzensizlik aşılmıştır.

5.3.5 Kolon ve Perdelerin Kapasitelerinin Karşılaştırılması

Bu güçlendirme projesi yapılırken eğilme kapasiteleri açısından kat bazında bir değerlendirme yapılmıştır. Esas itibariyle kat taşıma kapasiteleri gözönüne alınırken taşıyıcı elemanların

kapasitelerindeki büyük yetersizliklerde Md/Mr 'nin 1,15 oranına kadar kabul edilebilirliği düşüncesiyle perde takviyesinin yanı sıra mantolama gereksinimi ortaya çıkmıştır. Bu oranın 1'in üstünde olduğu elemanların çoğunda Nd/Md hesaplandığında büyük eksantriste görülmüştür. Büyük .eksantiriste kat itibariyle eğilme kapasitelerinde büyük yetersizlik gösteren elemanların mantolanmasıyla aşılmıştır. Mantolanan elemanların da daha önceden bahsettiğimiz perdelerde olduğu gibi bina boyunca her katta sürekli devam ettirilmesi gerektiği unutulmamalıdır. Her güçlendirme projesine ve mevcut projeye ait hesap raporları incelendiğinde mevcut projede görünen kapasite yetersizliklerinin güçlendirme yapılan projelerde aşıldığı kapasitelerin çıkarılmasıyla gösterilmiştir.

Ek 3'te mevcut ve diğer güçlendirme projelerine ait kat kapasiteleri verilmiştir. Buradaki kat kapasiteleri, mevcut perdeler, yeni yapılan perde ve mantolar alınmadan ortaya çıkan kapasite toplamlarıdır. Mevcutta güvenlik faktörleri 1.3 ve 1.1 alınmıştır. Yeni elemanlarda 1.5 ve 1.15 alınmıştır. Mevcut elemanların güçlendirme sonrası kapasitelerin kat bazında karşılaştırılması bir örnekle incelenecek olursa ;

Çizelge 5.3.1 Zemin Sınıfı Ve Perde Tiplerine Göre Kolon Kapasiteleri

KAT	MEVCUT	P1Z1	P2Z1
14	Nmax= 9825.0> Nd,max= 709.8	Nmax= 3700.0> Nd,max= 206.4	Nmax= 4900.0> Nd,max= 209.9
	Mr,x= 977.1> Md,x= 507.5	Mr,x= 381.0> Md,x= 143.2	Mr,x= 810.5> Md,x= 500.7
	Mr,y= 1528.8> Md,y= 786.4	Mr,y= 694.6> Md,y= 215.7	Mr,y= 399.0> Md,y= 263.8
KAT	MEVCUT	P1Z2	P2Z2
14	Nmax= 9825.0> Nd,max= 709.8	Nmax= 3700.0> Nd,max= 208.2	Nmax= 2500.0> Nd,max= 107.8
	Mr,x= 977.1> Md,x= 507.5	Mr,x= 338.1> Md,x= 152.2	Mr,x= 290.7> Md,x= 137.5
	Mr,y= 1528.8> Md,y= 786.4	Mr,y= 586.8> Md,y= 258.0	Mr,y= 328.6> Md,y= 184.6

14. kat için sadece mevcut elemanlarla kat kapasitesinin yeterli olduğu görülmektedir. Z1 zemin sınıfı için bir karşılaştırma yapılacak olursa P1 tipinin; Z2 için bu karşılaştırma yapılacak olursa yine P2 tipinin P1 tipine göre daha elverişli olduğunu söylemek mümkün olacaktır. Diğer katlar içinde bu incelendiğinde aynı şekilde P2 tipinin P1 tipine göre kapasite açısından daha etkin olduğunu söylemek mümkün olacaktır.

Aşağıda yapılan ek perde ve mantolara ait kapasiteler eleman bazında ve katlar bazında verilmektedir. Esas itibariyle ek perde ve mantolarla diğer mevcut elemanlara ait kapasite toplamları kat kapasite yeterliliğinin hesaplanmasında geçerli olacaktır. Ek perde ve mantolarla iki tip perdenin karşılaştırılması amacıyla yeni elemanların kapasiteyi ne kadar

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artırdığını ve bunlar arası bir karşılaştırmanın yapılabilmesi için mevcut ve ek elemanların kapasiteleri ayrı ayrı verilmiştir. Aşağıda sadece hesapların kabarık olmaması amacıyla Z1P2 tipi için değerler verilmiştir. Ek perde ve mantolarla kapasitelerin kat bazında kapasiteyi ne kadar artırdığı görülmektedir.

Çizelge 5.3.2 Mevcut ve Ek Perdeler ile Mantoların Kat Kapasiteleri

Z1P2				
Kat	Mevcut Perdeler		Ek Perde ve Mantolar	
	Mxr-Mx	Myr-My	Mxr-Mx	Myr-My
1	80309	3527	22665	6254
2	81537	3492	22227	6498
3	6475	2453	22661	6294
4	6466	2665	18493	4383
5	6431	2927	17267	4586
6	6385	3634	17044	6122.1
7	6276	3386	15280	5730
8	6034	3556	14440	6434
9	5712	3677	13472	7106
10	5267	3411	12488	8152
11	4963	3363	11494	8776
12	4645	3299	10465	9373
13	4510	3453	9368	9936
14	4091	3362	8313	10355

5.4 Metrajların Karşılaştırılması

Yapıya ait güçlendirme projelerinde donatı ,beton ve kalıp metrajı çıkarıldığında şu değreler elde edilmiştir.

Çizelge 5.4 Metrajların Karşılaştırılması

	MEVCUT	P1Z1	P1Z2	P2Z1	P2Z2
DEMIRLİ B25 BETONU (m^3)	2624.1	3021.4	3252.2	3021.4	3331.9
DÜZ YÜZEYLİ BETONARME KALIBI (m^2)	18034.8	23122.6	23663.8	23122.6	25181.2
8-12 mm NERVÜRLÜ BETONARME DEMİRİ (t)	231.3	316.7	342.7	300.8	349.3
14-26 mm NERVÜRLÜ BETONARME DEMİRİ (t)	223.6	224.7	237.2	279.2	281.1

Bu metraj tablolarını kıyasladığımızda P1 tipinin malzeme miktarları açısından dolayısıyla ekonomik yönden P2 tipinden daha elverişli olduğunu söylemek mümkündür.Diğer kıyaslama kriterlerinden çıkan sonuçlarla metrajların ortaklaşa kıyaslaması yapıldığında P2 tipinin elverişli olduğunu görmek mümkün olmaktadır.

6 SONUÇ

Bu sayfalar içinde analiz raporları verilen güçlendirme projelerinde görülmüştür ki bu güçlendirme yöntemiyle yapıyı bugünkü güvenlik mertebesinin üzerine çıkararak, şu anda taşıdığı yükler veya olası deprem yükleri altında oluşabilecek arızaları en aza indirmek, bu arızaların lokal sınırlarda kalmasını sağlamak ve mevcut yönetmelik hükümlerinin öngördüğü performansa yaklaştırmak mümkün olacaktır. İlave perde ve mantolarla her iki deprem doğrultusunda da yapıya etkiyecek deprem yüklerinin taşınmasında mevcut projeye göre sırasıyla;

P1Z1	x yönünde	%68	y yönünde	%213
P1Z2	x yönünde	%68	y yönünde	%213
P2Z1	x yönünde	%40	y yönünde	%213
P2Z2	x yönünde	%50	y yönünde	%230

artış sağlanmıştır. Bu veriler incelendiğinde P1 tipte perdelerin taşıyacağı deprem kuvvetlerinin P2 tipe göre daha büyük olduğu görülmektedir. Böylelikle P1 tipinde deprem yüklerinin küçük bir yüzdesini alacak olan kolon kesitleri rahatlamış olacaktır. Yeni yapılan perdelerin deprem tesirleri, yapının deprem tesirlerinin en az %70 ini alacak şekilde düşünülmelidir. Toplam perde moment taşıma kapasitesinin, deprem devrilme momentinden büyük olması depremde yapının plastikleşme durumunda en önemli sigortası olacaktır. Takviye projeleri ve mevcut yapımızdaki perdelerin taban moment taşıma oranları aşağıdaki şekilde bulunmuştur.

Çizelge 6. Taban Moment Oranları

MEVCUT	X yönü αm =15336.17 / 30797.42 = 0.5
	Y yönü αm =5525.72 / 23696.29 = 0.23
P1Z1	X yönü αm =35865.69 / 42777.86 = 0.84
	Y yönü αm =21209.58 / 29472.56 = 0.72
P1Z2	X yönü αm =45890.9 / 54755.18 = 0.84
	Y yönü αm =27361.34 / 38038.87 = 0.72
P2Z1	X yönü αm =34333.18 / 49645.87 = 0.70
	Y yönü αm =29238.14 / 40603.22 = 0.72
P2Z2	X yönü αm =49557.16 / 65711.05 = 0.75
	Y yönü αm =41827.09 / 55090.66 = 0.76

Mantolar güçlendirme elemanı olarak değil, tamir veya lokal bir takviye elemanı olarak düşünülmelidir. Bir kolonun çevresine yapılan mantonun maliyeti, perde maliyetine yakın olmasına rağmen aynı hacimdeki perdenin ataletinin 1/3 kadarı olmaktadır. Deprem esnasında en son göçen eleman perdedir. Kolonların deprem sırasında yetersizlikte plastikleşmesi durumunda, deprem enerjisi taşıyıcı perdeler tarafından karşılanacaktır. Bu nedenle yapıda yeni yapılan elemanların mevcut yapı elemanlarına nazaran daha rijit olması, plastik davranışta yeni rijit perdelerin deprem tesirlerini taşıyabilen rijitlikte yapılması düşünülmelidir.

Her iki tip perde yerleşiminde de perdelerin her iki yönde de birbirine yakın boyutlarda, simetrik, burulma tesirlerine yol açmayacak ve mevcut yapı çerçeveleri ile entegre olabilecek konumda yerleşimi sağlanmıştır. Bir kıyaslama yapıldığında P2 tip perdenin burulma tesirleri açısından incelendiğinde yapının burulma tesirlerine karşı daha verimli olduğu görülmektedir.Yukarıda verilen düzensizliklerden A1 Burulma Düzensizliği incelendiğinde görüleceği üzere P2 tipinde göreli kat ötelemeleri daha az olması nedeniyle n_{bi} burulma düzensizliği katsayısı daha küçüktür.

Analiz sonucunda birçok kirişte görüldüğü üzere kirişlerin beton kesitleri, düşey yükler altında hem eğilme hem de kesme tesirleri açısından yetersizdir. Kesme güvenliğindeki eksiklik bu kirişlerin, beklenen depremlerde kolon ile birleştikleri noktada mafsallaşmalarına ve taşıyıcı sistemde devre dışı kalmalarına neden olacaktır. Ayrıca kesme kırılması gevrek bir davranış biçimi olduğundan, mesnetlerde zımbalama ile ani çökmelere yol açabilecektir. Taşıyıcı kirişlerdeki boyut zaafları nedeniyle olası depremde kirişlerin kolonlarla birleştiği noktalarda oluşacak mafsallaşmaya karşı, çelik kesme-zımbalama başlıkları oluşturulacaktır. Bu başlıklar tüm katlarda söz konusu kolon etraflarında uygulanacaktır.Süneklilik alanı yetersiz kolonlar çelik mantolama yöntemiyle güçlendirilirler.

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EK 1 Deplasmanlar ve Göreli Kat Ötelemeleri

MEVCUT DURUM

Kat	9.Yükleme		10.Yükleme		11.Yükleme		12.Yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)
1	1.87E-05	9E-07	0.000187	0	-0.00122	0	-0.00122	0.000001
2	0.000538	2.7E-06	0.000537	-2E-06	-0.00352	-1E-06	-0.00351	2.6E-06
3	0.00351	7.99E-05	0.003507	-7.6E-05	-0.0077	-5.5E-05	-0.00767	6.45E-05
4	0.006922	0.000177	0.006913	-0.00016	-0.01213	-0.00012	-0.01207	0.000136
5	0.010913	0.000285	0.010895	-0.00026	-0.01714	-0.0002	-0.01705	0.000214
6	0.015247	0.000395	0.01522	-0.00036	-0.02253	-0.00028	-0.02241	0.00029
7	0.019762	0.000502	0.019722	-0.00046	-0.02813	-0.00036	-0.02796	0.000363
8	0.024339	0.000604	0.024287	-0.00055	-0.03382	-0.00044	-0.03361	0.000431
9	0.028893	0.000702	0.028826	-0.00063	-0.0395	-0.00051	-0.03925	0.000495
10	0.033354	0.000793	0.033272	-0.00071	-0.04511	-0.00059	-0.04482	0.000555
11	0.037667	0.000877	0.037568	-0.00078	-0.05058	-0.00065	-0.05024	0.000609
12	0.041784	0.000951	0.041669	-0.00084	-0.05586	-0.00071	-0.05548	0.000656
13	0.04568	0.001014	0.045555	-0.00089	-0.06092	-0.00077	-0.0605	0.000692
14	0.049333	0.001063	0.049183	-0.00093	-0.06571	-0.00081	-0.06525	0.000715

Deprem yapı salınımı: x= 0.00116 y= 0.00154

Göreli Kat Ötelemelesi

0.000519	1.8E-06	0.00035	-2E-06	-0.0023	-1E-06	-0.0023	1.6E-06
0.002972	7.72E-05	0.002969	-7.4E-05	-0.00417	-5.4E-05	-0.00415	6.19E-05
0.003412	9.72E-05	0.003406	-8.8E-05	-0.00443	-6.9E-05	-0.0044	7.19E-05
0.003991	0.000108	0.003983	-9.8E-05	-0.00502	-7.8E-05	-0.00498	7.72E-05
0.004335	0.00011	0.004325	-0.0001	-0.00539	-0.00008	-0.00535	7.62E-05
0.004514	0.000107	0.004502	-9.6E-05	-0.0056	-0.00008	-0.00556	7.27E-05
0.004577	0.000102	0.004564	-0.00009	-0.00569	-7.7E-05	-0.00565	6.84E-05
0.004554	9.72E-05	0.00454	-8.4E-05	-0.00569	-7.5E-05	-0.00564	6.42E-05
0.004461	9.12E-05	0.004446	-7.8E-05	-0.00561	-7.1E-05	-0.00557	5.96E-05
0.004313	8.39E-05	0.004296	-7.1E-05	-0.00547	-6.6E-05	-0.00543	5.43E-05
0.004117	7.46E-05	0.004101	-6.1E-05	-0.00528	-6.1E-05	-0.00524	4.68E-05
0.003896	6.26E-05	0.003886	-0.00005	-0.00506	-5.5E-05	-0.00502	3.63E-05
0.003653	4.88E-05	0.003629	-3.8E-05	-0.00479	-4.7E-05	-0.00475	2.28E-05

P1-Z1

Kat	9.Yükleme		10.Yükleme		11.Yükleme		12.Yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)
1	0.000233	1.4E-06	0.000233	-1E-06	-0.00092	-1E-06	-0.00092	1.3E-06
2	0.000706	4.2E-06	0.000708	-5E-06	-0.00283	-3E-06	-0.00282	3.8E-06
3	0.002827	4.77E-05	0.002833	-5.2E-05	-0.00607	-3.6E-05	-0.00603	3.28E-05
4	0.005278	0.000104	0.005286	-0.00011	-0.00948	-0.00008	-0.00942	6.71E-05
5	0.00813	0.000171	0.008139	-0.00018	-0.01334	-0.00013	-0.01325	0.000106
6	0.011216	0.000245	0.011225	-0.00026	-0.0175	-0.0002	-0.01737	0.000146
7	0.014418	0.000321	0.014426	-0.00034	-0.02186	-0.00026	-0.02169	0.000186
8	0.017651	0.000398	0.017656	-0.00042	-0.02633	-0.00033	-0.0261	0.000224
9	0.020842	0.000474	0.020844	-0.0005	-0.03083	-0.00039	-0.03056	0.000261
10	0.023938	0.000546	0.02398	-0.00057	-0.03531	-0.00046	-0.03499	0.000294
11	0.026938	0.000614	0.026893	-0.00064	-0.03973	-0.00052	-0.03935	0.000325
12	0.029703	0.000678	0.029689	-0.0007	-0.04404	-0.00059	-0.0436	0.000352
13	0.032342	0.000738	0.03232	-0.00076	-0.04823	-0.00065	-0.04773	0.000376
14	0.034824	0.000792	0.034794	-0.00081	-0.05226	-0.0007	-0.05172	0.000395

Deprem yapı salınımı: x= 0.00082 y= 0.00123

Göreli Kat Ötelemelesi

0.000473	2.8E-06	0.000475	-4E-06	-0.00191	-2E-06	-0.0019	2.5E-06
0.002121	4.35E-05	0.002125	-4.7E-05	-0.00324	-3.3E-05	-0.00322	0.000029
0.002451	5.63E-05	0.002454	-0.00006	-0.00341	-4.4E-05	-0.00338	3.43E-05
0.002852	6.74E-05	0.002852	-7.1E-05	-0.00386	-5.4E-05	-0.00383	3.86E-05
0.003086	7.34E-05	0.003086	-7.8E-05	-0.00417	-6.1E-05	-0.00413	4.01E-05
0.003202	7.64E-05	0.003201	-7.9E-05	-0.00436	-6.4E-05	-0.00431	3.98E-05
0.003233	7.68E-05	0.003231	-0.00008	-0.00447	-6.6E-05	-0.00442	3.85E-05
0.003191	7.55E-05	0.003188	-7.6E-05	-0.0045	-6.7E-05	-0.00445	3.64E-05
0.003096	7.23E-05	0.003136	-7.3E-05	-0.00448	-6.7E-05	-0.00443	3.38E-05
0.003000	6.85E-05	0.002913	-6.8E-05	-0.00442	-6.4E-05	-0.00436	3.08E-05
0.002765	6.4E-05	0.002796	-6.3E-05	-0.00431	-6.3E-05	-0.00426	2.72E-05
0.002639	5.93E-05	0.002631	-5.7E-05	-0.00419	-6E-05	-0.00413	2.35E-05
0.002482	5.48E-05	0.002474	-5.1E-05	-0.00404	-5.7E-05	-0.00398	1.95E-05

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

P1-Z2

Kat	9.Yükleme		10.Yükleme		11.Yükleme		12.Yükleme	
no	≤x (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)
1	0.000295	1.8E-06	0.000296	-2E-06	-0.00118	-1E-06	-0.00118	1.6E-06
2	0.000901	5.3E-06	0.000904	-7E-06	-0.00365	-4E-06	-0.00363	4.8E-06
3	0.003631	6.14E-05	0.003639	-6.8E-05	-0.00785	-4.6E-05	-0.00781	4.28E-05
4	0.006795	0.000134	0.006806	-0.00015	-0.0123	-0.0001	-0.01222	0.000088
5	0.010483	0.000222	0.010494	-0.00024	-0.01735	-0.00018	-0.01723	0.000139
6	0.014478	0.000317	0.014489	-0.00034	-0.0228	-0.00026	-0.02263	0.000192
7	0.018623	0.000416	0.018633	-0.00044	-0.02849	-0.00034	-0.02826	0.000245
8	0.022799	0.000515	0.022807	-0.00054	-0.03431	-0.00043	-0.03402	0.000297
9	0.026908	0.000613	0.026911	-0.00064	-0.04016	-0.00051	-0.0398	0.000344
10	0.030875	0.000706	0.030873	-0.00074	-0.04595	-0.0006	-0.04552	0.000388
11	0.03465	0.000793	0.034641	-0.00082	-0.05162	-0.00068	-0.05112	0.000428
12	0.038203	0.000874	0.038185	-0.0009	-0.05713	-0.00076	-0.05656	0.000462
13	0.041533	0.000949	0.041506	-0.00097	-0.06246	-0.00084	-0.06182	0.000491
14	0.04466	0.001017	0.044623	-0.00104	-0.06759	-0.00091	-0.06689	0.000515

Deprem yapı salınımı: x= 0.00105 y= 0.00159

Göreli Kat Ötelemelesi

0.000606	3.5E-06	0.000608	-5E-06	-0.00247	-3E-06	-0.00246	3.2E-06
0.00273	5.61E-05	0.002735	-6.1E-05	-0.0042	-4.2E-05	-0.00418	0.000038
0.003164	7.29E-05	0.003167	-7.7E-05	-0.00445	-5.8E-05	-0.00441	4.52E-05
0.003689	8.72E-05	0.003689	-9.2E-05	-0.00505	-7.1E-05	-0.005	5.11E-05
0.003995	9.53E-05	0.003995	-0.0001	-0.00545	-0.00008	-0.0054	5.33E-05
0.004145	9.92E-05	0.004143	-0.0001	-0.0057	-8.4E-05	-0.00564	0.000053
0.004176	9.94E-05	0.004174	-0.0001	-0.00582	-8.7E-05	-0.00576	5.11E-05
0.004109	9.73E-05	0.004105	-9.9E-05	-0.00585	-8.7E-05	-0.00578	4.78E-05
0.003967	9.28E-05	0.003961	-9.3E-05	-0.00579	-8.5E-05	-0.00572	4.39E-05
0.003776	8.73E-05	0.003769	-8.7E-05	-0.00567	-8.3E-05	-0.0056	3.94E-05
0.003552	0.000081	0.003544	-7.9E-05	-0.00551	-0.00008	-0.00544	3.42E-05
0.003331	7.47E-05	0.003321	-7.1E-05	-0.00533	-7.5E-05	-0.00526	2.92E-05
0.003127	6.88E-05	0.003116	-6.4E-05	-0.00514	-7.2E-05	-0.00507	2.39E-05

P2-Z1

Kat No	9.Yükleme		10.Yükleme		11.Yükleme		12.Yükleme	
	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)
1	0.000043	3E-07	0.000043	0	-0.00005	0	-0.00005	3E-07
2	0.00046	0.000004	0.00046	-4E-06	-0.00085	-3E-06	-0.00085	3.6E-06
3	0.002103	2.41E-05	0.002108	-2.8E-05	-0.00273	-2.2E-05	-0.00272	2.12E-05
4	0.00406	5.02E-05	0.004072	-0.00006	-0.00497	-4.6E-05	-0.00496	4.39E-05
5	0.00641	8.29E-05	0.00643	-0.0001	-0.00789	-7.7E-05	-0.00767	7.21E-05
6	0.009048	0.000121	0.009078	-0.00015	-0.01079	-0.00011	-0.01077	0.000105
7	0.011881	0.000162	0.011922	-0.0002	-0.01419	-0.00015	-0.01416	0.00014
8	0.014834	0.000206	0.014888	-0.00025	-0.01781	-0.0002	-0.01777	0.000178
9	0.017848	0.000251	0.017916	-0.00031	-0.02158	-0.00024	-0.02153	0.000217
10	0.020872	0.000297	0.020954	-0.00037	-0.02545	-0.00029	-0.02538	0.000256
11	0.023867	0.000343	0.023964	-0.00043	-0.02937	-0.00034	-0.02929	0.000296
12	0.026803	0.000389	0.026917	-0.00049	-0.03329	-0.00038	-0.0332	0.000336
13	0.029669	0.000434	0.029798	-0.00055	-0.0372	-0.00043	-0.0371	0.000375
14	0.032448	0.000479	0.032593	-0.00061	-0.04106	-0.00048	-0.04094	0.000414

Deprem yapı salınımı: x= 0.00076 y= 0.00096

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

Görell Kat Ötelemelesi

0.000417	3.7E-06	0.000417	-4E-06	-0.0008	-3E-06	-0.0008	3.3E-06
0.001643	2.01E-05	0.001648	-2.4E-05	-0.00188	-1.9E-05	-0.00187	1.76E-05
0.001957	2.61E-05	0.001963	-3.2E-05	-0.00224	-2.4E-05	-0.00224	2.27E-05
0.00235	3.27E-05	0.002358	-0.00004	-0.00292	-3.1E-05	-0.00272	2.82E-05
0.002638	3.76E-05	0.002648	-4.7E-05	-0.0029	-3.6E-05	-0.0031	3.24E-05
0.002833	4.12E-05	0.002844	-5.2E-05	-0.0034	-0.00004	-0.00339	3.55E-05
0.002954	4.38E-05	0.002966	-5.5E-05	-0.00362	-4.4E-05	-0.00361	3.77E-05
0.003014	4.53E-05	0.003027	-5.8E-05	-0.00377	-4.5E-05	-0.00376	0.000039
0.003024	4.61E-05	0.003039	-0.00006	-0.00387	-4.7E-05	-0.00386	3.97E-05
0.002995	4.62E-05	0.00301	-6.1E-05	-0.00392	-4.7E-05	-0.00391	0.00004
0.002937	4.59E-05	0.002953	-6E-05	-0.00393	-4.8E-05	-0.00391	3.97E-05
0.002865	4.53E-05	0.002881	-0.00006	-0.00391	-4.8E-05	-0.00389	3.91E-05
0.002779	4.47E-05	0.002795	-0.00006	-0.00386	-4.7E-05	-0.00384	3.84E-05

P2-Z2

Kat	9.Yükleme		10.Yükleme		11.Yükleme		12.Yükleme	
no	≤x (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)	δx (m)	θz (rad)
1	5.61E-05	4E-07	5.62E-05	0	-6.5E-05	0	-6.5E-05	3E-07
2	0.000592	0.000005	0.000593	-0.00005	-0.00108	-4E-06	-0.00108	4.7E-06
3	0.002646	2.93E-05	0.002653	-3.4E-05	-0.00346	-2.6E-05	-0.00345	2.73E-05
4	0.005086	6.08E-05	0.005101	-7.2E-05	-0.00627	-5.6E-05	-0.00626	5.62E-05
5	0.008021	9.98E-05	0.008045	-0.00012	-0.00968	-9.3E-05	-0.00966	9.18E-05
6	0.011309	0.000144	0.011345	-0.00018	-0.01356	-0.00014	-0.01353	0.000133
7	0.014832	0.000193	0.014881	-0.00024	-0.01777	-0.00018	-0.01773	0.000177
8	0.01849	0.000244	0.018554	-0.0003	-0.02223	-0.00023	-0.02218	0.000223
9	0.022203	0.000297	0.022284	-0.00037	-0.02685	-0.00029	-0.02677	0.000271
10	0.025908	0.000349	0.026005	-0.00044	-0.03154	-0.00034	-0.03145	0.000319
11	0.029552	0.000401	0.029668	-0.00051	-0.03625	-0.0004	-0.03615	0.000366
12	0.033104	0.000453	0.033237	-0.00057	-0.04094	-0.00045	-0.04082	0.000413
13	0.03655	0.000503	0.036702	-0.00064	-0.04557	-0.0005	-0.04543	0.000459
14	0.039878	0.000552	0.040048	-0.00071	-0.05011	-0.00056	-0.04995	0.000503

Deprem yapı salınımı: x= 0.00094 y= 0.00118

Göreli Kat Ötelemelesi

0.000536	4.6E-06	0.000537	-0.00005	-0.00102	-4E-06	-0.00102	4.4E-06
0.002054	2.43E-05	0.00206	0.000016	-0.00237	-2.2E-05	-0.00237	2.26E-05
0.00244	3.15E-05	0.002448	-3.8E-05	-0.00282	-0.00003	-0.00281	2.89E-05
0.002934	0.000039	0.002944	-4.8E-05	-0.00341	-3.7E-05	-0.0034	3.56E-05
0.003289	4.46E-05	0.003301	-5.6E-05	-0.00387	-4.3E-05	-0.00386	4.07E-05
0.003522	4.86E-05	0.003536	-6.1E-05	-0.00422	-4.8E-05	-0.00421	4.42E-05
0.003658	5.11E-05	0.003673	-6.5E-05	-0.00446	-0.00005	-0.00444	4.65E-05
0.003714	5.24E-05	0.00373	-6.7E-05	-0.00461	-5.3E-05	-0.0046	4.76E-05
0.003704	5.27E-05	0.003721	-6.8E-05	-0.00469	-5.4E-05	-0.00468	4.79E-05
0.003645	5.22E-05	0.003663	-6.9E-05	-0.00471	-5.5E-05	-0.0047	4.76E-05
0.003551	5.13E-05	0.00357	-6.8E-05	-0.00469	-5.4E-05	-0.00467	4.67E-05
0.003446	5.03E-05	0.003464	-6.7E-05	-0.00463	-5.3E-05	-0.00461	4.56E-05
0.003329	0.000049	0.003346	-6.6E-05	-0.00454	-5.3E-05	-0.00452	4.45E-05

EK 2 Düzensizlikler

MEVCUT DURUM

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.0001869 + -.0000009 x (.12 – 14.69=-.0002006 (S1001)

1. kat X dalt = -.0001869 + -.0000009 x (29.28 - 14.69)=-.0001732 (S1053)

2. kat X dust = -.0005379 + -.0000027 x (.12 – 14.69) - -.0002006 = -.0003772 (S2002)

2. kat X dalt = -.0005379 + -.0000027 x (29.28 - 14.69) - -.0001732 = -.0003248 (S2009)

TDY 6.3.2.1 A1 burulma düzensizliği:

1.2< nbi=1.328 <2 , dinamik analizle çözülmüştür ✓

TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓

TDY 6.20 kosulu sağlanmaktadır. .0022 < .0035 ✓

TDY 6.21 koşulu sağlanmaktadır. max θi=.02 < 0.12 ✓

B1-Düşey doğrultudaki düzensizliklerinin kontrolu

nci < .8 Duzensiz; R=1.25 x nci x R= 3.42 olarak çözün ×

A4 düzensizliği bulunmamıştır. ✓

P1-Z1

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.0002327 + -.0000014 x (.12 – 14.69=-.0002538 (S1001)

1. kat X dalt = -.0002327 + -.0000014 x (29.28 - 14.69)=-.0002116 (S1051)

2. kat X dust = -.0007057 + -.0000042 x (.12 – 14.69) - -.0002538 = -.0005126 (S2002)

2. kat X dalt = -.0007057 + -.0000042 x (29.28 - 14.69) - -.0002116 = -.0004333 (S2009)

TDY 6.3.2.1 A1 burulma düzensizliği:

1.2< nbi=1.29 <2 , dinamik analizle çözülmüştür ✓

TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓

TDY 6.20 kosulu sağlanmaktadır. .0018 < .0035 ✓

TDY 6.21 koşulu sağlanmaktadır. Max θi=.013 < 0.12 ✓

EC YÜKSEKÖĞRETİM KURULU DOKÜMANTASYON MERKEZİ

A4 düzensizliği bulunmamıştır. ✓

P1-Z2

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.0002951 + -.0000018 x (.12 - 14.69=-.0003217 (S1001)

1. kat X dalt = -.0002951 + -.0000018 x (29.28 - 14.69)=-.0002685 (S1051)

2. kat X dust = -.0009009 + -.0000053 x (.12 - 14.69) - -.0003217 = -.0006566 (S2002)

2. kat X dalt = -.0009009 + -.0000053 x (29.28 - 14.69) - -.0002685 = -.0005549 (S2009)

TDY 6.3.2.1 A1 burulma düzensizliği:

1.2< nbi=1.29 <2 , dinamik analizle çözülmüştür ✓

TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓

TDY 6.20 kosulu sağlanmaktadır. .0023 < .0035 ✓

TDY 6.21 koşulu sağlanmaktadır. Max θi=.013 < 0.12 ✓

A4 düzensizliği bulunmamıştır. ✓

P2-Z1

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.000043 + -.0000003 x (.12 - 14.69=-.000047 (S1001)

1. kat X dalt = -.000043 + -.0000003 x (29.28 - 14.69)=-.0000389 (S1051)

2. kat X dust = -.0004595 + -.000004 x (.12 - 14.69) - -.000047 = -.0004714 (S2002)

2. kat X dalt = -.0004595 + -.000004 x (29.28 - 14.69) - -.0000389 = -.0003614 (S2009)

TDY 6.3.2.1 A1 burulma düzensizliği:

1.2< nbi=1.245 <2 , dinamik analizle çözülmüştür ✓

TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓

TDY 6.20 kosulu sağlanmaktadır. .0015 < .0035 ✓

TDY 6.21 koşulu sağlanmaktadır. Max θi=.008 < 0.12 ✓

A4 düzensizliği bulunmamıştır. ✓

P2-Z2

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.0000561 + -.0000004 x (.12 - 14.69=-.0000613 (S1001)

1. kat X dalt = -.0000561 + -.0000004 x (29.28 - 14.69)=-.000051 (S1051)

2. kat X dust = -.0005919 + -.000005 x (.12 - 14.69) - -.0000613 = -.0006037 (S2002)

2. kat X dalt = -.0005919 + -.000005 x (29.28 - 14.69) - -.000051 = -.0004679 (S2009)

TDY 6.3.2.1 A1 burulma düzensizliği:

1.2< nbi=1.227 <2 , dinamik analizle çözülmüştür ✓

TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓

TDY 6.20 kosulu sağlanmaktadır. .0018 < .0035 ✓

TDY 6.21 koşulu sağlanmaktadır. Max ei=.007 < 0.12 ✓

A4 düzensizliği bulunmamıştır. ✓

EK 3 Kapasiteler

Nmax = 0,5 . fck . Ac No = 0,85 . fcd . b . d +fyd . As

Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü

Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü

Md,x/y = x/y yönünde en büyük kombinasyonun momenti

Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti

Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti

Vr,max = 2 . fck½ . Ac

Ac = Kolon kesit alanı As,g = Gerekli donatı alanı

As,m = Mevcut donatı alanı Mevcut kolon min. boyuna donatı oranı : 0.01

rm = Mevcut donatı oranı Mevcut kolon donatı korozyon oranı % : 0

KAT	MEVCUT	P1Z1	P2Z1
1	Nmax= 17375.0> Nd,max= 13456.2	Nmax= 8500.0> Nd,max= 4513.4	Nmax= 10250.0> Nd,max= 5410.4
	Mr,x= 2419.2> Md,x= 1125.4	Mr,x= 939.3> Md,x= 269.9	Mr,x= 2144.2> Md,x= 477.1
	Mr,y= 4021.2> Md,y= 1739.8	Mr,y= 2018.7> Md,y= 556.2	Mr,y= 1678.1> Md,y= 297.5
2	Nmax= 17375.0> Nd,max= 12665.2	Nmax= 8500.0> Nd,max= 3937.9	Nmax= 10250.0> Nd,max= 4856.0
	Mr,x= 2258.9> Md,x= 1038.3	Mr,x= 1032.3> Md,x= 281.7	Mr,x= 1997.5> Md,x= 485.0
	Mr,y= 4099.0> Md,y= 1754.0	Mr,y= 1937.6> Md,y= 657.4	Mr,y= 1523.8> Md,y= 428.2
3	Nmax= 11475.0> Nd,max= 11279.6	Nmax= 4400.0> Nd,max= 3294.3	Nmax= 5800.0> Nd,max= 3697.0
	Mr,x= 1304.4> Md,x= 1123.3	Mr,x= 418.6> Md,x= 254.8	Mr,x= 927.6> Md,x= 490.9
	Mr,y= 2315.5> Md,y= 1698.8	Mr,y= 938.1> Md,y= 395.5	Mr,y= 642.8> Md,y= 186.3
4	Nmax= 11475.0> Nd,max= 10329.7	Nmax= 4400.0> Nd,max= 2998.7	Nmax= 5800.0> Nd,max= 3364.5
	Mr,x= 1452.7> Md,x= 912.2	Mr,x= 398.3> Md,x= 145.2	Mr,x= 901.8> Md,x= 481.6
	Mr,y= 2479.4> Md,y= 1167.1	Mr,y= 996.5> Md,y= 276.2	Mr,y= 708.5> Md,y= 194.5
5	Nmax= 9825.0> Nd,max= 9371.6	Nmax= 3700.0> Nd,max= 2686.2	Nmax= 4900.0> Nd,max= 3180.0
	Mr,x= 1275.8> Md,x= 799.2	Mr,x= 403.6> Md,x= 120.2	Mr,x= 779.3> Md,x= 474.9
	Mr,y= 2047.4> Md,y= 1078.7	Mr,y= 858.9> Md,y= 258.4	Mr,y= 614.9> Md,y= 216.4
6	Nmax= 9825.0> Nd,max= 8182.8	Nmax= 3700.0> Nd,max= 2336.0	Nmax= 4900.0> Nd,max= 2547.7
	Mr,x= 1243.8> Md,x= 752.3	Mr,x= 402.5> Md,x= 131.4	Mr,x= 790.6> Md,x= 473.0
	Mr,y= 2031.1> Md,y= 843.3	Mr,y= 774.5> Md,y= 176.0	Mr,y= 485.2> Md,y= 157.2
7	Nmax= 9825.0> Nd,max= 7220.9	Nmax= 3700.0> Nd,max= 2039.6	Nmax= 4900.0> Nd,max= 2237.5
	Mr,x= 1245.3> Md,x= 719.5	Mr,x= 427.0> Md,x= 133.8	Mr,x= 822.7> Md,x= 481.3
	Mr,y= 2034.2> Md,y= 815.4	Mr,y= 805.1> Md,y= 181.5	Mr,y= 547.7> Md,y= 180.4
8	Nmax= 9825.0> Nd,max= 6252.5	Nmax= 3700.0> Nd,max= 1754.8	Nmax= 4900.0> Nd,max= 1906.2
	Mr,x= 1233.6> Md,x= 682.6	Mr,x= 421.9> Md,x= 131.9	Mr,x= 824.9> Md,x= 475.5
	Mr,y= 2020.1> Md,y= 761.1	Mr,y= 778.7> Md,y= 170.9	Mr,y= 524.8> Md,y= 179.3
9	Nmax= 9825.0> Nd,max= 5317.4	Nmax= 3700.0> Nd,max= 1479.6	Nmax= 4900.0> Nd,max= 1598.9
	Mr,x= 1231.5> Md,x= 651.5	Mr,x= 418.7> Md,x= 133.7	Mr,x= 827.3> Md,x= 462.7
	Mr,y= 1987.1> Md,y= 731.6	Mr,y= 758.7> Md,y= 164.4	Mr,y= 510.4> Md,y= 183.2

KAT	MEVCUT	P1Z1	P2Z1
10	Nmax= 9825.0> Nd,max= 4373.4	Nmax= 3700.0> Nd,max= 1212.7	Nmax= 4900.0> Nd,max= 1298.2
	Mr,x= 1230.9> Md,x= 628.9	Mr,x= 408.7> Md,x= 130.8	Mr,x= 826.2> Md,x= 443.5
	Mr,y= 1961.6> Md,y= 717.9	Mr,y= 736.9> Md,y= 165.0	Mr,y= 493.0> Md,y= 184.6
11	Nmax= 9825.0> Nd,max= 3458.6	Nmax= 3700.0> Nd,max= 952.9	Nmax= 4900.0> Nd,max= 1018.2
	Mr,x= 1195.3> Md,x= 597.0	Mr,x= 397.1> Md,x= 125.9	Mr,x= 823.3> Md,x= 428.5
	Mr,y= 1890.3> Md,y= 687.6	Mr,y= 713.5> Md,y= 165.2	Mr,y= 501.6> Md,y= 188.7
12	Nmax= 9825.0> Nd,max= 2529.3	Nmax= 3700.0> Nd,max= 699.8	Nmax= 4900.0> Nd,max= 740.7
	Mr,x= 1127.1> Md,x= 550.4	Mr,x= 383.8> Md,x= 119.2	Mr,x= 830.9> Md,x= 420.1
	Mr,y= 1819.3> Md,y= 668.2	Mr,y= 705.3> Md,y= 166.2	Mr,y= 470.4> Md,y= 190.8
13	Nmax= 9825.0> Nd,max= 1625.6	Nmax= 3700.0> Nd,max= 450.7	Nmax= 4900.0> Nd,max= 473.6
	Mr,x= 1079.6> Md,x= 503.3	Mr,x= 367.7> Md,x= 109.8	Mr,x= 836.9> Md,x= 399.9
	Mr,y= 1681.8> Md,y= 605.3	Mr,y= 683.1> Md,y= 156.0	Mr,y= 426.0> Md,y= 180.4
14	Nmax= 9825.0> Nd,max= 709.8	Nmax= 3700.0> Nd,max= 206.4	Nmax= 4900.0> Nd,max= 209.9
	Mr,x= 977.1> Md,x= 507.5	Mr,x= 381.0> Md,x= 143.2	Mr,x= 810.5> Md,x= 500.7
	Mr,y= 1528.8> Md,y= 786.4	Mr,y= 694.6> Md,y= 215.7	Mr,y= 399.0> Md,y= 263.8
KAT	MEVCUT	P1Z2	P2Z2
1	Nmax= 17375.0> Nd,max= 13456.2	Nmax= 8500.0> Nd,max= 4540.9	Nmax= 6750.0> Nd,max= 2839.0
	Mr,x= 2419.2> Md,x= 1125.4	Mr,x= 850.2> Md,x= 323.7	Mr,x= 899.8> Md,x= 207.6
	Mr,y= 4021.2> Md,y= 1739.8	Mr,y= 1885.2> Md,y= 704.2	Mr,y= 1431.5> Md,y= 299.2
2	Nmax= 17375.0> Nd,max= 12665.2	Nmax= 8500.0> Nd,max= 4064.4	Nmax= 6750.0> Nd,max= 2412.9
	Mr,x= 2258.9> Md,x= 1038.3	Mr,x= 846.5> Md,x= 296.0	Mr,x= 884.3> Md,x= 236.9
	Mr,y= 4099.0> Md,y= 1754.0	Mr,y= 1758.1> Md,y= 844.7	Mr,y= 1288.5> Md,y= 473.5
3	Nmax= 11475.0> Nd,max= 11279.6	Nmax= 4400.0> Nd,max= 3296.6	Nmax= 3000.0> Nd,max= 1711.6
	Mr,x= 1304.4> Md,x= 1123.3	Mr,x= 400.5> Md,x= 307.0	Mr,x= 291.3> Md,x= 207.1
	Mr,y= 2315.5> Md,y= 1698.8	Mr,y= 887.2> Md,y= 509.6	Mr,y= 471.5> Md,y= 185.1
4	Nmax= 11475.0> Nd,max= 10329.7	Nmax= 4400.0> Nd,max= 3080.2	Nmax= 3000.0> Nd,max= 1579.8
	Mr,x= 1452.7> Md,x= 912.2	Mr,x= 394.0> Md,x= 175.3	Mr,x= 285.2> Md,x= 121.5
	Mr,y= 2479.4> Md,y= 1167.1	Mr,y= 875.6> Md,y= 304.3	Mr,y= 574.5> Md,y= 162.4

5	Nmax= 9825.0> Nd,max= 9371.6	Nmax= 3700.0> Nd,max= 2835.4	Nmax= 2500.0> Nd,max= 1409.2
	Mr,x= 1275.8> Md,x= 799.2	Mr,x= 347.2> Md,x= 150.6	Mr,x= 248.2> Md,x= 113.7
	Mr,y= 2047.4> Md,y= 1078.7	Mr,y= 808.9> Md,y= 316.1	Mr,y= 442.3> Md,y= 171.7
6	Nmax= 9825.0> Nd,max= 8182.8	Nmax= 3700.0> Nd,max= 2399.9	Nmax= 2500.0> Nd,max= 1238.5
	Mr,x= 1243.8> Md,x= 752.3	Mr,x= 353.4> Md,x= 160.1	Mr,x= 255.2> Md,x= 117.0
	Mr,y= 2031.1> Md,y= 843.3	Mr,y= 697.5> Md,y= 227.5	Mr,y= 348.9> Md,y= 114.8
7	Nmax= 9825.0> Nd,max= 7220.9	Nmax= 3700.0> Nd,max= 2094.3	Nmax= 2500.0> Nd,max= 1077.8
	Mr,x= 1245.3> Md,x= 719.5	Mr,x= 358.7> Md,x= 153.3	Mr,x= 264.7> Md,x= 115.7
	Mr,y= 2034.2> Md,y= 815.4	Mr,y= 686.4> Md,y= 219.7	Mr,y= 397.0> Md,y= 123.1
8	Nmax= 9825.0> Nd,max= 6252.5	Nmax= 3700.0> Nd,max= 1800.6	Nmax= 2500.0> Nd,max= 924.1
	Mr,x= 1233.6> Md,x= 682.6	Mr,x= 372.5> Md,x= 150.6	Mr,x= 304.3> Md,x= 126.2
	Mr,y= 2020.1> Md,y= 761.1	Mr,y= 674.4> Md,y= 210.0	Mr,y= 380.4> Md,y= 118.7
9	Nmax= 9825.0> Nd,max= 5317.4	Nmax= 3700.0> Nd,max= 1516.7	Nmax= 2500.0> Nd,max= 776.8
	Mr,x= 1231.5> Md,x= 651.5	Mr,x= 398.8> Md,x= 158.8	Mr,x= 305.6> Md,x= 122.3
	Mr,y= 1987.1> Md,y= 731.6	Mr,y= 661.2> Md,y= 203.7	Mr,y= 373.2> Md,y= 116.7
10	Nmax= 9825.0> Nd,max= 4373.4	Nmax= 3700.0> Nd,max= 1241.7	Nmax= 2500.0> Nd,max= 635.1
	Mr,x= 1230.9> Md,x= 628.9	Mr,x= 395.8> Md,x= 156.0	Mr,x= 306.4> Md,x= 119.7
	Mr,y= 1961.6> Md,y= 717.9	Mr,y= 646.6> Md,y= 204.7	Mr,y= 364.4> Md,y= 113.7
11	Nmax= 9825.0> Nd,max= 3458.6	Nmax= 3700.0> Nd,max= 974.6	Nmax= 2500.0> Nd,max= 497.9
	Mr,x= 1195.3> Md,x= 597.0	Mr,x= 386.1> Md,x= 148.2	Mr,x= 305.4> Md,x= 117.9
	Mr,y= 1890.3> Md,y= 687.6	Mr,y= 630.3> Md,y= 203.4	Mr,y= 354.1> Md,y= 110.1
12	Nmax= 9825.0> Nd,max= 2529.3	Nmax= 3700.0> Nd,max= 714.1	Nmax= 2500.0> Nd,max= 364.8
	Mr,x= 1127.1> Md,x= 550.4	Mr,x= 373.0> Md,x= 138.0	Mr,x= 302.5> Md,x= 114.8
	Mr,y= 1819.3> Md,y= 668.2	Mr,y= 635.4> Md,y= 202.0	Mr,y= 390.0> Md,y= 121.9
13	Nmax= 9825.0> Nd,max= 1625.6	Nmax= 3700.0> Nd,max= 458.8	Nmax= 2500.0> Nd,max= 230.8
	Mr,x= 1079.6> Md,x= 503.3	Mr,x= 356.7> Md,x= 125.6	Mr,x= 297.9> Md,x= 109.3
	Mr,y= 1681.8> Md,y= 605.3	Mr,y= 605.5> Md,y= 186.6	Mr,y= 332.5> Md,y= 107.6
14	Nmax= 9825.0> Nd,max= 709.8	Nmax= 3700.0> Nd,max= 208.2	Nmax= 2500.0> Nd,max= 107.8
	Mr,x= 977.1> Md,x= 507.5	Mr,x= 338.1> Md,x= 152.2	Mr,x= 290.7> Md,x= 137.5
	Mr,y= 1528.8> Md,y= 786.4	Mr,y= 586.8> Md,y= 258.0	Mr,y= 328.6> Md,y= 184.6

EK 4 Perde Kapasiteleri

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
1001	399.3	436.9	37274	36837.1	0.0117213	81.4	20.6	212.4	191.8	0.0969868
1005	324.7	16.6	126.6	110	0.1311216	140.8	4.6	53.7	49.1	0.0856611
1006	355.7	18.1	120.9	102.8	0.1497105	195.9	6.5	50.7	44.2	0.1282051
1026	1897.7	317.4	6467.4	6150	0.0490769	1355.8	1833.8	4762.8	2929	0.3850256
1046	357.7	18.3	120.5	102.2	0.1518672	260.3	8.6	50.2	41.6	0.1713147
1047	1897.7	18.1	120	101.9	0.1508333	255.5	8.4	52.2	43.8	0.1609195
1051	405.6	443.6	37348.3	36904.7	0.0118774	482.9	21.4	249	227.6	0.0859438
1053	2226.9	320.7	5730.9	**5410.2**	0.0559598	1379.2	5324.9	6423.5	**1098.6**	0.8289717
1054	2272.1	327.2	5806.8	**5479.6**	0.0563477	1490.9	5286.4	6471.9	**1185.5**	0.8168235
1055	2228.2	320.9	5786.6	**5465.7**	0.0554557	1460.1	5180.2	6491.7	**1311.5**	0.7979728
1056	2188.5	315.1	5691.6	**5376.5**	0.0553623	1444.7	5185.2	6475.9	**1290.7**	0.8006918
1057	461.1	24.6	266.4	**241.8**	0.0923423	339.1	21.3	206.9	**185.6**	0.1029483
1058	374.1	19.9	267.4	**247.5**	0.0744203	283	21.2	205.8	**184.6**	0.1030126
1059	383.4	12.1	123.7	**111.6**	0.0978173	262.1	50.6	302.1	**251.5**	0.1674942
1060	359.7	11.3	120.2	**108.9**	0.0940100	238	49.2	294.8	**245.6**	0.1668928
1061	478.7	15.1	127.8	**112.7**	0.1181534	286.2	52.7	308.7	**256**	0.1707159
1062	372.1	11.7	122	**110.3**	0.0959016	229.4	48.1	292	**243.9**	0.164726
TOPLAM				80308.7					3527.1	
TOPLAM				**22664.8**					**6253.5**	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
2001	220.1	240.8	37818.5	37577.7	0.0063673	308.2	140.3	253	112.7	0.5545455
2005	305.7	15.6	130.2	114.6	0.1198157	305.5	10.1	51.2	41.1	0.1972656
2006	344.1	17.5	165.6	148.1	0.1056763	292.4	9.7	49.5	39.8	0.1959596
2026	1765.6	295.3	6397.4	6102.1	0.0461594	1261.5	2207.5	5317.6	3110.1	0.4151309
2046	344	17.5	123.5	106	0.1417004	255.6	11.3	50.3	39	0.2246521

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
2047	342.1	17.4	123	105.6	0.1414634	254	11	52.2	41.2	0.210728
2051	224.8	245.9	37629.2	37383.3	0.0065348	311.7	144.7	252.6	107.9	0.5728424
2053	2130.4	306.8	5606.7	5299.9	0.0547202	1294.6	5158.9	6087.8	928.9	0.8474161
2054	2182.6	314.3	5691.8	5377.5	0.0552198	1408.4	5143.1	6349.5	1206.4	0.8100008
2055	2128.5	306.5	5658.4	5351.9	0.0541673	1590.5	5139.4	6684.3	1544.9	0.7688763
2056	2099.1	302.3	5577	5274.7	0.0542048	1561.9	5153.5	6649.5	1496	0.7750207
2057	415.8	22.1	272.7	250.6	0.0810414	262.7	25.8	202.9	177.1	0.1271562
2058	345.6	18.4	263.7	245.3	0.0697763	206.9	26.8	191.6	164.8	0.1398747
2059	361.8	11.4	118	106.6	0.0966102	252.1	59.6	296.2	236.6	0.2012154
2060	339.8	10.7	114.6	103.9	0.0933682	245.5	57.4	293.9	236.5	0.1953045
2061	465.6	16.4	127	110.6	0.1291339	367.1	60.5	323	262.5	0.1873065
2062	353.5	11.1	116.7	105.6	0.0951157	272.2	58.3	302.3	244	0.1928548
TOPLAM				81537.4					3491.8	
TOPLAM				22226.6					6497.7	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
3005	291.8	14.9	132.8	117.9	0.1121988	290.2	11.8	51.6	39.8	0.2286822
3006	344.1	17.5	123.5	106	0.1417004	278.8	11.8	49.8	38	0.2369478
3026	1620.7	271.1	6307.7	6036.6	0.0429792	1156.3	2274.9	4574.1	2299.2	0.4973437
3046	338.2	17.3	124.7	107.4	0.138733	236.3	13.8	50.5	36.7	0.2732673
3047	336.9	17.2	124.1	106.9	0.1385979	235.8	13.7	52.5	38.8	0.2609524
3053	2001.1	288.2	5621.6	5333.4	0.0512665	1133.8	5143.5	6139.2	995.7	0.8378127
3054	2069	297.9	5792.9	5495	0.051425	1245.2	5127.8	6526.3	1398.5	0.7857132
3055	1999.1	287.9	5540.8	5252.9	0.05196	1574.2	5124	6421.7	1297.7	0.7979196
3056	1984.8	285.8	5946.9	5661.1	0.0480587	1563.1	5138.1	6459.7	1321.6	0.7954085
3057	373.6	19.9	287.3	267.4	0.0692656	232.9	31.6	207	175.4	0.152657
3058	319.9	17	279.5	262.5	0.0608229	188.2	32.8	195.7	162.9	0.1676035
3059	342.4	10.3	106.3	96	0.0968956	229.5	67.2	302.9	235.7	0.2218554
3060	321.6	9.6	103.5	93.9	0.0927536	224.3	66	300.8	234.8	0.2194149

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
3061	464	13.9	117.2	103.3	0.1186007	279.8	64	291.6	227.6	0.2194787
3062	337.6	10.1	105.6	95.5	0.0956439	252.6	67.4	311.7	244.3	0.2162336
TOPLAM				6474.8					2452.5	
TOPLAM				22661					6294.2	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
4005	263.6	13.4	137.7	124.3	0.097313	263.9	10.5	52.1	41.6	0.2015355
4006	306.1	15.6	131	115.4	0.119084	250.4	11.9	50.3	38.4	0.2365805
4026	1517.3	253.8	6250.1	5996.3	0.0406074	1083.6	1988.4	4498.9	2510.5	0.4419747
4046	306.9	15.7	130.8	115.1	0.1200306	203.7	14.3	50.7	36.4	0.2820513
4047	305.6	15.6	130.3	114.7	0.1197237	205.3	14.3	52.5	38.2	0.272381
4053	1837.1	264.5	4983.5	4719	0.0530751	1033	4687	5268	581	0.8897115
4054	1900	273.6	4763.5	4489.9	0.0574368	1504.5	4672.6	5744	1071.4	0.8134749
4055	1836.7	264.5	4504	4239.5	0.0587256	1451.3	4669.2	5448.9	779.7	0.8569069
4056	1821.4	262.3	4467.2	4204.9	0.0587169	1439.7	4682.1	5442.7	760.6	0.8602532
4057	349.9	18.6	264.1	245.5	0.0704279	270	33.7	204.1	170.4	0.1651151
4058	301.4	16.1	257.5	241.4	0.0625243	242.6	31.7	199.3	167.6	0.1590567
4059	308.8	9.3	97.2	87.9	0.095679	221.4	65.1	283.2	218.1	0.2298729
4060	289.8	9	94.6	85.6	0.0951374	200.6	63.3	275.5	212.2	0.2297641
4061	423	12.7	104.9	92.2	0.1210677	253.8	53.6	266.6	213	0.2010503
4062	303.7	9.1	96.5	87.4	0.0943005	193.7	64.2	272.8	208.6	0.2353372
TOPLAM				6465.8					2665.1	
TOPLAM				18493.3					4382.6	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
5005	237.1	12.1	142.1	130	0.0851513	237.7	11.5	52.4	40.9	0.2194656
5006	269.6	13.8	137.5	123.7	0.1003636	222.6	11.8	50.6	38.8	0.2332016
5026	1411.4	236.1	6170.1	5934	0.0382652	1009.1	1658.3	4428.5	2770.2	0.3744609

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
5046	276.7	14.1	136.2	122.1	0.1035242	183.4	13.2	50.8	37.6	0.2598425
5047	275.6	14.1	135.7	121.6	0.1039057	185.1	13.4	52.7	39.3	0.2542694
5053	1677.1	241.5	4521.6	4280.1	0.0534103	938.8	4303.5	4838.6	535.1	0.8894102
5054	1734.7	249.8	4350.5	4100.7	0.0574187	1376.7	4290.3	5362.7	1072.4	0.8000261
5055	1678	241.6	4286.3	4044.7	0.0563656	1328.7	4287.2	5264.5	977.3	0.8143603
5056	1662.5	239.4	4249.1	4009.7	0.0563413	1316.9	4299	5256.1	957.1	0.8179068
5057	325.1	17.3	260.5	243.2	0.0664107	249.8	34	200.7	166.7	0.1694071
5058	281.7	15	272	257	0.0551471	225.7	32.2	201.9	169.7	0.1594849
5059	277.8	12	99.6	87.6	0.1204819	200.5	63.1	246.4	183.3	0.2560877
5060	261.8	11.9	85.7	73.8	0.1388565	183.1	60.7	222.5	161.8	0.272809
5061	386.2	11.6	103.6	92	0.1119691	231.8	56	260.4	204.4	0.2150538
5062	273.6	9.6	87.3	77.7	0.1099656	175.8	61.4	219.9	158.5	0.2792178
TOPLAM				6431.4					2926.8	
TOPLAM				17266.5					4586.3	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
6005	213.8	10.9	145.7	134.8	0.0748113	214.3	12.3	52.5	40.2	0.2342857
6006	239.9	12.2	142.4	130.2	0.0856742	199	11.8	50.7	38.9	0.2327416
6026	1296.6	216.9	6079.4	5862.5	0.0356779	927.7	1335.5	4814.5	3479	0.2773912
6046	246.3	12.6	141.4	128.8	0.0891089	163	14.2	51.2	37	0.2773438
6047	245.3	12.5	140.7	128.2	0.0888415	164.8	14.3	53.2	38.9	0.268797
6053	1517.2	218.5	4434.2	4215.7	0.0492761	847.7	3920	4852.1	932.1	0.8078976
6054	1569	225.9	4250	4024.1	0.0531529	1246.3	3908	5321.1	1413.1	0.7344346
6055	1518.6	218.7	4195	3976.3	0.0521335	1203.4	3905.1	5226.5	1321.4	0.7471731
6056	1502.6	216.4	4157.5	3941.1	0.0520505	1191.7	3915.9	5218.1	1302.2	0.7504456
6057	297.8	15.9	273.9	258	0.0580504	227.8	34	205.7	171.7	16.61157
6058	259.4	13.8	304.7	290.9	0.0452904	206.9	32.4	209.7	177.3	0.1545064
6059	246.7	15	113.7	98.7	0.1319261	178.3	49.7	280.3	230.6	0.17731
6060	232.4	14.7	85.3	70.6	0.1723329	162.3	44.2	226.7	182.5	0.1949713

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
6061	345.1	10.4	103.5	93.1	0.1004831	206	52.3	266.3	214	0.196395
6062	242	11.4	86.7	75.3	0.1314879	154.6	46.2	223.4	177.2	0.2068039
TOPLAM				6384.5					3634	
TOPLAM				17043.8					6122.1	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
7005	190.2	9.7	143.6	133.9	0.0675487	194.6	12.9	52.6	39.7	0.2452471
7006	210.8	10.8	146.9	136.1	0.0735194	178.8	11.8	50.9	39.1	0.2318271
7026	1172.1	196	5932.8	5736.8	0.0330367	839.1	1040.1	4269.5	3229.4	0.2436117
7046	216.5	11	146.1	135.1	0.0752909	143	13.6	51.7	38.1	0.2630561
7047	215.6	11	145.4	134.4	0.0756534	145	13.7	53.6	39.9	0.255597
7053	1353.8	194.9	3719	3524.1	0.0524066	756	3536.5	4171.6	635.1	0.8477563
7054	1399.6	201.5	3891	3689.5	0.0517862	1111.9	3525.6	4939.3	1413.7	0.7137854
7055	1355.2	195.1	3843.6	3648.5	0.0507597	1074	3523.1	4854.1	1331	0.7257988
7056	1339.3	192.9	3806.9	3614	0.0506711	1062.5	3532.8	4845.5	1312.7	0.7290888
7057	268.2	14.3	250.9	236.6	0.0569948	204.2	34.9	190.6	155.7	0.183106
7058	234.7	12.5	278.7	266.2	0.0448511	186.4	32.3	192.1	159.8	0.1681416
7059	218.1	16.9	105.2	88.3	0.1606464	157.8	51.6	260.5	208.9	0.1980806
7060	205.4	16.5	77.7	61.2	0.2123552	143.3	45.7	207.7	162	0.2200289
7061	309.8	9.3	94.4	85.1	0.0985169	184.5	51.1	244	192.9	0.2094262
7062	216	12.8	79.3	66.5	0.1614124	137.7	47.7	205.6	157.9	0.2320039
TOPLAM				6276.3					3386.2	
TOPLAM				15280					5729.7	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
8005	166	8.5	136.9	128.4	0.0620891	169.3	13.5	53	39.5	0.254717
8006	182.4	9.3	142.4	133.1	0.065309	155	11.8	51.4	39.6	0.229572
8026	1040.7	174.1	5679.1	5505	0.0306563	745.4	783.2	4181.3	3398.1	0.1873102

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
8046	187.3	9.6	143.7	134.1	0.0668058	123.5	13.5	52.1	38.6	0.2591171
8047	186.5	9.5	142.6	133.1	0.0666199	125.6	13.6	53.9	40.3	0.2523191
8053	1187.8	171	3490.7	3319.7	0.0489873	663.7	3153	4022.8	869.8	0.7837824
8054	1227.4	176.7	3654.9	3478.2	0.0483461	974.8	3143.3	4717.8	1574.5	0.6662639
8055	1188.5	171.1	3615	3443.9	0.0473306	941.4	3141	4640.6	1499.6	0.6768521
8056	1173.3	169	3579.5	3410.5	0.0472133	930.5	3149.7	4632.5	1482.8	0.6799137
8057	236.9	12.6	244.8	232.2	0.0514706	179.5	34.8	183.9	149.1	0.1892333
8058	208.3	11.1	286.9	275.8	0.0386894	164.5	32	194.9	162.9	0.1641868
8059	188.6	18.6	100.9	82.3	0.1843409	136.6	50.1	254.3	204.2	0.1970114
8060	177.8	18.1	73.5	55.4	0.2462585	123.9	43.5	199.7	156.2	0.2178267
8061	267.7	8	88.8	80.8	0.0900901	158.9	49.6	233.8	184.2	0.2121471
8062	185.9	13.7	74.8	61.1	0.1831551	118.1	46.1	197.2	151.1	0.2337728
TOPLAM				6033.7					3556.1	
TOPLAM				14439.9					6434.4	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
9005	141.7	7.2	129.8	122.6	0.05547	143.7	13.7	53.6	39.9	0.255597
9006	154.5	7.9	134.5	126.6	0.0587361	131.5	11.8	52	40.2	0.2269231
9026	903.1	151	5359.7	5208.7	0.0281732	647.1	561.3	4080	3518.7	0.1375735
9046	158.5	8.1	135.6	127.5	0.0597345	104.4	13.2	51	37.8	0.2588235
9047	157.9	8.1	134.5	126.4	0.060223	106.6	13.3	53.2	39.9	0.25
9053	1019.5	146.8	3231.2	3084.4	0.045432	570.6	2769.5	3872.7	1103.2	0.7151341
9054	1052.9	151.6	3397.1	3245.5	0.0446263	835.5	2761	4492.9	1731.9	0.6145251
9055	1019.1	146.7	3359.4	3212.7	0.0436685	806.5	2759	4423.1	1664.1	0.6237707
9056	1005	144.7	3326	3181.3	0.0435057	796.4	2766.6	4416.1	1649.5	0.6264804
9057	204.2	10.9	237.8	226.9	0.0458368	153.9	34.4	176.9	142.5	0.1944601
9058	180.4	9.6	271.3	261.7	0.0353852	141.7	31.4	176.9	145.5	0.1775014
9059	160.8	20	96.8	76.8	0.2066116	116.7	49.5	247.8	198.3	0.1997579
9060	151.7	19.3	69.3	50	0.2784993	105.7	42.5	191.7	149.2	0.2217006

EC YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
9061	231.6	7	83.7	76.7	0.083632	137.4	47.8	224.6	176.8	0.2128228
9062	160.9	14.8	70.8	56	0.2090395	102.3	45	190.1	145.1	0.2367175
TOPLAM				5711.8					3676.5	
TOPLAM				13472					7106.1	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
10005	117.1	6	117.4	111.4	0.0511073	118.2	13.8	49.3	35.5	0.2799189
10006	127.1	6.5	121.2	114.7	0.0536304	108.1	11.7	47.7	36	0.245283
10026	761.1	127.3	4938	4810.7	0.0257797	545.4	459.5	3728.8	3269.3	0.12323
10046	130.1	6.6	122.1	115.5	0.0540541	85.4	13	47	34	0.2765957
10047	129.7	6.6	121	114.4	0.0545455	87.9	13.2	49.1	35.9	0.2688391
10053	849.5	122.3	2968.9	2846.6	0.0411937	704.9	2386	4089.2	1703.2	0.5834882
10054	876.6	126.2	3125.2	2999	0.0403814	694.8	2378.7	4265.7	1887	0.5576342
10055	847.3	122	3094.5	2972.5	0.0394248	669.7	2376.9	4202.8	1825.9	0.5655515
10056	834.7	120.2	3063.6	2943.4	0.0392349	660.7	2383.5	4197	1813.5	0.5679056
10057	170.4	9.1	228.8	219.7	0.0397727	127.7	33.8	169.4	135.6	0.1995277
10058	151.5	8.1	276.4	268.3	0.0293054	118.2	30.8	178.1	147.3	0.1729366
10059	132.1	21	92.2	71.2	0.2277657	96	47.8	240.7	192.9	0.1985875
10060	124.7	20.2	64.8	44.6	0.3117284	86.9	40.3	182.7	142.4	0.2205802
10061	189.3	5.7	77.3	71.6	0.0737387	111.9	46.1	212.7	166.6	0.2167372
10062	131.8	15.2	66	50.8	0.230303	83.6	43.4	181.1	137.7	0.2396466
TOPLAM				5266.7					3410.7	
TOPLAM				12487.7					8152.1	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
11005	92.5	5.4	109.7	104.3	0.0492252	92.7	13.7	49.4	35.7	0.2773279
11006	100	5.1	113	107.9	0.0451327	85	11.5	47	35.5	0.2446809
11026	615.2	102.9	4637.5	4534.6	0.0221887	440.9	397.5	3621.4	3223.9	0.1097642

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
11046	102.1	5.2	113.7	108.5	0.0457344	66.7	13.1	45.8	32.7	0.2860262
11047	101.8	5.2	112.7	107.5	0.0461402	69.3	13.1	47.9	34.8	0.2734864
11053	678.2	97.7	2704.5	2606.8	0.036125	561.5	2002.5	3858	1855.5	0.5190513
11054	698.9	100.6	2851.2	2750.6	0.0352834	553.2	1996.4	4036.9	2040.5	0.4945379
11055	673.6	97	2826.6	2729.6	0.0343168	531.6	1994.9	3980.2	1985.3	0.501206
11056	662.9	95.5	2798.8	2703.3	0.0341218	523.9	2000.4	3976.3	1975.9	0.5030808
11057	135.8	7.2	217.6	210.4	0.0330882	101.1	32.9	161.7	128.8	0.2034632
11058	121.7	6.5	258.1	251.6	0.025184	94.3	29.8	163.3	133.5	0.1824862
11059	104.9	21.7	87.8	66.1	0.2471526	76.5	46.6	233.4	186.8	0.1996572
11060	99	20.8	72.2	51.4	0.2880886	68.9	39	196.8	157.8	0.1981707
11061	153.2	5.5	71.5	66	0.0769231	90.6	44.2	201.7	157.5	0.2191373
11062	107.7	15.7	73.7	58	0.2130258	68.5	42	196.6	154.6	0.2136317
TOPLAM				4962.8					3362.6	
TOPLAM				11493.8					8776.2	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
12005	68	6.1	101.6	95.5	0.0600394	67.6	13.6	47.8	34.2	0.2845188
12006	73.3	4.3	104.3	100	0.0412272	62	11.6	45.5	33.9	0.2549451
12026	466.8	78.1	4331.6	4253.5	0.0180303	334.4	335.5	3502.7	3167.2	0.0957833
12046	74.3	6.3	104.7	98.4	0.0601719	48	13.3	44	30.7	0.3022727
12047	74.2	5.8	103.7	97.9	0.0559306	50.9	13.8	46.5	32.7	0.2967742
12053	505.8	72.8	2438.6	2365.8	0.0298532	417.7	1619	3626.1	2007.1	0.4464852
12054	520	74.9	2575.4	2500.5	0.0290829	411	1614	3807.2	2193.2	0.4239336
12055	498.2	71.7	2556.2	2484.5	0.0280494	392.6	1612.9	3756.3	2143.4	0.4293853
12056	489.9	74.3	2532.3	2458	0.0293409	386.5	1617.3	3754.5	2137.2	0.4307631
12057	100.5	5.4	204.6	199.2	0.026393	74.4	34.2	153.9	119.7	0.2222222
12058	91.4	6.2	245.6	239.4	0.0252443	70.2	30.4	162.5	132.1	0.1870769
12059	76.6	22.8	83	60.2	0.2746988	56.1	46.4	246.9	200.5	0.1879303
12060	72.2	21.6	67.4	45.8	0.3204748	50.2	37.9	188	150.1	0.2015957

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
12061	111	5.6	64.3	58.7	0.0870918	65.2	44	187.9	143.9	0.2341671
12062	79.4	16.3	68.7	52.4	0.2372635	50.4	42	188	146	0.2234043
TOPLAM				4645.3					3298.7	
TOPLAM				10464.5					9373.2	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
13005	43.5	5.4	93.7	88.3	0.0576307	42.9	12.9	47.9	35	0.2693111
13006	46.8	2.7	100	97.3	0.027	39.2	10.8	45.2	34.4	0.2389381
13026	317	53	4187.8	4134.8	0.0126558	215.5	273.5	3591.9	3318.4	0.0761435
13046	46.7	3.5	99.9	96.4	0.035035	29.5	12.8	44.1	31.3	0.2902494
13047	46.8	5.4	98.9	93.5	0.0546006	30.8	12.7	46.6	33.9	0.2725322
13053	332.9	47.9	2171.8	2123.9	0.0220554	273.9	1235.5	3394.2	2158.7	0.3640033
13054	340.5	49	2298.6	2249.6	0.0213173	268.8	1231.7	3577.5	2345.8	0.3442907
13055	321.4	84.3	2283.5	2199.2	0.036917	253.1	1230.8	3531.5	2300.7	0.3485205
13056	316.3	70	2264.7	2194.7	0.0309092	248.8	1234.2	3532.2	2298	0.349414
13057	65	4.4	191	186.6	0.0230366	47.8	29.4	145.5	116.1	0.2020619
13058	60.7	6.1	218	211.9	0.0279817	46	26.5	147.3	120.8	0.179905
13059	49.8	21.6	78.4	56.8	0.2755102	36.7	42.5	217.3	174.8	0.1955821
13060	46.4	20.6	62.8	42.2	0.3280255	32.2	35	178.6	143.6	0.1959686
13061	75.1	5.2	58.1	52.9	0.0895009	44	41.1	175.9	134.8	0.2336555
13062	56.1	14.4	64.5	50.1	0.2232558	35.7	37.8	180.5	142.7	0.2094183
TOPLAM				4510.3					3453	
TOPLAM				9367.9					9936	

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
14005	19	10.6	86.8	76.2	0.1221198	17.8	18.1	50.9	32.8	0.3555992
14006	20.3	12.8	85.9	73.1	0.1490105	16.5	15.4	43.2	27.8	0.3564815
14026	163.9	74.1	3867.7	3793.6	0.0191587	111.8	211.5	3465.6	3254.1	0.0610284

No	N	Mx	Mxr	Mxr-Mx	Mx/Mrx	N	My	Myr	Myr-My	My/Mry
14046	19.2	19.3	90.6	71.3	0.2130243	15.7	17.8	42.5	24.7	0.4188235
14047	19.5	10.4	87.3	76.9	0.1191294	14.2	19.7	42.6	22.9	0.4624413
14053	159.2	33.5	1890.9	1857.4	0.0177164	129.9	852	3129.3	2277.3	0.2722654
14054	160.1	24.6	2007.6	1983	0.0122534	126.3	849.4	3314.5	2465.1	0.2562679
14055	143.7	94	2005.5	1911.5	0.0468711	87.5	848.8	3257.3	2408.5	0.2605839
14056	142.4	71.7	1993.3	1921.6	0.0359705	87.5	851.1	3264.6	2413.5	0.2607058
14057	19.1	4.7	176.5	171.8	0.0266289	21.1	52.2	137.1	84.9	0.380744
14058	29.7	1.4	277	275.6	0.0050542	21.7	47	168.9	121.9	0.2782712
14059	21.8	33.9	88.3	54.4	0.3839185	16.4	81.9	265.9	184	0.3080105
14060	19	30.4	73.3	42.9	0.414734	12.8	61	211.5	150.5	0.2884161
14061	32.8	7.3	50.7	43.4	0.1439842	18.4	69.7	160.2	90.5	0.4350811
14062	29.3	29.2	80.2	51	0.3640898	18.6	83.1	242.2	159.1	0.3431049
TOPLAM				4091.1					3362.3	
TOPLAM				8312.6					10355.3	

Z1P2				
Kat	Mevcut Perdeler		Ek Perde ve Mantolar	
	Mxr-Mx	Myr-My	Mxr-Mx	Myr-My
1	80309	3527	22665	6254
2	81537	3492	22227	6498
3	6475	2453	22661	6294
4	6466	2665	18493	4383
5	6431	2927	17267	4586
6	6385	3634	17044	6122.1
7	6276	3386	15280	5730
8	6034	3556	14440	6434
9	5712	3677	13472	7106
10	5267	3411	12488	8152
11	4963	3363	11494	8776
12	4645	3299	10465	9373
13	4510	3453	9368	9936
14	4091	3362	8313	10355

EK 5 Hesap Raporları

MEVCUT PROJE

PROJE İSMİ.....:soyak gokyuzu evleri b-blok
KAT ADEDİ.....: 14
Bir kattaki KOLON SAYISI.....: 55
X yönü aks sayısı.....: 32
Y yönü aks sayısı.....: 23
DEPREM KATSAYISI.....(Ao).: .4
YAPI TİPİ KATSAYISI.....(R)..: 4
YAPI ÖNEM KATSAYISI.....(I)..: 1
ZEMİN HAKİM TİTREŞİM PERYODU..(Ta/Tb).: .1 / .3
HAREKETLİ YÜK KATSAYISI.....(n)..: .3
SIFIR RÖLATİF HAREKET YÜKSEKLİĞİ (m)..:.00
ZEMİN EMNİYET GERİLMESİ..... (t/m²)..:30.0
ZEMİN YATAK KATSAYISI..... (t/m³)..:4500.0
BETON YOĞUNLUĞU.....(t/m³)..:2.5
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETONARME KESİT DONATI HESAP YÖNTEMİ .....:BRÜT KESİTE GÖRE
DEPREM HESABI YÖNTEMİ .....:MOD SÜPERPOZİSYONU İLE DİNAMİK ANALİZ
TEMEL ANALİZ OPSİYONU.....:TEMELLER DİKKATE ALINMADAN, YAPI ANALİZİ
Zemin gerilmesi hareketli yük azaltma degeri..:.60
Zemin gerilmesi deprem azaltması.....:.50
Zemin gerilmesi rüzgar azaltması.....:.25
Kolonun oturduğu kiriş tesir çarpanı.....: 1.5
Kiriş & Kolon rijitlik bölgesi opsiyonu.....: Rijit davranış
Kiriş uçlarında elastik ankastrelik opsiyonu : Elastik ankastre

BETON ve ÇELİK MALZEME BİLGİLERİ	Kiriş\Kolon	Döşeme	Temel
Beton dayanım gerilmesi (kg/cm²)	250\250	250	250
Çelik akma gerilmesi (kg/cm²)	4200	4200	4200
Çelik akma gerilmesi (kg/cm²) (Etriye)	4200		4200

TAŞIMA GÜCÜ MALZEME KATSAYILARI	BETON 1.30	ÇELİK 1.10
TAŞIMA GÜCÜ YÜK KATSAYILARI	SABİT YÜK 1.40	HAREKETLİ YÜK 1.60

ELASTİSİTE MODÜLÜ (kg/cm²)

BS30	E1=	318000	G1=	127200
BS25	E2=	302500	G2=	121000

BETONARME HESAP YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

ZEMİN GERİLMESİ HAREKETLİ YÜK AZALTMA DEĞERLERİ

Kat	1	2	3	4	5	6	7	8	9	10
Eksiltme %				20	40	60	80	80	80	40

DEPREM RAPORU

Deprem yükü eksantirisitesi : 0.050
Dinamik Analiz min. deprem yükü oranı ß : 1.0

DİNAMİK ANALİZ BİLGİLERİ
TASARIM SPECTURUM BİLGİSİ

T (s)	Sa (m/s²) Ao.I.S(t)
0.00	4.000
0.10	10.000
0.30	10.000
0.40	7.944
0.50	6.644
0.60	5.744
0.70	5.076
0.80	4.564
0.90	4.152
1.00	3.816
1.10	3.536
1.20	3.300
1.30	3.096
1.40	2.916
1.50	2.800
5.00	2.800

MODAL ANALIZ - YAPI PERYOD ve VEKTORLERI

Mod w T yon	1.mod 4.47 1.4067 b	2.mod 4.78 1.3149 y	3.mod 6.34 0.9916 x	4.mod 14.28 0.4400 b	5.mod 17.93 0.3505 y	6.mod 23.86 0.2633 x	7.mod 25.91 0.2425 b	8.mod 39.01 0.1611 y	9.mod 39.38 0.1596 b
1x	0.00000	0.00000	0.00061	0.00000	-0.00001	0.00352	0.00001	-0.00001	-0.00003
2x	0.00001	-0.00001	0.00183	0.00002	-0.00002	0.00909	0.00005	-0.00004	-0.00003
3x	0.00007	-0.00009	0.01236	0.00006	-0.00013	0.04855	0.00013	-0.00018	-0.00034
4x	0.00017	-0.00018	0.02460	0.00015	-0.00023	0.08508	0.00031	-0.00027	-0.00042
5x	0.00028	-0.00030	0.03905	0.00024	-0.00032	0.11702	0.00049	-0.00027	-0.00035
6x	0.00042	-0.00043	0.05485	0.00032	-0.00036	0.13738	0.00066	-0.00017	-0.00011
7x	0.00057	-0.00057	0.07130	0.00039	-0.00035	0.14188	0.00077	-0.00001	0.00011
8x	0.00073	-0.00071	0.08787	0.00043	-0.00029	0.12871	0.00079	0.00017	0.00022
9x	0.00091	-0.00085	0.10410	0.00045	-0.00019	0.09856	0.00068	0.00030	0.00016
10x	0.00108	-0.00099	0.11967	0.00044	-0.00006	0.05419	0.00042	0.00030	0.00003
11x	0.00126	-0.00111	0.13435	0.00039	0.00008	-0.00001	0.00005	0.00018	-0.00007
12x	0.00144	-0.00123	0.14801	0.00031	0.00019	-0.05891	-0.00039	-0.00003	-0.00004
13x	0.00162	-0.00133	0.16069	0.00020	0.00027	-0.11769	-0.00084	-0.00026	0.00007
14x	0.00179	-0.00139	0.17247	0.00008	0.00021	-0.17240	-0.00123	-0.00031	0.00015
1y	0.00054	0.00300	0.00002	0.00052	0.01507	0.00005	0.00047	0.03812	0.00614
2y	0.00159	0.00884	0.00006	0.00135	0.03956	0.00011	0.00108	0.08677	0.01379
3y	0.00365	0.01966	0.00013	0.00287	0.07517	0.00017	0.00217	0.12999	0.02090
4y	0.00592	0.03130	0.00020	0.00425	0.10397	0.00019	0.00290	0.13849	0.02223
5y	0.00853	0.04459	0.00028	0.00540	0.12571	0.00020	0.00304	0.11252	0.01758
6y	0.01136	0.05892	0.00037	0.00608	0.13596	0.00022	0.00245	0.05689	0.00797
7y	0.01430	0.07372	0.00046	0.00614	0.13233	0.00023	0.00128	-0.01294	-0.00354
8y	0.01725	0.08858	0.00055	0.00551	0.11418	0.00023	-0.00011	-0.07729	-0.01339
9y	0.02016	0.10316	0.00064	0.00423	0.08263	0.00022	-0.00130	-0.11750	-0.01869
10y	0.02296	0.11718	0.00073	0.00241	0.04016	0.00018	-0.00193	-0.12116	-0.01803
11y	0.02561	0.13048	0.00081	0.00019	-0.00972	0.00009	-0.00185	-0.08577	-0.01178
12y	0.02811	0.14298	0.00090	-0.00223	-0.06318	-0.00004	-0.00112	-0.01871	-0.00155
13y	0.03046	0.15472	0.00099	-0.00469	-0.11674	-0.00023	0.00004	0.06546	0.01048
14y	0.03267	0.16574	0.00109	-0.00709	-0.16744	-0.00052	0.00136	0.14995	0.02208
1b	0.00001	0.00000	0.00000	0.00005	0.00000	0.00000	0.00010	-0.00003	0.00017
2b	0.00004	-0.00001	0.00000	0.00014	-0.00001	0.00000	0.00027	-0.00007	0.00044
3b	0.00113	-0.00024	-0.00002	0.00375	-0.00022	-0.00005	0.00652	-0.00145	0.00887
4b	0.00250	-0.00052	-0.00005	0.00770	-0.00042	-0.00007	0.01182	-0.00216	0.01307
5b	0.00406	-0.00083	-0.00007	0.01115	-0.00057	-0.00009	0.01343	-0.00151	0.00866
6b	0.00566	-0.00115	-0.00009	0.01318	-0.00064	-0.00007	0.00991	0.00019	-0.00219
7b	0.00722	-0.00146	-0.00011	0.01330	-0.00060	-0.00004	0.00252	0.00174	-0.01145
8b	0.00869	-0.00174	-0.00013	0.01144	-0.00046	0.00001	-0.00582	0.00202	-0.01224
9b	0.01003	-0.00199	-0.00013	0.00784	-0.00025	0.00006	-0.01179	0.00087	-0.00397
10b	0.01122	-0.00222	-0.00014	0.00303	-0.00001	0.00008	-0.01299	-0.00086	0.00720
11b	0.01223	-0.00240	-0.00014	-0.00230	0.00022	0.00008	-0.00890	-0.00188	0.01295
12b	0.01305	-0.00254	-0.00013	-0.00740	0.00039	0.00004	-0.00109	-0.00145	0.00893
13b	0.01369	-0.00264	-0.00012	-0.01160	0.00048	-0.00001	0.00757	0.00016	-0.00229
14b	0.01416	-0.00270	-0.00011	-0.01466	0.00047	-0.00006	0.01457	0.00200	-0.01403
Mxr%	0.005	0.004	61.936	0.001	0.000	13.005	0.000	0.000	0.000
Myr%	2.428	63.773	0.003	0.036	15.729	0.000	0.004	7.330	0.183
Mbr%	56.230	2.189	0.008	8.252	0.017	0.000	3.219	0.049	1.768

Mod w T yon	10.mod 51.42 0.1222 x	11.mod 55.24 0.1137 b	12.mod 65.12 0.0965 y	13.mod 73.56 0.0854 b	14.mod 84.94 0.0740 x	15.mod 94.18 0.0667 y	16.mod 94.35 0.0666 b	17.mod 116.33 0.0540 b	18.mod 121.32 0.0518 x	
1x	0.00992	0.00001	-0.00007	-0.00004	0.02087	-0.00014	0.00016	-0.00029	0.03965	
2x	0.02301	0.00006	-0.00015	-0.00003	0.04358	-0.00023	0.00037	-0.00048	0.07395	
3x	0.09672	-0.00007	-0.00050	-0.00055	0.13434	-0.00091	0.00051	-0.00165	0.14641	
4x	0.14087	0.00011	-0.00054	-0.00030	0.14143	-0.00036	0.00086	-0.00007	0.07674	-
5x	0.14573	0.00044	-0.00032	0.00038	0.06455	0.00049	0.00084	0.00125	-0.06719	
6x	0.10522	0.00065	0.00002	0.00058	-0.05130	0.00031	-0.00030	0.00026	-0.13959	
7x	0.03170	0.00041	0.00024	0.00006	-0.13256	-0.00017	-0.00116	0.00019	-0.06741	
8x	-0.05049	-0.00014	0.00025	-0.00032	-0.12755	0.00007	-0.00054	0.00025	0.07533	
9x	-0.11330	-0.00057	0.00008	-0.00007	-0.04082	0.00029	0.00029	-0.00132	0.14208	
10x	-0.13457	-0.00056	-0.00011	0.00022	0.07076	-0.00016	0.00019	-0.00108	0.06410	
11x	-0.10573	-0.00021	-0.00019	-0.00005	0.13332	-0.00035	0.00008	0.00125	-0.07643	
12x	-0.03374	0.00011	-0.00009	-0.00043	0.10269	0.00016	0.00054	0.00117	-0.13197	
13x	0.06180	0.00018	0.00011	-0.00012	-0.00757	0.00023	0.00036	-0.00042	-0.03931	
14x	0.15672	0.00024	0.00014	0.00051	-0.13944	-0.00023	-0.00076	-0.00051	0.12320	
1y	0.00022	-0.00019	0.06930	-0.00055	0.00064	0.07025	-0.06202	0.00074	0.00155	
2y	0.00044	-0.00058	0.13035	-0.00120	0.00101	0.10201	-0.09029	0.00053	0.00162	
3y	0.00049	-0.00030	0.12726	-0.00055	0.00049	0.03303	-0.02831	0.00016	-0.00074	
4y	0.00037	-0.00017	0.06240	-0.00013	-0.00026	-0.05503	0.04878	-0.00137	-0.00191	
5y	0.00019	-0.00045	-0.03335	-0.00010	-0.00068	-0.09842	0.08597	-0.00099	-0.00084	
6y	0.00003	-0.00052	-0.11066	0.00055	-0.00054	-0.05867	0.05192	0.00167	0.00112	
7y	-0.00008	0.00018	-0.12886	0.00156	-0.00006	0.02986	-0.02538	0.00124	0.00162	
8y	-0.00012	0.00125	-0.07874	0.00131	0.00033	0.09324	-0.08275	-0.00088	0.00019	
9y	-0.00013	0.00163	0.01227	-0.00056	0.00035	0.08032	-0.07206	-0.00055	-0.00134	
10y	-0.00014	0.00076	0.09499	-0.00208	0.00006	0.00261	-0.00156	-0.00023	-0.00116	
11y	-0.00015	-0.00071	0.12390	-0.00152	-0.00021	-0.07516	0.06803	-0.00087	0.00040	
12y	-0.00012	-0.00146	0.08009	0.00024	-0.00020	-0.08640	0.07600	0.00063	0.00136	
13y	-0.00004	-0.00085	-0.01954	0.00115	0.00008	-0.01572	0.01241	0.00165	0.00047	
14y	0.00026	0.00072	-0.13433	0.00063	0.00018	0.09104	-0.08002	-0.00124	-0.00119	
1b	0.00000	0.00028	0.00001	0.00045	0.00000	0.00049	0.00053	0.00118	0.00001	
2b	0.00000	0.00069	0.00001	0.00102	0.00000	0.00102	0.00113	0.00231	0.00002	
3b	-0.00004	0.01094	0.00008	0.01232	-0.00001	0.00862	0.00974	0.01261	0.00012	
4b	0.00000	0.01167	0.00004	0.00732	0.00005	0.00075	0.00084	-0.00544	0.00001	
5b	0.00004	-0.00022	-0.00009	-0.00919	0.00004	-0.00884	-0.01008	-0.01020	-0.00010	
6b	0.00005	-0.01213	-0.00006	-0.01124	-0.00003	0.00009	0.00000	0.01138	0.00004	
7b	0.00002	-0.00999	0.00012	0.00497	-0.00005	0.00884	0.01001	0.00312	0.00003	
8b	-0.00003	0.00375	0.00021	0.01306	0.00001	-0.00118	-0.00124	-0.01329	-0.00008	
9b	-0.00005	0.01317	0.00005	-0.00018	0.00003	-0.00874	-0.00977	0.00511	0.00005	
10b	-0.00002	0.00737	-0.00019	-0.01315	-0.00001	0.00222	0.00255	0.01016	0.00009	
11b	0.00002	-0.00692	-0.00022	-0.00472	-0.00002	0.00848	0.00946	-0.01142	-0.00010	
12b	0.00003	-0.01301	-0.00003	0.01126	0.00003	-0.00313	-0.00371	-0.00326	-0.00004	
13b	0.00001	-0.00335	0.00014	0.00825	0.00004	-0.00765	-0.00864	0.01303	0.00009	
14b	-0.00003	0.01320	0.00007	-0.01164	-0.00005	0.00643	0.00744	-0.00802	-0.00004	
Mxr%	5.480	0.000	0.000	0.000	3.575	0.000	0.000	0.000	3.296	∑= 87.3
Myr%	0.000	0.000	4.658	0.000	0.000	1.507	1.170	0.000	0.000	∑= 96.8
Mbr%	0.000	1.187	0.000	0.925	0.000	0.382	0.472	0.972	0.000	

Mxr=∑[(∑m.Φ)²/Mr]= %87.30 > %90.00 **Dinamik kütle oranı yeterli.** ✓

Myr=∑[(∑m.Φ)²/Mr]= %96.82 > %90.00 **Dinamik kütle oranı yeterli.** ✓

EŞDEĞER DEPREM HESABI 1. DOĞAL TİTREŞİM PERYODUNUN KONTROLU

Hn= m $\sum Atx^{3/4}$= >> Ctx= $\sum Aty$= >> Cty=

$T1x=Ctx \cdot Hn^{3/4}$ = s. < 1.0 Tx= s. ✓

$T1y=Cty \cdot Hn^{3/4}$ = s. < 1.0 Ty= s. ✓

KAT KÜTLESİ ve RİJİTLİK MERKEZİ (t)

Kat no	H (m)	Wg	Wq	Xg (m)	Xr (m)	Yg (m)	Yr (m)	∑Wk
1	3.50	1007.02	211.70	18.20	19.10	14.72	14.69	1070.532
2	6.71	979.88	211.70	18.20	19.10	14.72	14.69	1043.393
3	10.21	717.38	207.30	18.90	19.13	14.73	14.76	779.567
4	13.15	683.34	198.08	18.90	19.13	14.79	14.76	742.768
5	16.09	687.95	203.04	18.89	19.13	14.80	14.76	748.864
6	19.03	678.73	198.10	18.90	19.13	14.78	14.76	738.164
7	21.97	687.95	203.04	18.89	19.13	14.80	14.76	748.864
8	24.91	678.73	198.10	18.90	19.13	14.78	14.76	738.164
9	27.85	687.95	203.04	18.89	19.13	14.80	14.76	748.864
10	30.79	678.73	198.10	18.90	19.13	14.78	14.76	738.164
11	33.73	687.95	203.04	18.89	19.13	14.80	14.76	748.864
12	36.67	678.73	198.10	18.90	19.13	14.78	14.76	738.164
13	39.61	687.95	203.04	18.89	19.13	14.80	14.76	748.864
14	42.55	589.58	144.83	18.95	19.13	14.73	14.76	633.026

∑Wt = 10966.264

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

DEPREM KUVVETİ (t)
Deprem tepe yükü Ftx= 73.12 Fty= 77.37 (t)

	X YÖNÜ			Y YÖNÜ			
Kat no	Modal Analiz	Eşdeğer dep.yön.	Deprem yükü	Modal Analiz	Eşdeğer dep.yön.	Deprem yükü	Kat tipi
1	32.950	15.184	42.654	30.957	11.821	35.972	NORMAL
2	25.963	28.372	33.609	45.853	22.087	53.282	NORMAL
3	32.876	32.255	42.558	42.158	25.110	48.988	NORMAL
4	40.527	39.582	52.462	41.773	30.814	48.540	NORMAL
5	46.139	48.830	59.727	40.333	38.013	46.868	NORMAL
6	45.551	56.927	58.967	35.893	44.317	41.708	NORMAL
7	43.591	66.674	56.430	31.942	51.905	37.117	NORMAL
8	39.611	74.516	51.276	28.115	58.010	32.670	NORMAL
9	40.136	84.519	51.957	28.185	65.797	32.751	NORMAL
10	45.161	92.106	58.462	32.346	71.703	37.586	NORMAL
11	59.103	102.363	76.510	43.928	79.688	51.044	NORMAL
12	83.836	109.695	108.527	64.557	85.396	75.015	NORMAL
13	116.447	120.208	150.741	108.034	93.580	125.536	NORMAL
14	161.938	182.279	209.630	149.321	162.346	173.511	UST KAT
Σ	813.829	1053.510	1053.510	723.395	840.589	840.589	GENEL

Vt=W.A(t) / Ra(t)> 0,10. Ao.I.W 1053.51 , 840.59 > 438.65
X Deprem kontrol: 1.00 x 1053.510 = 1053.510 > 813.829 >>> 1053.510
Y Deprem kontrol: 1.00 x 840.589 = 840.589 > 723.395 >>> 840.589

Rüzgar kuvvetleri (t)

Kat no	X-yönü F	X-yönü ey m	Y-yönü F	Y-yönü ex m
1	6.174	17.975	7.550	14.700
2	5.662	17.975	6.924	14.700
3	8.870	18.950	8.938	14.700
4	7.451	18.950	7.508	14.700
5	7.451	18.950	7.508	14.700
6	7.451	18.950	7.508	14.700
7	10.245	18.950	10.323	14.700
8	10.245	18.950	10.323	14.700
9	10.245	18.950	10.323	14.700
10	10.245	18.950	10.323	14.700
11	10.245	18.950	10.323	14.700
12	10.245	18.950	10.323	14.700
13	10.245	18.950	10.323	14.700
14	10.245	18.950	10.323	14.700

Kat Deprem deplasmanları

Kat	9. yükleme		10. yükleme		11. yükleme		12. yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δy (m)	θz (rad)	δy (m)	θz (rad)
1	0.0001869	0.0000009	0.0001870	-0.000000	-0.001218	-0.000000	-0.001215	0.0000010
2	0.0005379	0.0000027	0.0005374	-0.000002	-0.003522	-0.000001	-0.003514	0.0000026
3	0.0035095	0.0000799	0.0035067	-0.000076	-0.007696	-0.000055	-0.007666	0.0000645
4	0.0069218	0.0001771	0.0069128	-0.000164	-0.012127	-0.000124	-0.012070	0.0001364
5	0.0109126	0.0002852	0.0108954	-0.000262	-0.017142	-0.000202	-0.017052	0.0002136
6	0.0152474	0.0003951	0.0152201	-0.000362	-0.022533	-0.000282	-0.022405	0.0002898
7	0.0197615	0.0005020	0.0197224	-0.000458	-0.028131	-0.000362	-0.027962	0.0003625
8	0.0243389	0.0006043	0.0242865	-0.000548	-0.033819	-0.000439	-0.033608	0.0004309
9	0.0288928	0.0007015	0.0288260	-0.000632	-0.039504	-0.000514	-0.039250	0.0004951
10	0.0333542	0.0007927	0.0332719	-0.000710	-0.045112	-0.000585	-0.044816	0.0005547
11	0.0376667	0.0008766	0.0375680	-0.000781	-0.050580	-0.000651	-0.050242	0.0006090
12	0.0417840	0.0009512	0.0416685	-0.000842	-0.055858	-0.000712	-0.055479	0.0006558
13	0.0456802	0.0010138	0.0455474	-0.000892	-0.060919	-0.000767	-0.060500	0.0006921
14	0.0493328	0.0010626	0.0491834	-0.000930	-0.065708	-0.000814	-0.065251	0.0007149

Deprem yapı salınımı: x= 0.00116 y= 0.00154

DEPREM PERDELERİ TABAN MOMENT KONTROLU
Kat deprem momenti (tm)

Kat	H (m)	Fx	Fx . H	Fy	Fy . H
1	3.50	42.65	149.29	35.97	125.90
2	6.71	33.61	225.52	53.28	357.52
3	10.21	42.56	434.52	48.99	500.17
4	13.15	52.46	689.88	48.54	638.31
5	16.09	59.73	961.01	46.87	754.10
6	19.03	58.97	1122.14	41.71	793.70
7	21.97	56.43	1239.76	37.12	815.46
8	24.91	51.28	1277.29	32.67	813.80
9	27.85	51.96	1446.99	32.75	912.12
10	30.79	58.46	1800.04	37.59	1157.28

11	33.73	76.51	2580.67	51.04	1721.72
12	36.67	108.53	3979.69	75.02	2750.80
13	39.61	150.74	5970.87	125.54	4972.49
14	42.55	209.63	8919.75	173.51	7382.91
		Mdx=	30797.42	Mdy=	23696.29

Perde taban momenti (tm)
M : Perde ve Panel deprem momenti
∑Mk : Perdelerde; bağlı olduğu kirişlerin deprem momentlerinin toplamı
Panellerde ise; başlık kolonlarından oluşan deprem momentlerinin toplamıdır.

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1001	5101.62	0.00	5101.62	46.26	188.42	234.68
S1026	1510.63	2804.62	4315.25	4814.09	261.93	5076.02
S1053	5919.30	0.00	5919.30	45.88	169.13	215.01
TOPLAM	12531.55		15336.17	4906.24		5525.72

X yönü αm =15336.17 / 30797.42 = 0.5
Y yönü αm =5525.72 / 23696.29 = 0.23

Perde taban kesme kuvveti oranı :
X yönü Vm =961.07 / 1053.51 = 0.91
Y yönü Vm =386.04 / 840.59 = 0.46

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU
A1,B2 düzensizliklerinin kontrolu
max(di/hi)=0.0035, 0.02/R =.005
1. kat X dust = -.0001869 + -.0000009 x (.12 - 14.69=-.0002006 (S1001)
1. kat X dalt = -.0001869 + -.0000009 x (29.28 - 14.69)=-.0001732 (S1053)
2. kat X dust = -.0005379 + -.0000027 x (.12 - 14.69) - -.0002006 = -.0003772 (S2002)
2. kat X dalt = -.0005379 + -.0000027 x (29.28 - 14.69) - -.0001732 = -.0003248 (S2009)

X YÖNÜ (+%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0002006	0.0001732	0.0001869	1.07	0.53	0.00006	0.00056	Normal kat
2	0.0003772	0.0003248	0.0003510	1.07	0.12	0.00012	0.00107	Normal kat
3	0.0038661	0.0020863	0.0029762	1.30	0.87	0.00110	0.00770	Normal kat
4	0.0045389	0.0022971	0.0034180	1.33	0.86	0.00154	0.01004	Normal kat
5	0.0052448	0.0027498	0.0039973	1.31	0.92	0.00178	0.01130	Normal kat
6	0.0056085	0.0030740	0.0043412	1.29	0.96	0.00191	0.01181	Normal kat
7	0.0057535	0.0032872	0.0045204	1.27	0.99	0.00196	0.01177	Normal kat
8	0.0057640	0.0034028	0.0045834	1.26	1.01	0.00196	0.01123	Normal kat
9	0.0056803	0.0034390	0.0045597	1.25	1.02	0.00193	0.01030	Normal kat
10	0.0055187	0.0034149	0.0044668	1.24	1.03	0.00188	0.00908	Normal kat
11	0.0052858	0.0033490	0.0043174	1.22	1.05	0.00180	0.00772	Normal kat
12	0.0049820	0.0032614	0.0041217	1.21	1.06	0.00169	0.00634	Normal kat
13	0.0046218	0.0031778	0.0038998	1.19	1.07	0.00157	0.00509	Normal kat
14	0.0042185	0.0030926	0.0036555	1.15	0.00	0.00143	0.00375	Normal kat

X YÖNÜ (-%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0001732	0.0002008	0.0001870	1.07	0.53	0.00006	0.00056	Normal kat
2	0.0003272	0.0003736	0.0003504	1.07	0.12	0.00012	0.00107	Normal kat
3	0.0021137	0.0038160	0.0029648	1.29	0.87	0.00109	0.00767	Normal kat
4	0.0023822	0.0044198	0.0034010	1.30	0.86	0.00150	0.00999	Normal kat
5	0.0028435	0.0051098	0.0039767	1.28	0.92	0.00174	0.01124	Normal kat
6	0.0031721	0.0054656	0.0043189	1.27	0.96	0.00186	0.01175	Normal kat
7	0.0033931	0.0056002	0.0044967	1.25	0.99	0.00190	0.01170	Normal kat
8	0.0035163	0.0056013	0.0045588	1.23	1.01	0.00191	0.01117	Normal kat
9	0.0035597	0.0055092	0.0045345	1.21	1.02	0.00187	0.01024	Normal kat
10	0.0035410	0.0053416	0.0044413	1.20	1.03	0.00182	0.00902	Normal kat
11	0.0034790	0.0051050	0.0042920	1.19	1.05	0.00174	0.00768	Normal kat
12	0.0033919	0.0048019	0.0040969	1.17	1.06	0.00163	0.00630	Normal kat
13	0.0033035	0.0044485	0.0038760	1.15	1.07	0.00151	0.00506	Normal kat
14	0.0031917	0.0040757	0.0036337	1.12	0.00	0.00139	0.00373	Normal kat

Y YÖNÜ (+%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0012067	0.0012284	0.0012176	1.01	0.53	0.00035	0.00454	Normal kat
2	0.0022838	0.0023224	0.0023031	1.01	0.55	0.00072	0.00882	Normal kat
3	0.0035344	0.0047930	0.0041637	1.15	0.94	0.00137	0.01402	Normal kat
4	0.0036138	0.0052235	0.0044186	1.18	0.88	0.00178	0.01727	Normal kat
5	0.0040884	0.0059134	0.0050009	1.18	0.93	0.00201	0.01907	Normal kat
6	0.0044336	0.0063179	0.0053758	1.18	0.96	0.00215	0.01983	Normal kat
7	0.0046528	0.0065138	0.0055833	1.17	0.98	0.00222	0.01963	Normal kat
8	0.0047690	0.0065778	0.0056734	1.16	1.00	0.00224	0.01861	Normal kat
9	0.0048004	0.0065428	0.0056716	1.15	1.01	0.00223	0.01696	Normal kat

10	0.0047641	0.0064256	0.0055948	1.15	1.03	0.00219	0.01484	Normal kat
11	0.0046762	0.0062359	0.0054560	1.14	1.04	0.00212	0.01252	Normal kat
12	0.0045526	0.0059811	0.0052669	1.14	1.04	0.00203	0.01015	Normal kat
13	0.0044154	0.0056856	0.0050505	1.13	1.06	0.00193	0.00794	Normal kat
14	0.0042215	0.0053397	0.0047806	1.12	0.00	0.00182	0.00593	Normal kat

Y YÖNÜ (-%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0012338	0.0011993	0.0012166	1.01	0.53	0.00035	0.00453	Normal kat
2	0.0023294	0.0022716	0.0023005	1.01	0.55	0.00073	0.00881	Normal kat
3	0.0048885	0.0034398	0.0041641	1.17	0.94	0.00140	0.01402	Normal kat
4	0.0052584	0.0035760	0.0044172	1.19	0.88	0.00179	0.01727	Normal kat
5	0.0058990	0.0040929	0.0049960	1.18	0.93	0.00201	0.01905	Normal kat
6	0.0062595	0.0044741	0.0053668	1.17	0.96	0.00213	0.01979	Normal kat
7	0.0064204	0.0047211	0.0055708	1.15	0.98	0.00218	0.01959	Normal kat
8	0.0064586	0.0048577	0.0056582	1.14	1.00	0.00220	0.01856	Normal kat
9	0.0064054	0.0049034	0.0056544	1.13	1.01	0.00218	0.01691	Normal kat
10	0.0062746	0.0048781	0.0055763	1.13	1.03	0.00213	0.01479	Normal kat
11	0.0060710	0.0048019	0.0054364	1.12	1.04	0.00206	0.01248	Normal kat
12	0.0057943	0.0046976	0.0052459	1.10	1.04	0.00197	0.01011	Normal kat
13	0.0054526	0.0046028	0.0050277	1.08	1.06	0.00185	0.00790	Normal kat
14	0.0050210	0.0044894	0.0047552	1.06	0.00	0.00171	0.00590	Normal kat

TDY 6.3.2.1 A1 burulma düzensizliği:
1.2< nbi=1.328 <2 , dinamik analizle çözülmüştür ✓
TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓
TDY 6.20 kosulu sağlanmaktadır. .0022 < .0035 ✓
TDY 6.21 koşulu sağlanmaktadır. max θi=.02 < 0.12 ✓
B1-Düşey doğrultudaki düzensizliklerinin kontrolu

Kat	Aw	Agx	Agy	ΣAex	ΣAey	ncix	nciy	AÇIKLAMA
1	15.79	21.64	3.66	37.43	19.45	1.00	1.00	Düzenli ✓
2	15.79	21.64	3.66	37.43	19.45	4.08	1.71	Düzenli ✓
3	2.15	7.02	9.22	9.17	11.37	1.00	1.00	Düzenli ✓
4	2.15	7.02	9.22	9.17	11.37	0.68	0.85	< .8 Düzensiz
5	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
6	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
7	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
8	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
9	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
10	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
11	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
12	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
13	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Düzenli ✓
14	9.75	3.66	3.66	13.41	13.41	1.00	1.00	Üst kat ✓

nci < .8 Duzensiz; R=1.25 x nci x R= 3.42 olarak çözün ×
A4 düzensizliği bulunmamıştır. ✓

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU

No = 0,85 . fcd . b . d +fyd . As
Nmax = 0,5 . fck . Ac
Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü
Md,x/y = x/y yönünde en büyük kombinasyonun momenti
Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti
Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti
Vr,max = 2 . fck½ . Ac
Ac = Kolon kesit alanı
As,g = Gerekli donatı alanı
As,m = Mevcut donatı alanı **Mevcut kolon min. boyuna donatı oranı : 0.01**
rm = Mevcut donatı oranı **Mevcut kolon donatı korozyon oranı % : 0**

1. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S1002	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	41.1	5.6
S1003	25x140	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	444.6	15.1
S1004	25x140	3500	2x5ø16 +	2x8ø12	38.18	60.29	0.011	717.9	437.5	489.9	17.7
S1007	25x140	3500	2x5ø16 +	2x8ø12	38.18	60.29	0.011	717.9	437.5	491.5	17.6
S1008	25x140	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	420.4	16.3
S1009	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	35.9	6.7
S1010	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	42.2	5.6
S1011	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	421.5	9.4
S1012	25x150	3750	2x5ø16 +	2x8ø12	38.18	44.21	0.010	758.8	468.8	451.5	19.1
S1013	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	489.3	19.8
S1014	25x160	4000	2x5ø16 +	2x9ø12	40.44	52.25	0.010	808.3	500.0	297.3	20.1
S1015	25x150	3750	2x5ø16 +	2x8ø12	38.18	44.21	0.010	758.8	468.8	488.7	18.8
S1016	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	410.2	7.8
S1017	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	37.4	6.4
S1018	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	51.7	5.1
S1019	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	394.8	7.5
S1020	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	378.9	4.6
S1021	25x140	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	283.2	16.9

S1022	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	258.6	16.2
S1023	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	379.6	4.2
S1024	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	380.0	5.6
S1025	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	45.2	5.9
S1029	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	55.1	5.4
S1030	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	404.8	5.7
S1031	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	401.2	3.6
S1032	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	366.3	16.9
S1033	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	267.5	16.0
S1034	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	361.4	4.3
S1035	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	357.9	5.5
S1036	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	46.3	6.0
S1037	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	42.1	5.6
S1038	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	425.8	9.4
S1039	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	451.8	20.4
S1040	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	436.3	19.8
S1041	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	402.4	20.5
S1042	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	429.6	19.9
S1043	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	400.8	7.8
S1044	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	37.4	6.4
S1045	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	41.1	5.6
S1046	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	443.8	15.1
S1047	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	443.2	19.1
S1050	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	444.5	18.9
S1051	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	426.0	16.3
S1052	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	37.6	6.6

1. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S1002	41.1	2.6	9.7	20.0	17.6	53.6	0.164	0.264	0.328	As
S1003	444.6	10.0	21.6	407.4	60.6	147.2	1.016	0.464	0.412	N,As
S1004	408.4	9.2	23.3	-7.4	56.8	89.0	1.120	0.396	0.639	N,As
S1007	437.2	9.9	22.0	491.5	68.9	118.9	1.123	0.449	0.579	N,As
S1008	420.4	9.5	22.8	386.7	62.0	153.0	0.961	0.417	0.405	As
S1009	35.9	1.5	9.5	18.1	19.0	53.0	0.144	0.155	0.358	As
S1010	42.2	2.3	9.8	18.1	18.1	53.0	0.169	0.239	0.341	As
S1011	173.9	75.6	157.0	421.5	13.4	22.7	0.963	0.481	0.591	As
S1012	451.5	10.2	23.7	245.8	79.2	184.5	0.963	0.429	0.429	As
S1013	489.3	11.0	25.0	216.5	77.2	201.2	0.979	0.441	0.384	As
S1014	274.4	6.2	30.1	23.3	77.0	126.8	0.595	0.206	0.608	As
S1015	488.7	11.0	21.9	249.4	76.9	184.8	1.043	0.504	0.416	N,As
S1016	170.0	71.5	156.3	410.2	12.8	23.2	0.938	0.457	0.553	As
S1017	37.4	1.6	9.5	15.6	18.9	52.2	0.149	0.170	0.363	As
S1018	51.7	2.2	10.2	22.4	17.6	54.4	0.207	0.217	0.324	As
S1019	69.6	76.4	125.6	394.8	12.3	23.8	0.902	0.608	0.515	As
S1020	262.2	81.8	166.8	378.9	11.5	24.5	0.866	0.490	0.472	As
S1021	283.2	6.4	27.1	113.4	57.2	141.4	0.647	0.236	0.404	As
S1022	258.6	5.8	27.0	98.0	57.5	136.3	0.591	0.216	0.422	As
S1023	253.1	80.9	166.6	379.6	11.6	24.4	0.868	0.485	0.474	As
S1024	65.3	73.6	123.9	380.0	11.6	24.4	0.869	0.594	0.475	As
S1025	45.2	1.6	9.9	18.8	18.4	53.2	0.181	0.158	0.345	As
S1029	55.1	2.1	10.3	24.3	17.7	55.0	0.220	0.201	0.321	As
S1030	117.5	76.6	142.8	404.8	12.7	23.4	0.925	0.536	0.542	As
S1031	235.7	80.3	165.5	401.2	12.5	23.6	0.917	0.485	0.529	As
S1032	366.3	8.3	24.9	126.5	57.1	145.4	0.837	0.332	0.393	As
S1033	267.5	6.0	27.0	90.2	58.1	133.5	0.612	0.223	0.435	As
S1034	222.0	82.6	164.3	361.4	10.8	25.1	0.826	0.503	0.433	As
S1035	76.1	74.5	128.3	357.9	10.7	25.2	0.818	0.580	0.425	As
S1036	46.3	1.5	9.9	19.6	18.3	53.5	0.185	0.151	0.343	As
S1037	42.1	2.3	9.7	18.3	18.0	53.1	0.168	0.239	0.339	As
S1038	191.9	75.3	160.3	425.8	13.6	22.5	0.973	0.470	0.605	As
S1039	451.8	10.2	23.7	328.8	79.5	185.8	0.964	0.430	0.428	As
S1040	436.3	9.8	27.3	111.8	77.2	170.1	0.873	0.361	0.454	As
S1041	402.4	9.1	28.4	94.0	77.9	162.4	0.805	0.319	0.480	As
S1042	429.6	9.7	24.7	281.3	77.1	186.7	0.917	0.393	0.413	As
S1043	171.2	71.4	156.5	400.8	12.4	23.6	0.916	0.456	0.527	As
S1044	37.4	1.6	9.5	15.9	18.8	52.3	0.150	0.166	0.360	As
S1045	41.1	2.5	9.7	20.3	18.1	53.7	0.165	0.263	0.338	As
S1046	443.8	10.0	21.7	386.2	61.5	153.1	1.014	0.462	0.401	N,As
S1047	443.2	10.0	21.7	387.2	75.7	152.9	1.013	0.461	0.495	N,As
S1050	444.5	10.0	21.6	228.5	73.7	165.0	1.016	0.464	0.447	N,As
S1051	426.0	9.6	22.5	372.4	63.2	156.6	0.974	0.427	0.404	As
S1052	37.6	1.3	9.6	19.2	19.1	53.3	0.150	0.141	0.358	As

Kat Kapasite Kontrolu:
Nmax= 17375.0> Nd,max= 13456.2
Mr,x= 2419.2> Md,x= 1125.4
Mr,y= 4021.2> Md,y= 1739.8

2. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S2002	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	20.7	15.9
S2003	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	414.9	16.2
S2004	25x140	3500	2x5ø16 + 2x8ø12	38.18	48.23	0.011	717.9	437.5	473.9	27.4
S2007	25x140	3500	2x5ø16 + 2x8ø12	38.18	48.23	0.011	717.9	437.5	440.7	28.1
S2008	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	398.3	22.5
S2009	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	18.5	19.0
S2010	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	20.9	17.3
S2011	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	387.4	24.4
S2012	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	425.8	20.4
S2013	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	454.8	14.0
S2014	25x160	4000	2x5ø16 + 2x9ø12	40.44	52.25	0.010	808.3	500.0	228.4	23.6
S2015	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	466.0	19.9
S2016	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	382.8	21.4
S2017	20x100	2000	2x4ø16 + 2x5ø12	27.38	36.17	0.014	431.5	250.0	18.5	19.9
S2018	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	25.8	15.0
S2019	140x25	3500	2x5ø16 + 2x8ø12	38.18	60.29	0.011	717.9	437.5	467.0	32.3
S2020	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	359.2	25.7
S2021	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	262.2	19.4
S2022	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	240.5	17.9
S2023	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	352.2	25.6
S2024	140x25	3500	2x5ø16 + 2x8ø12	38.18	60.29	0.011	717.9	437.5	456.1	27.9
S2025	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	22.6	18.0
S2029	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	27.5	15.9
S2030	140x25	3500	2x5ø16 + 2x8ø16	52.25	52.25	0.015	771.6	437.5	437.4	32.6
S2031	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	381.3	31.1
S2032	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	352.9	17.6
S2033	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	250.7	17.7
S2034	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	334.0	26.2
S2035	140x25	3500	2x5ø16 + 2x8ø16	52.25	56.27	0.015	771.6	437.5	414.1	27.4
S2036	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	23.1	18.1
S2037	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	20.8	17.2
S2038	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	391.9	24.4
S2039	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	423.1	31.8
S2040	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	396.6	21.5
S2041	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	361.6	25.8
S2042	25x150	3750	2x5ø16 + 2x8ø12	38.18	44.21	0.010	758.8	468.8	401.0	31.3
S2043	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	373.3	21.2
S2044	20x100	2000	2x4ø16 + 2x5ø12	27.38	36.17	0.014	431.5	250.0	18.5	19.7
S2045	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	20.8	16.3
S2046	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	413.7	16.8
S2047	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	430.5	35.4
S2050	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	431.7	34.7
S2051	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	404.2	22.9
S2052	20x100	2000	2x4ø16 + 2x5ø12	27.38	32.15	0.014	431.5	250.0	19.4	19.4

2. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S2002	20.7	5.7	8.8	13.4	27.2	51.5	0.083	0.657	0.528	As
S2003	414.9	9.4	23.0	379.0	58.1	155.0	0.948	0.406	0.375	As
S2004	473.9	10.7	20.1	-10.7	46.8	87.1	1.083	0.533	0.537	N,As
S2007	419.5	9.5	22.8	440.7	64.6	137.0	1.007	0.415	0.472	N,As
S2008	398.3	9.0	23.7	365.0	58.2	158.6	0.910	0.379	0.367	As
S2009	18.5	3.6	8.6	11.8	32.4	50.9	0.074	0.414	0.636	As
S2010	16.1	5.5	8.5	12.7	30.3	51.2	0.084	0.650	0.591	As
S2011	384.9	68.0	153.4	387.4	12.1	24.1	0.886	0.443	0.502	As
S2012	425.8	9.6	24.8	249.3	74.7	184.8	0.908	0.387	0.404	As
S2013	454.8	10.3	26.5	298.1	68.6	210.3	0.910	0.387	0.326	As
S2014	228.4	5.1	29.0	-6.4	59.7	108.9	0.457	0.178	0.548	As
S2015	466.0	10.5	23.1	256.4	72.9	185.4	0.994	0.456	0.393	As
S2016	378.0	64.4	155.2	382.8	11.6	24.3	0.875	0.415	0.479	As
S2017	14.6	4.6	8.4	7.6	34.0	49.5	0.074	0.542	0.686	As
S2018	19.9	5.8	8.7	15.9	26.4	52.3	0.103	0.671	0.505	As
S2019	-41.5	54.7	68.7	265.7	12.7	27.0	1.067	0.797	0.468	N,As
S2020	259.9	73.7	166.8	269.2	12.4	27.0	0.821	0.442	0.460	As
S2021	26.5	7.4	16.4	188.0	57.2	159.7	0.599	0.454	0.358	As
S2022	154.2	5.4	24.2	179.1	56.1	158.1	0.550	0.224	0.355	As
S2023	223.0	72.8	164.4	226.5	12.5	26.6	0.805	0.443	0.468	As
S2024	-38.6	59.8	70.6	259.8	13.4	27.0	1.043	0.848	0.496	N,As
S2025	17.9	5.0	8.6	13.3	31.1	51.4	0.090	0.577	0.605	As
S2029	20.9	5.5	8.8	17.1	27.9	52.7	0.110	0.629	0.530	As
S2030	437.4	73.7	153.4	374.3	11.5	28.8	1.000	0.480	0.399	✓
S2031	126.5	68.5	145.4	381.3	11.5	24.4	0.871	0.471	0.474	As
S2032	305.5	10.7	26.7	267.4	49.5	166.9	0.807	0.399	0.297	As
S2033	191.5	5.5	25.7	193.7	56.0	160.6	0.573	0.213	0.349	As
S2034	269.6	74.3	167.0	235.0	11.5	26.8	0.763	0.445	0.431	As
S2035	-21.4	60.0	109.5	132.7	10.5	27.6	0.946	0.548	0.380	As
S2036	18.1	4.7	8.6	13.8	31.5	51.6	0.092	0.549	0.610	As
S2037	16.0	5.5	8.5	12.8	30.0	51.3	0.083	0.644	0.584	As
S2038	373.2	67.8	156.5	391.9	12.3	24.0	0.896	0.434	0.514	As
S2039	423.1	9.5	24.9	320.4	75.0	186.3	0.903	0.383	0.403	As
S2040	396.6	8.9	28.6	91.2	58.6	156.7	0.793	0.312	0.374	As

S2041	361.6	8.1	29.7	65.2	64.7	149.2	0.723	0.275	0.433	As
S2042	401.0	9.0	25.8	149.9	65.2	165.8	0.855	0.351	0.393	As
S2043	363.8	64.3	158.9	163.8	11.6	24.6	0.853	0.405	0.471	As
S2044	14.6	4.4	8.4	7.8	33.6	49.6	0.074	0.526	0.678	As
S2045	20.8	5.7	8.8	13.7	27.9	51.6	0.083	0.653	0.541	As
S2046	413.7	9.3	23.1	361.6	58.8	159.3	0.946	0.404	0.370	As
S2047	430.5	9.7	22.3	351.3	71.2	161.0	0.984	0.435	0.442	As
S2050	431.7	9.7	22.2	352.4	69.4	160.9	0.987	0.438	0.431	As
S2051	404.2	9.1	23.5	354.7	59.4	160.4	0.924	0.389	0.370	As
S2052	14.5	3.5	8.4	12.8	33.3	51.3	0.078	0.413	0.650	As

Kat Kapasite Kontrolu:
Nmax= 17375.0> Nd,max= 12665.2
Mr,x= 2258.9> Md,x= 1038.3
Mr,y= 4099.0> Md,y= 1754.0

3. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S3003	20x140	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	392.2	17.9
S3004	20x140	2800	2x4ø16 +	2x7ø12	31.90	65.31	0.011	579.5	350.0	456.5	26.1
S3007	20x140	2800	2x4ø16 +	2x7ø12	31.90	61.29	0.011	579.5	350.0	456.6	25.0
S3008	20x140	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	384.3	18.8
S3011	140x20	2800	2x4ø16 +	2x7ø12	31.90	44.21	0.011	579.5	350.0	351.9	27.2
S3012	20x150	3000	2x4ø16 +	2x7ø12	31.90	27.38	0.011	612.2	375.0	398.2	33.4
S3013	20x160	3200	2x4ø16 +	2x8ø12	34.16	27.38	0.011	653.5	400.0	420.5	24.2
S3014	20x160	3200	2x4ø16 +	2x8ø12	34.16	55.52	0.011	653.5	400.0	174.7	20.9
S3015	20x150	3000	2x4ø16 +	2x7ø12	31.90	44.21	0.011	612.2	375.0	443.8	32.5
S3016	140x20	2800	2x4ø16 +	2x7ø12	31.90	48.23	0.011	579.5	350.0	353.7	24.5
S3019	140x20	2800	2x4ø16 +	2x7ø12	31.90	61.29	0.011	579.5	350.0	330.3	31.5
S3020	140x20	2800	2x4ø16 +	2x7ø12	31.90	40.19	0.011	579.5	350.0	340.1	35.7
S3021	20x140	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	241.0	24.3
S3022	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	221.5	22.7
S3023	140x20	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	325.1	34.2
S3024	140x20	2800	2x4ø16 +	2x7ø12	31.90	57.27	0.011	579.5	350.0	329.7	29.3
S3030	140x20	2800	2x4ø16 +	2x7ø12	31.90	49.24	0.011	579.5	350.0	342.0	30.4
S3031	140x20	2800	2x4ø16 +	2x7ø12	31.90	48.23	0.011	579.5	350.0	360.4	37.3
S3032	20x130	2600	2x4ø16 +	2x7ø12	31.90	40.19	0.012	546.8	325.0	347.0	25.0
S3033	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	234.6	23.4
S3034	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	306.9	36.2
S3035	140x20	2800	2x4ø16 +	2x7ø12	31.90	53.25	0.011	579.5	350.0	308.0	29.8
S3038	140x20	2800	2x4ø16 +	2x7ø12	31.90	48.23	0.011	579.5	350.0	356.5	26.7
S3039	20x150	3000	2x4ø16 +	2x7ø12	31.90	37.18	0.011	612.2	375.0	390.4	25.6
S3040	20x160	3200	2x4ø16 +	2x8ø12	34.16	31.40	0.011	653.5	400.0	354.2	18.8
S3041	20x160	3200	2x4ø16 +	2x8ø12	34.16	35.42	0.011	653.5	400.0	317.0	19.5
S3042	20x150	3000	2x4ø16 +	2x7ø12	31.90	25.12	0.011	612.2	375.0	367.4	23.9
S3043	140x20	2800	2x4ø16 +	2x7ø12	31.90	44.21	0.011	579.5	350.0	344.1	24.0
S3046	20x140	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	390.3	18.8
S3047	20x140	2800	2x4ø16 +	2x7ø12	31.90	40.19	0.011	579.5	350.0	423.8	22.2
S3050	20x140	2800	2x4ø16 +	2x7ø12	31.90	40.19	0.011	579.5	350.0	425.7	21.0
S3051	20x140	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	390.8	19.6

3. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S3003	392.2	8.3	12.9	376.6	68.2	94.0	1.121	0.642	0.725	N,As
S3004	378.1	8.0	13.6	456.5	80.7	63.2	1.304	0.587	1.276	N,Mr,As
S3007	403.7	8.5	12.3	456.6	78.2	63.2	1.304	0.693	1.236	N,Mr,As
S3008	384.3	8.1	13.3	371.1	70.1	95.7	1.098	0.610	0.732	N,As
S3011	46.0	79.9	90.1	351.9	14.2	14.8	1.005	0.887	0.962	N,As
S3012	398.2	8.4	14.4	149.4	87.6	129.9	1.062	0.583	0.675	N
S3013	420.5	8.9	15.6	277.0	79.3	155.2	1.051	0.569	0.511	N
S3014	131.8	4.8	17.2	-43.1	80.8	63.4	0.437	0.280	1.275	Mr,As
S3015	443.8	9.4	12.0	146.4	85.1	129.2	1.184	0.778	0.658	N,As
S3016	51.4	73.6	92.1	353.7	14.2	14.7	1.011	0.799	0.969	N,As
S3019	-61.7	31.5	39.4	245.2	15.5	18.0	0.944	2.070	0.860	Mr,As
S3020	145.2	82.7	116.0	340.1	13.7	15.2	0.972	0.713	0.901	As
S3021	19.0	10.6	10.3	159.5	69.1	118.1	0.688	1.029	0.586	Mr,As
S3022	141.3	9.6	16.6	152.5	65.6	117.1	0.633	0.581	0.560	✓
S3023	130.0	81.3	113.4	238.1	16.1	18.2	0.929	0.717	0.885	As
S3024	-56.4	76.5	42.6	245.7	16.2	18.0	0.942	1.796	0.897	Mr,As
S3030	-16.9	80.6	63.4	342.0	13.6	15.2	0.977	1.271	0.896	Mr,As
S3031	115.1	83.3	110.4	360.4	14.9	14.4	1.030	0.754	1.032	N,Mr,As
S3032	328.5	10.3	13.1	218.7	65.4	119.1	1.068	0.788	0.549	N,As
S3033	184.3	9.8	17.9	103.1	64.3	107.5	0.670	0.548	0.598	✓
S3034	105.7	83.2	108.1	131.9	12.2	16.2	0.877	0.770	0.755	✓
S3035	-36.7	77.3	53.5	197.4	14.7	18.2	0.880	1.447	0.810	Mr,As
S3038	63.1	79.4	96.0	356.5	14.6	14.6	1.019	0.827	1.000	N,As
S3039	390.4	8.2	14.8	99.0	88.5	117.4	1.041	0.558	0.754	N,As
S3040	354.2	7.5	18.2	43.3	76.2	109.7	0.886	0.410	0.695	✓
S3041	227.7	7.6	20.3	30.8	79.8	103.8	0.793	0.375	0.768	As
S3042	367.4	7.8	15.7	89.2	86.0	114.4	0.980	0.492	0.752	✓
S3043	54.1	73.8	93.1	344.1	13.5	15.1	0.983	0.792	0.896	As

S3046	390.3	8.2	13.0	355.8	66.9	100.2	1.115	0.634	0.667	N,As
S3047	423.8	8.9	11.2	310.3	82.8	111.3	1.211	0.801	0.744	N,As
S3050	425.7	9.0	11.1	312.3	80.2	110.9	1.216	0.813	0.723	N,As
S3051	390.8	8.2	13.0	358.4	70.7	99.5	1.117	0.636	0.711	N,As

Kat Kapasite Kontrolu:
Nmax= 11475.0> Nd,max= 11279.6
Mr,x= 1304.4> Md,x= 1123.3
Mr,y= 2315.5> Md,y= 1698.8

4. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S4003	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	357.3	17.2
S4004	20x140	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	343.4	29.4
S4007	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	367.4	27.6
S4008	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	350.8	16.7
S4011	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	323.1	11.3
S4012	20x150	3000	2x4ø16 +	2x7ø12	31.90	25.12	0.011	612.2	375.0	363.5	54.5
S4013	20x160	3200	2x4ø16 +	2x8ø12	34.16	27.38	0.011	653.5	400.0	374.0	43.7
S4014	20x160	3200	2x4ø16 +	2x8ø12	34.16	31.40	0.011	653.5	400.0	223.6	16.7
S4015	20x150	3000	2x4ø16 +	2x7ø12	31.90	27.38	0.011	612.2	375.0	401.8	55.9
S4016	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	326.1	12.0
S4019	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	389.4	31.7
S4020	140x20	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	304.5	61.0
S4021	20x140	2800	2x4ø16 +	2x7ø12	31.90	60.29	0.011	579.5	350.0	211.8	38.0
S4022	20x140	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	194.1	35.8
S4023	140x20	2800	2x4ø16 +	2x7ø12	31.90	36.17	0.011	579.5	350.0	293.6	57.5
S4024	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	297.9	31.8
S4030	140x20	2800	2x4ø16 +	2x7ø12	31.90	36.17	0.011	579.5	350.0	359.9	33.0
S4031	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	323.7	55.7
S4032	20x130	2600	2x4ø16 +	2x7ø12	31.90	44.21	0.012	546.8	325.0	311.1	29.9
S4033	20x140	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	204.6	38.7
S4034	140x20	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	275.3	65.6
S4035	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	276.2	35.3
S4038	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	327.6	10.9
S4039	20x150	3000	2x4ø16 +	2x7ø12	31.90	25.12	0.011	612.2	375.0	355.9	21.0
S4040	20x160	3200	2x4ø16 +	2x8ø12	34.16	27.38	0.011	653.5	400.0	333.4	22.2
S4041	20x160	3200	2x4ø16 +	2x8ø12	34.16	27.38	0.011	653.5	400.0	305.1	20.4
S4042	20x150	3000	2x4ø16 +	2x7ø12	31.90	25.12	0.011	612.2	375.0	333.4	21.0
S4043	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	315.3	11.2
S4046	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	356.3	17.7
S4047	20x140	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	385.5	7.5
S4050	20x140	2800	2x4ø16 +	2x7ø12	31.90	32.15	0.011	579.5	350.0	387.7	7.5
S4051	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	356.6	17.4

4. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S4003	357.3	7.5	14.5	72.2	31.3	99.0	1.021	0.518	0.316	N
S4004	228.8	10.1	18.3	8.7	49.6	75.2	0.981	0.552	0.659	✓
S4007	239.9	11.3	18.1	35.1	47.9	86.1	1.050	0.623	0.556	N
S4008	350.8	7.4	14.8	67.4	31.6	97.4	1.002	0.499	0.324	N
S4011	119.5	29.5	111.1	119.2	11.7	15.7	0.923	0.265	0.747	✓
S4012	255.1	10.0	19.0	153.7	89.4	130.6	0.969	0.525	0.684	✓
S4013	374.0	7.9	17.5	253.4	74.6	156.3	0.935	0.450	0.477	✓
S4014	223.6	6.2	20.2	-39.6	25.3	65.5	0.559	0.307	0.386	✓
S4015	276.0	12.6	18.6	149.8	92.8	130.0	1.072	0.675	0.714	N
S4016	51.8	23.0	92.3	117.4	11.7	15.6	0.932	0.249	0.751	✓
S4019	-37.3	52.2	53.2	131.4	15.7	16.2	1.112	0.982	0.970	N,As
S4020	203.7	95.9	121.6	224.8	17.2	18.3	0.870	0.789	0.940	As
S4021	16.1	19.1	10.1	152.9	62.6	117.2	0.605	1.892	0.534	Mr,As
S4022	120.7	17.5	15.7	136.2	59.4	114.6	0.555	1.114	0.518	Mr,As
S4023	206.3	90.4	121.6	217.1	18.6	18.4	0.839	0.743	1.016	Mr,As
S4024	-33.6	54.4	55.1	220.1	18.7	18.3	0.851	0.986	1.020	Mr,As
S4030	3.4	49.9	72.9	198.3	17.9	18.2	1.028	0.685	0.984	N,As
S4031	121.3	91.8	111.6	139.6	14.0	16.5	0.925	0.822	0.847	✓
S4032	69.7	13.2	12.7	195.4	57.0	119.3	0.957	1.041	0.478	Mr,As
S4033	157.0	17.8	17.1	90.1	59.9	104.2	0.585	1.039	0.575	Mr,As
S4034	113.4	94.4	110.0	119.9	13.4	15.7	0.786	0.858	0.856	✓
S4035	-17.4	59.0	63.2	175.8	17.7	17.7	0.789	0.933	1.000	As
S4038	135.6	29.4	114.5	229.0	13.0	18.3	0.936	0.257	0.710	✓
S4039	128.2	8.6	16.3	321.7	47.3	128.2	0.949	0.528	0.369	✓
S4040	254.0	11.9	20.5	321.3	45.4	149.7	0.833	0.581	0.303	✓
S4041	205.7	11.6	19.8	285.8	41.1	154.4	0.763	0.588	0.266	✓
S4042	124.3	8.6	16.1	306.1	48.4	131.0	0.889	0.532	0.369	✓
S4043	53.7	23.5	93.0	219.7	12.6	18.3	0.901	0.253	0.688	✓
S4046	356.3	7.5	14.6	88.7	33.4	103.8	1.018	0.515	0.322	N
S4047	284.3	11.3	17.2	283.8	31.2	116.2	1.101	0.659	0.268	N,As
S4050	287.4	11.3	17.1	387.7	23.8	90.4	1.108	0.665	0.263	N,As
S4051	356.6	7.5	14.6	86.7	33.2	103.2	1.019	0.516	0.322	N

Kat Kapasite Kontrolu:
Nmax= 11475.0> Nd,max= 10329.7
Mr,x= 1452.7> Md,x= 912.2
Mr,y= 2479.4> Md,y= 1167.1

5. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S5003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	322.8	14.5
S5004	20x120	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	309.5	21.6
S5007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	331.1	20.3
S5008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	317.4	14.2
S5011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	296.3	12.7
S5012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	328.6	42.3
S5013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	328.8	32.5
S5014	20x130	2600	2x4ø16 +	2x6ø12	29.64	40.19	0.011	538.2	325.0	200.8	14.4
S5015	20x130	2600	2x4ø16 +	2x6ø12	29.64	40.19	0.011	538.2	325.0	362.0	43.6
S5016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	299.3	13.0
S5019	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	331.4	26.2
S5020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	271.7	51.0
S5021	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	187.0	33.1
S5022	20x120	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	172.4	30.1
S5023	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	262.3	48.1
S5024	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	325.0	25.8
S5030	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	303.2	27.2
S5031	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	290.9	45.0
S5032	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	286.3	32.9
S5033	20x120	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	184.1	32.7
S5034	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	245.9	54.3
S5035	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	287.0	28.5
S5038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	300.4	12.1
S5039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	321.6	20.4
S5040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	300.0	17.9
S5041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	273.4	16.4
S5042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	299.5	20.1
S5043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	288.5	11.8
S5046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	322.6	15.2
S5047	20x120	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	348.3	7.3
S5050	20x120	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	350.6	7.3
S5051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	322.8	15.2

5. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S5003	322.8	6.8	11.3	67.0	29.3	85.6	1.076	0.602	0.343	N,As
S5004	212.4	9.7	14.4	26.2	41.2	72.0	1.032	0.674	0.572	N,As
S5007	222.4	10.8	14.3	49.2	39.8	80.1	1.104	0.754	0.497	N,As
S5008	317.4	6.7	11.5	63.0	29.4	84.5	1.058	0.581	0.348	N,As
S5011	294.1	27.3	87.3	115.4	11.4	13.6	0.988	0.313	0.840	As
S5012	232.3	9.5	15.2	225.7	78.0	116.6	1.011	0.622	0.669	N,As
S5013	328.8	6.9	12.6	229.9	63.6	116.3	1.012	0.548	0.547	N,As
S5014	200.8	5.7	15.5	-35.0	19.3	47.7	0.618	0.368	0.405	As
S5015	249.7	11.8	14.9	228.8	80.8	116.4	1.114	0.789	0.694	N,As
S5016	292.8	27.7	87.7	113.2	11.5	13.5	0.998	0.315	0.853	As
S5019	-15.0	38.0	54.4	195.4	17.9	14.6	1.105	0.698	1.220	N,Mr,As
S5020	103.6	78.8	94.5	202.4	16.8	14.6	0.906	0.834	1.150	Mr,As
S5021	18.6	19.1	9.5	135.9	58.4	99.7	0.623	2.022	0.585	Mr,As
S5022	105.2	17.9	13.3	123.1	54.7	98.0	0.575	1.348	0.558	Mr,As
S5023	110.8	74.7	95.9	195.9	18.4	14.6	0.874	0.778	1.260	Mr,As
S5024	-11.8	37.9	55.8	194.4	19.0	14.6	1.083	0.680	1.301	N,Mr,As
S5030	303.2	48.3	84.9	175.2	18.0	14.7	1.011	0.569	1.226	N,Mr,As
S5031	215.0	73.6	102.0	189.6	14.2	14.7	0.970	0.722	0.971	As
S5032	71.7	14.7	12.3	117.6	56.1	108.1	0.881	1.195	0.520	Mr,As
S5033	136.5	18.1	14.1	121.2	58.6	97.7	0.614	1.284	0.600	Mr,As
S5034	169.8	86.5	102.7	109.3	13.0	13.4	0.820	0.843	0.967	As
S5035	1.8	41.5	61.9	155.1	17.8	14.4	0.957	0.670	1.233	Mr,As
S5038	283.9	26.8	90.0	205.2	12.7	14.5	1.001	0.297	0.874	N,As
S5039	121.8	8.0	14.2	288.4	51.9	107.0	0.990	0.566	0.485	As
S5040	229.6	11.3	15.2	300.0	42.7	104.0	0.923	0.743	0.411	As
S5041	184.0	10.9	15.4	273.4	40.0	110.7	0.841	0.707	0.362	As
S5042	117.6	8.0	14.1	273.3	50.7	110.7	0.922	0.569	0.458	As
S5043	278.9	26.4	91.2	196.4	12.5	14.6	0.962	0.289	0.856	As
S5046	322.6	6.8	11.3	82.9	31.1	89.8	1.075	0.601	0.346	N,As
S5047	257.5	11.1	13.5	348.3	19.0	71.1	1.161	0.821	0.267	N,As
S5050	260.7	11.0	13.4	350.6	19.1	70.3	1.169	0.822	0.272	N,As
S5051	322.8	6.8	11.3	80.8	31.7	89.3	1.076	0.602	0.354	N,As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 9371.6
Mr,x= 1275.8> Md,x= 799.2
Mr,y= 2047.4> Md,y= 1078.7

6. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S6003	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	289.6	9.7
S6004	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	276.9	15.5
S6007	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	296.6	14.2
S6008	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	285.4	9.5
S6011	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	266.8	11.9
S6012	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	294.4	36.6
S6013	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	287.8	26.8
S6014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	179.0	11.5
S6015	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	321.8	38.6
S6016	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	270.1	11.4
S6019	120x20	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	241.4	23.5
S6020	120x20	2400	2x4ø16 + 2x6ø12	29.64	44.21	0.012	505.5	300.0	240.2	50.2
S6021	20x120	2400	2x4ø16 + 2x6ø12	29.64	72.35	0.012	505.5	300.0	163.6	31.9
S6022	20x120	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	150.4	27.3
S6023	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	232.9	46.3
S6024	120x20	2400	2x4ø16 + 2x6ø12	29.64	56.27	0.012	505.5	300.0	237.0	24.4
S6030	120x20	2400	2x4ø16 + 2x6ø12	29.64	44.21	0.012	505.5	300.0	246.1	22.0
S6031	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	255.9	49.6
S6032	20x130	2600	2x4ø16 + 2x6ø12	29.64	40.19	0.011	538.2	325.0	252.8	33.3
S6033	20x120	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	159.0	30.7
S6034	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	216.6	53.1
S6035	120x20	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	217.4	26.8
S6038	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	270.6	11.2
S6039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	289.0	16.7
S6040	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	267.1	12.7
S6041	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	242.7	10.5
S6042	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	267.6	16.4
S6043	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	259.1	11.6
S6046	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	290.1	10.7
S6047	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	311.1	7.8
S6050	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	313.6	7.8
S6051	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	290.2	10.9

6. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S6003	289.6	6.1	12.5	61.6	17.4	84.0	0.965	0.487	0.207	As
S6004	193.3	10.3	14.6	32.2	26.2	74.3	0.923	0.705	0.352	As
S6007	202.3	11.5	14.6	52.8	24.8	81.2	0.989	0.787	0.306	As
S6008	285.4	6.0	12.7	58.4	17.5	83.0	0.951	0.474	0.211	As
S6011	48.4	18.8	79.9	108.5	11.0	13.4	0.889	0.235	0.822	As
S6012	210.9	10.0	15.5	208.6	61.2	117.2	0.906	0.644	0.522	As
S6013	217.3	8.8	15.4	131.5	44.9	110.7	0.886	0.573	0.405	As
S6014	179.0	6.1	15.3	-28.7	18.7	51.4	0.551	0.396	0.364	As
S6015	224.5	12.4	15.3	210.7	64.9	117.1	0.990	0.811	0.554	As
S6016	53.4	18.3	81.4	106.0	11.3	13.3	0.900	0.225	0.845	As
S6019	-1.0	38.0	60.7	174.2	18.5	14.6	0.805	0.626	1.266	Mr,As
S6020	80.2	75.4	89.2	178.5	17.0	14.7	0.801	0.846	1.154	Mr,As
S6021	23.6	20.9	9.7	118.9	51.6	97.3	0.545	2.149	0.531	Mr,As
S6022	91.2	19.9	12.8	107.0	44.3	95.2	0.501	1.554	0.465	Mr,As
S6023	87.6	69.6	90.9	173.6	18.9	14.6	0.776	0.765	1.292	Mr,As
S6024	2.0	39.2	62.0	172.7	19.9	14.6	0.790	0.631	1.361	Mr,As
S6030	30.8	35.4	73.8	157.3	18.5	14.4	0.820	0.479	1.283	Mr,As
S6031	119.6	74.4	97.4	112.1	13.4	13.5	0.853	0.764	0.992	As
S6032	69.6	15.1	12.2	103.3	52.4	104.8	0.778	1.238	0.500	Mr,As
S6033	114.9	19.9	13.6	70.8	46.8	86.6	0.530	1.469	0.541	Mr,As
S6034	139.6	80.3	100.2	96.4	13.2	13.0	0.722	0.802	1.015	Mr,As
S6035	12.0	42.9	66.3	138.8	18.5	14.1	0.725	0.647	1.309	Mr,As
S6038	62.5	17.9	84.3	181.5	13.0	14.7	0.902	0.213	0.884	As
S6039	114.4	8.3	14.0	256.1	35.1	113.8	0.889	0.597	0.309	As
S6040	205.7	12.3	15.5	267.1	24.4	111.9	0.822	0.794	0.218	As
S6041	163.8	11.9	15.1	21.5	18.9	76.9	0.747	0.785	0.246	As
S6042	109.8	8.3	13.8	241.6	34.7	115.4	0.823	0.601	0.300	As
S6043	54.4	18.4	81.7	172.8	12.9	14.6	0.864	0.225	0.885	As
S6046	290.1	6.1	12.5	76.5	19.5	88.3	0.967	0.488	0.221	As
S6047	230.3	11.8	14.1	311.1	16.8	82.7	1.037	0.834	0.204	N,As
S6050	233.7	11.8	14.1	313.6	17.0	81.9	1.045	0.838	0.207	N,As
S6051	290.2	6.1	12.5	74.5	20.1	87.7	0.967	0.488	0.229	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 8182.8
Mr,x= 1243.8> Md,x= 752.3
Mr,y= 2031.1> Md,y= 843.3

7. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S7003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	256.6	10.2
S7004	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	244.5	15.6
S7007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	262.3	14.3
S7008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	253.2	10.0
S7011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	237.2	10.8
S7012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	260.3	36.6
S7013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	249.1	27.8
S7014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	157.0	11.8
S7015	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	282.8	38.7
S7016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	240.5	10.1
S7019	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	212.7	21.5
S7020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	210.8	51.1
S7021	20x120	2400	2x4ø16 +	2x6ø12	29.64	76.36	0.012	505.5	300.0	143.6	33.2
S7022	20x120	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	131.6	28.4
S7023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	204.6	46.8
S7024	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	208.1	22.2
S7030	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	216.5	21.8
S7031	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	225.9	47.3
S7032	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	226.3	34.2
S7033	20x120	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	140.9	32.0
S7034	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	190.6	53.6
S7035	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	190.3	24.8
S7038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	240.8	10.2
S7039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	256.2	17.2
S7040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	234.2	13.3
S7041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	212.1	10.9
S7042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	235.7	16.8
S7043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	229.9	10.6
S7046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	257.4	11.5
S7047	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	274.4	7.9
S7050	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	277.2	7.9
S7051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	257.5	11.8

7. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S7003	256.6	5.4	13.5	56.3	16.8	82.4	0.855	0.400	0.204	As
S7004	173.7	10.4	14.6	36.9	25.3	75.9	0.815	0.707	0.333	As
S7007	181.7	11.5	14.7	54.8	23.8	81.9	0.874	0.783	0.290	As
S7008	253.2	5.3	13.6	53.8	16.8	81.6	0.844	0.392	0.206	As
S7011	47.8	15.8	79.7	100.5	10.5	13.1	0.791	0.199	0.802	As
S7012	189.2	9.9	15.5	190.0	59.7	117.0	0.801	0.643	0.511	As
S7013	188.2	9.1	15.4	181.1	46.6	116.6	0.767	0.587	0.400	As
S7014	157.0	6.1	15.0	-22.4	15.6	55.0	0.483	0.408	0.284	As
S7015	199.7	12.4	15.5	131.4	60.2	110.7	0.870	0.798	0.544	As
S7016	52.4	15.1	81.1	97.8	10.8	13.0	0.802	0.186	0.831	As
S7019	10.7	33.5	65.7	153.2	18.5	14.4	0.709	0.510	1.289	Mr,As
S7020	60.8	75.2	83.8	156.0	16.7	14.4	0.703	0.898	1.159	Mr,As
S7021	58.6	25.1	11.5	104.3	52.9	94.6	0.479	2.190	0.559	Mr,As
S7022	52.4	19.4	11.2	61.7	41.4	84.1	0.439	1.730	0.492	Mr,As
S7023	67.9	68.6	85.8	152.0	19.8	14.4	0.682	0.799	1.311	Mr,As
S7024	13.6	34.2	67.0	151.5	20.0	14.3	0.694	0.511	1.395	Mr,As
S7030	38.3	30.1	76.4	139.3	18.3	14.1	0.722	0.394	1.298	Mr,As
S7031	162.0	71.5	102.3	98.8	13.0	13.1	0.753	0.699	0.991	As
S7032	69.0	15.4	12.2	91.9	51.6	101.8	0.696	1.263	0.507	Mr,As
S7033	98.7	21.0	13.1	62.4	47.3	84.3	0.470	1.604	0.561	Mr,As
S7034	74.5	78.9	87.7	85.0	12.9	12.6	0.635	0.900	1.027	Mr,As
S7035	20.4	38.3	69.7	122.8	18.5	13.8	0.634	0.550	1.341	Mr,As
S7038	60.6	14.9	83.7	158.8	12.5	14.5	0.803	0.178	0.868	As
S7039	106.2	8.2	13.7	224.3	33.4	116.7	0.788	0.597	0.286	As
S7040	181.7	12.7	15.4	234.2	24.0	116.0	0.721	0.828	0.207	As
S7041	143.8	12.2	14.7	20.4	15.1	76.3	0.653	0.828	0.198	As
S7042	101.2	8.1	13.5	210.3	32.9	117.1	0.725	0.603	0.280	As
S7043	53.0	15.4	81.3	150.4	12.7	14.3	0.766	0.189	0.883	As
S7046	210.0	5.9	14.5	69.9	19.2	86.4	0.858	0.408	0.223	As
S7047	203.4	12.0	14.6	274.4	14.7	92.3	0.915	0.821	0.160	As
S7050	206.9	11.9	14.5	277.2	14.9	91.6	0.924	0.823	0.163	As
S7051	210.7	5.9	14.5	68.0	19.9	85.9	0.858	0.410	0.232	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 7220.9
Mr,x= 1245.3> Md,x= 719.5
Mr,y= 2034.2> Md,y= 815.4

8. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	ρm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S8003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	223.6	9.6
S8004	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	212.5	14.4
S8007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	228.1	13.0
S8008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	221.0	9.4
S8011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	207.3	10.2
S8012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	226.5	35.0
S8013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	212.3	27.0
S8014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	135.3	11.3
S8015	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	244.8	37.4
S8016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	210.3	9.3
S8019	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	184.5	20.1
S8020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	181.2	50.3
S8021	20x120	2400	2x4ø16 +	2x6ø12	29.64	76.36	0.012	505.5	300.0	123.1	33.4
S8022	20x120	2400	2x4ø16 +	2x6ø12	29.64	60.29	0.012	505.5	300.0	112.8	28.1
S8023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	176.3	45.5
S8024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	180.0	20.7
S8030	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	187.9	20.0
S8031	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	193.3	45.3
S8032	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	193.6	34.4
S8033	20x120	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	119.2	32.1
S8034	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	163.0	52.3
S8035	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	164.5	23.3
S8038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	210.7	9.5
S8039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	223.6	16.8
S8040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	201.6	12.8
S8041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	181.9	10.2
S8042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	203.9	16.4
S8043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	200.6	10.0
S8046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	224.7	11.1
S8047	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	238.1	7.9
S8050	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	241.1	7.9
S8051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	224.8	11.5

8. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S8003	223.6	4.7	14.3	50.9	14.6	80.6	0.745	0.330	0.181	As
S8004	153.6	10.2	14.4	39.8	22.0	76.9	0.708	0.710	0.286	As
S8007	160.6	11.4	14.5	55.2	20.5	82.0	0.760	0.788	0.250	As
S8008	179.7	4.9	14.7	49.0	14.5	80.0	0.737	0.336	0.181	As
S8011	46.3	13.9	79.1	91.3	9.9	12.8	0.691	0.176	0.770	As
S8012	167.0	9.8	15.2	170.2	55.5	115.9	0.697	0.644	0.479	As
S8013	160.3	9.1	15.1	91.1	38.9	101.6	0.653	0.604	0.383	As
S8014	135.3	6.1	14.6	-16.3	13.7	58.4	0.416	0.419	0.235	As
S8015	175.0	12.2	15.3	171.8	59.3	116.0	0.753	0.797	0.511	As
S8016	50.3	12.9	80.4	88.6	10.2	12.7	0.701	0.160	0.802	As
S8019	19.8	30.3	69.5	132.6	18.2	14.0	0.615	0.436	1.297	Mr,As
S8020	44.4	72.7	78.5	133.5	16.2	14.0	0.604	0.927	1.154	Mr,As
S8021	30.4	24.0	10.1	89.7	51.7	91.4	0.410	2.365	0.566	Mr,As
S8022	44.7	19.7	10.8	53.0	40.4	81.3	0.376	1.822	0.497	Mr,As
S8023	50.9	65.4	80.6	130.4	18.4	14.0	0.588	0.810	1.317	Mr,As
S8024	22.6	30.9	70.6	130.7	19.7	14.0	0.600	0.437	1.414	Mr,As
S8030	43.3	26.2	78.1	121.6	17.9	13.8	0.626	0.335	1.299	Mr,As
S8031	145.8	68.3	100.9	84.8	12.3	12.6	0.644	0.677	0.982	As
S8032	65.0	15.1	12.0	78.7	49.9	98.0	0.596	1.262	0.509	Mr,As
S8033	80.8	21.4	12.4	52.5	45.9	81.2	0.397	1.728	0.566	Mr,As
S8034	56.3	75.5	82.4	106.7	13.3	13.4	0.543	0.916	0.999	As
S8035	26.8	35.1	72.3	107.2	18.2	13.4	0.548	0.486	1.358	Mr,As
S8038	57.7	12.8	82.8	137.1	12.0	14.1	0.702	0.155	0.853	As
S8039	96.8	7.9	13.3	193.2	30.2	117.0	0.688	0.591	0.258	As
S8040	157.8	12.9	15.0	201.6	21.3	117.2	0.620	0.861	0.181	As
S8041	124.1	12.3	14.3	19.3	13.6	75.8	0.560	0.862	0.179	As
S8042	91.4	7.8	13.1	179.9	29.5	116.5	0.628	0.598	0.253	As
S8043	50.6	13.4	80.5	128.8	12.2	13.9	0.669	0.166	0.877	As
S8046	183.2	5.9	14.7	63.0	17.4	84.5	0.749	0.399	0.206	As
S8047	176.6	11.9	14.7	238.1	12.7	99.8	0.794	0.813	0.127	As
S8050	180.4	11.9	14.7	241.1	12.9	99.3	0.804	0.811	0.130	As
S8051	183.8	5.9	14.7	61.3	18.0	83.3	0.749	0.401	0.215	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 6252.5
Mr,x= 1233.6> Md,x= 682.6
Mr,y= 2020.1> Md,y= 761.1

9. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S9003	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	190.8	9.2
S9004	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	180.8	13.3
S9007	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	194.2	11.9
S9008	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	188.8	9.0
S9011	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	177.3	9.4
S9012	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	192.9	33.4
S9013	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	177.0	26.1
S9014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	114.1	10.8
S9015	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	207.5	35.8
S9016	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	179.8	8.4
S9019	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	156.5	18.5
S9020	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	153.6	49.0
S9021	20x120	2400	2x4ø16 + 2x6ø12	29.64	76.36	0.012	505.5	300.0	104.8	33.2
S9022	20x120	2400	2x4ø16 + 2x6ø12	29.64	64.31	0.012	505.5	300.0	95.8	27.7
S9023	120x20	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	149.4	43.9
S9024	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	152.3	18.9
S9030	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	159.0	18.4
S9031	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	165.4	42.5
S9032	20x130	2600	2x4ø16 + 2x6ø12	29.64	44.21	0.011	538.2	325.0	167.7	34.3
S9033	20x120	2400	2x4ø16 + 2x6ø12	29.64	60.29	0.012	505.5	300.0	103.1	32.0
S9034	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	138.9	50.5
S9035	120x20	2400	2x4ø16 + 2x6ø12	29.64	44.21	0.012	505.5	300.0	139.0	21.5
S9038	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	180.6	8.8
S9039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	190.9	16.5
S9040	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	169.5	12.4
S9041	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	152.3	9.6
S9042	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	172.3	16.0
S9043	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	171.3	9.3
S9046	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	192.0	10.8
S9047	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	202.1	7.7
S9050	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	205.5	7.7
S9051	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	192.1	11.3

9. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S9003	155.8	4.5	14.4	45.2	14.7	78.8	0.636	0.311	0.187	As
S9004	132.9	9.9	14.0	40.9	20.5	77.3	0.603	0.706	0.265	As
S9007	138.9	11.1	14.1	53.7	18.7	81.5	0.647	0.788	0.230	As
S9008	153.2	4.8	14.4	43.7	14.3	78.3	0.629	0.337	0.183	As
S9011	43.6	13.6	78.2	81.1	9.1	12.4	0.591	0.174	0.735	As
S9012	144.3	9.4	14.8	149.2	52.2	113.4	0.593	0.639	0.460	As
S9013	133.6	9.0	14.5	73.0	37.6	96.3	0.545	0.620	0.390	As
S9014	114.1	6.0	14.0	-10.6	13.0	61.6	0.351	0.430	0.211	As
S9015	150.1	11.9	14.9	150.8	55.8	113.7	0.639	0.797	0.491	As
S9016	47.0	12.5	79.4	78.3	9.5	12.3	0.599	0.157	0.770	As
S9019	26.3	28.3	72.1	112.2	17.6	13.5	0.522	0.392	1.302	Mr,As
S9020	31.1	70.9	74.0	112.5	15.5	13.5	0.512	0.958	1.148	Mr,As
S9021	31.4	23.8	10.2	76.5	51.6	88.3	0.349	2.338	0.585	Mr,As
S9022	57.6	21.5	11.4	45.1	39.4	78.7	0.319	1.885	0.501	Mr,As
S9023	36.9	62.8	75.9	110.0	17.8	13.5	0.498	0.827	1.320	Mr,As
S9024	28.8	28.5	73.1	110.2	19.2	13.5	0.508	0.390	1.429	Mr,As
S9030	141.4	27.4	100.4	70.3	15.7	12.0	0.530	0.273	1.310	Mr,As
S9031	62.8	54.6	84.4	107.6	12.4	13.4	0.551	0.647	0.929	As
S9032	61.8	14.7	11.9	67.9	49.5	94.6	0.516	1.238	0.523	Mr,As
S9033	46.3	20.1	10.9	45.6	45.4	78.9	0.344	1.840	0.575	Mr,As
S9034	41.9	72.5	77.7	91.1	12.8	12.8	0.463	0.934	0.999	As
S9035	59.6	32.8	83.4	91.6	17.6	12.8	0.463	0.394	1.373	Mr,As
S9038	53.6	12.5	81.5	116.2	11.4	13.6	0.602	0.153	0.834	As
S9039	86.4	7.5	12.9	162.8	29.4	115.1	0.588	0.578	0.255	As
S9040	133.9	12.9	14.5	169.5	20.5	115.9	0.521	0.890	0.177	As
S9041	104.8	12.2	13.6	17.9	13.0	75.2	0.469	0.898	0.173	As
S9042	117.6	7.8	14.1	150.0	28.2	113.5	0.530	0.554	0.248	As
S9043	47.1	13.1	79.4	108.1	11.6	13.4	0.571	0.165	0.867	As
S9046	156.2	5.8	14.4	55.7	17.8	82.2	0.640	0.399	0.217	As
S9047	150.0	11.7	14.3	202.1	10.7	102.8	0.674	0.818	0.104	As
S9050	154.0	11.7	14.4	205.5	10.9	102.7	0.685	0.813	0.106	As
S9051	156.7	5.8	14.4	54.0	18.2	81.6	0.640	0.401	0.223	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 5317.4
Mr,x= 1231.5> Md,x= 651.5
Mr,y= 1987.1> Md,y= 731.6

10. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S10003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	158.1	8.6
S10004	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	149.3	12.1
S10007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	160.5	10.8
S10008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	156.5	8.4
S10011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	147.1	8.6
S10012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	159.5	31.5
S10013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	142.7	24.9
S10014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	93.4	10.3
S10015	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	170.8	33.9
S10016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	149.1	7.5
S10019	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	129.0	16.9
S10020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	125.4	47.1
S10021	20x120	2400	2x4ø16 +	2x6ø12	29.64	76.36	0.012	505.5	300.0	85.6	32.6
S10022	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	78.3	26.9
S10023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	122.2	41.7
S10024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	125.1	17.2
S10030	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	130.9	16.5
S10031	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	134.2	39.4
S10032	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	135.6	33.8
S10033	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	82.8	31.5
S10034	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	112.7	48.0
S10035	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	114.4	19.6
S10038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	150.5	8.0
S10039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	158.3	16.0
S10040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	139.7	12.0
S10041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	123.5	9.0
S10042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	140.7	15.5
S10043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	142.1	8.5
S10046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	159.2	10.5
S10047	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	166.4	7.5
S10050	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	170.1	7.5
S10051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	159.3	11.0

10. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S10003	128.8	4.3	13.9	39.0	14.6	76.7	0.527	0.305	0.191	As
S10004	64.0	8.3	11.7	70.9	20.1	86.7	0.498	0.712	0.231	As
S10007	116.8	10.7	13.6	83.7	18.0	90.0	0.535	0.785	0.199	As
S10008	126.8	4.7	13.9	37.8	14.2	76.3	0.522	0.335	0.186	As
S10011	39.8	13.1	76.9	101.2	9.3	13.2	0.490	0.170	0.704	As
S10012	121.0	9.0	14.2	127.0	49.9	109.9	0.491	0.633	0.454	As
S10013	107.8	9.8	13.7	56.3	36.7	90.6	0.439	0.640	0.405	As
S10014	93.4	5.8	13.2	-5.4	13.1	64.1	0.287	0.440	0.204	As
S10015	125.0	11.4	14.3	128.5	53.5	110.2	0.526	0.799	0.486	As
S10016	42.5	11.9	77.9	67.0	8.7	11.8	0.497	0.152	0.735	As
S10019	57.3	26.8	82.7	92.1	16.9	12.8	0.430	0.324	1.313	Mr,As
S10020	19.6	68.5	69.4	91.4	14.7	12.8	0.418	0.987	1.150	Mr,As
S10021	30.3	23.3	10.1	62.8	51.3	84.4	0.285	2.298	0.608	Mr,As
S10022	46.9	21.3	10.9	55.7	42.0	82.2	0.261	1.947	0.511	Mr,As
S10023	24.6	60.1	71.4	89.5	17.0	12.7	0.407	0.842	1.333	Mr,As
S10024	58.3	26.8	83.0	90.2	18.5	12.8	0.417	0.323	1.452	Mr,As
S10030	108.5	25.6	95.5	85.6	16.4	12.6	0.436	0.268	1.301	Mr,As
S10031	45.8	50.8	79.0	87.4	11.7	12.7	0.447	0.644	0.922	As
S10032	103.6	16.8	13.6	55.2	49.1	90.2	0.417	1.237	0.544	Mr,As
S10033	35.1	19.8	10.4	53.8	48.7	81.5	0.276	1.908	0.597	Mr,As
S10034	28.3	69.7	72.9	74.0	12.1	12.1	0.376	0.957	1.001	Mr,As
S10035	56.6	30.7	82.4	76.4	16.9	12.2	0.381	0.372	1.383	Mr,As
S10038	81.1	13.2	89.4	63.3	10.3	11.7	0.502	0.148	0.882	As
S10039	109.1	7.4	13.8	133.3	28.7	111.0	0.487	0.540	0.259	As
S10040	110.2	12.7	13.8	137.9	20.4	111.8	0.430	0.921	0.183	As
S10041	85.7	12.0	12.9	16.2	13.2	74.4	0.380	0.934	0.178	As
S10042	98.5	7.3	13.4	120.9	27.5	108.8	0.433	0.546	0.253	As
S10043	73.5	14.1	87.4	57.1	10.6	11.4	0.474	0.161	0.926	As
S10046	129.2	5.6	13.9	47.9	17.9	79.7	0.531	0.403	0.225	As
S10047	123.4	11.4	13.8	166.4	8.8	102.5	0.555	0.822	0.085	As
S10050	127.7	11.3	13.9	170.1	9.0	102.7	0.567	0.816	0.087	As
S10051	129.6	5.7	13.9	46.3	18.4	79.2	0.531	0.406	0.232	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 4373.4
Mr,x= 1230.9> Md,x= 628.9
Mr,y= 1961.6> Md,y= 717.9

T.C. YÜKSEKÖĞRETİM KURULU DOKÜMANTASYON MERKEZİ

11. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	125.4	8.1
S11004	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	117.9	10.8
S11007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	126.9	9.5
S11008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	124.3	7.8
S11011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	116.8	7.7
S11012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	126.3	29.3
S11013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	109.2	23.4
S11014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	73.5	9.6
S11015	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	134.5	31.7
S11016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	118.2	6.6
S11019	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	101.6	15.2
S11020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	98.9	44.5
S11021	20x120	2400	2x4ø16 +	2x6ø12	29.64	80.38	0.012	505.5	300.0	68.1	31.6
S11022	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	61.9	25.9
S11023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	96.3	39.0
S11024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	98.2	15.3
S11030	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	102.5	14.6
S11031	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	107.5	35.8
S11032	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	110.2	32.9
S11033	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	67.8	30.5
S11034	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	89.9	44.9
S11035	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	89.8	17.6
S11038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	120.3	7.1
S11039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	125.8	15.4
S11040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	110.2	11.5
S11041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	95.4	8.4
S11042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	109.1	14.8
S11043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	113.0	7.7
S11046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	126.4	10.0
S11047	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	130.9	7.2
S11050	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	135.0	7.1
S11051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	126.6	10.6

11. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S11003	101.8	4.0	13.2	32.3	14.4	74.4	0.418	0.303	0.194	As
S11004	48.8	7.9	11.0	61.5	18.7	84.0	0.393	0.714	0.223	As
S11007	94.1	10.2	12.9	71.2	16.7	86.8	0.423	0.792	0.193	As
S11008	100.3	4.4	13.1	31.3	14.0	74.0	0.414	0.335	0.189	As
S11011	60.1	13.6	83.6	53.2	8.1	11.2	0.389	0.163	0.721	As
S11012	97.2	8.5	13.3	103.7	47.2	104.9	0.389	0.637	0.450	As
S11013	82.6	8.5	12.8	40.5	35.3	84.8	0.336	0.665	0.416	As
S11014	73.5	5.6	12.4	-0.9	13.0	66.3	0.226	0.452	0.196	As
S11015	99.5	10.9	13.4	104.9	50.6	105.1	0.414	0.809	0.481	As
S11016	62.3	11.9	84.3	54.7	7.9	11.3	0.394	0.141	0.698	As
S11019	52.7	24.9	81.2	72.2	16.0	12.1	0.339	0.307	1.327	Mr,As
S11020	10.3	64.9	65.6	71.6	13.9	12.0	0.330	0.990	1.154	Mr,As
S11021	41.8	24.3	10.7	50.4	49.9	80.5	0.227	2.271	0.619	Mr,As
S11022	37.1	20.8	10.5	44.3	40.4	78.5	0.206	1.988	0.515	Mr,As
S11023	14.6	56.3	67.4	70.1	16.1	12.0	0.321	0.836	1.347	Mr,As
S11024	53.3	24.7	81.4	70.4	17.7	12.0	0.327	0.303	1.477	Mr,As
S11030	78.1	23.2	88.7	67.2	15.4	11.8	0.342	0.262	1.304	Mr,As
S11031	32.0	45.6	74.3	70.1	10.9	12.0	0.358	0.614	0.913	As
S11032	80.0	16.1	12.7	44.9	48.0	86.4	0.339	1.271	0.555	Mr,As
S11033	40.7	20.7	10.6	44.4	47.4	78.5	0.226	1.948	0.603	Mr,As
S11034	18.0	65.2	68.8	59.2	11.5	11.5	0.300	0.948	0.997	As
S11035	51.1	28.4	80.7	60.8	16.1	11.6	0.299	0.352	1.390	Mr,As
S11038	67.6	12.7	85.8	50.9	9.5	11.1	0.401	0.148	0.857	As
S11039	89.2	6.9	13.0	104.5	27.9	105.0	0.387	0.528	0.265	As
S11040	86.7	12.5	12.9	107.0	20.1	105.6	0.339	0.964	0.190	As
S11041	66.9	11.6	12.1	14.0	13.2	73.4	0.293	0.963	0.180	As
S11042	78.1	6.7	12.6	92.4	26.8	102.0	0.336	0.536	0.263	As
S11043	61.1	13.6	83.9	44.4	9.8	10.8	0.377	0.162	0.911	As
S11046	102.3	5.4	13.2	67.7	19.0	85.8	0.421	0.406	0.221	As
S11047	97.0	10.9	13.0	130.9	6.8	99.1	0.436	0.838	0.069	As
S11050	101.6	10.9	13.2	135.0	7.1	99.6	0.450	0.829	0.071	As
S11051	102.6	5.4	13.2	38.1	18.3	76.4	0.422	0.411	0.240	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 3458.6
Mr,x= 1195.3> Md,x= 597.0
Mr,y= 1890.3> Md,y= 687.6

12. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S12003	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	92.8	7.3
S12004	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	86.7	9.2
S12007	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	93.5	8.0
S12008	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	92.0	7.0
S12011	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	86.4	6.7
S12012	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	93.4	26.9
S12013	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	76.3	21.6
S12014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	54.4	8.9
S12015	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	98.6	29.4
S12016	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	87.2	5.5
S12019	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	74.6	12.8
S12020	120x20	2400	2x4ø16 + 2x6ø12	29.64	56.27	0.012	505.5	300.0	71.4	41.5
S12021	20x120	2400	2x4ø16 + 2x6ø12	29.64	80.38	0.012	505.5	300.0	49.5	30.6
S12022	20x120	2400	2x4ø16 + 2x6ø12	29.64	64.31	0.012	505.5	300.0	44.6	24.7
S12023	120x20	2400	2x4ø16 + 2x6ø12	29.64	56.27	0.012	505.5	300.0	69.8	35.8
S12024	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	71.7	12.8
S12030	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	74.5	12.1
S12031	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	77.4	31.8
S12032	20x130	2600	2x4ø16 + 2x6ø12	29.64	48.23	0.011	538.2	325.0	78.6	31.9
S12033	20x120	2400	2x4ø16 + 2x6ø12	29.64	68.33	0.012	505.5	300.0	48.4	29.8
S12034	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	64.7	41.2
S12035	120x20	2400	2x4ø16 + 2x6ø12	29.64	44.21	0.012	505.5	300.0	65.8	14.9
S12038	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	90.3	6.1
S12039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	93.2	14.7
S12040	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	80.9	10.9
S12041	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	68.1	7.6
S12042	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	77.5	14.0
S12043	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	84.1	6.8
S12046	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	93.6	9.3
S12047	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	95.5	6.7
S12050	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	100.2	6.7
S12051	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	93.8	10.0

12. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S12003	75.0	3.7	12.2	25.0	13.8	71.5	0.309	0.306	0.193	As
S12004	34.5	7.3	10.3	49.7	16.7	80.2	0.289	0.706	0.208	As
S12007	70.8	9.6	12.0	56.6	14.7	82.5	0.312	0.800	0.178	As
S12008	73.9	4.1	12.1	44.7	14.7	78.6	0.307	0.341	0.187	As
S12011	46.7	12.7	79.3	38.3	7.3	10.5	0.288	0.160	0.694	As
S12012	72.8	7.9	12.3	79.1	44.0	98.2	0.287	0.639	0.448	As
S12013	58.0	8.1	11.7	25.8	33.8	78.7	0.235	0.692	0.429	As
S12014	54.4	5.3	11.5	54.4	17.3	90.0	0.167	0.460	0.192	As
S12015	73.6	10.2	12.4	79.9	47.5	98.4	0.303	0.828	0.482	As
S12016	48.1	10.8	79.7	60.2	7.9	11.5	0.291	0.135	0.681	As
S12019	45.3	21.7	78.8	52.7	15.0	11.2	0.249	0.275	1.341	Mr,As
S12020	2.6	61.1	62.3	51.4	13.0	11.2	0.238	0.980	1.162	Mr,As
S12021	32.8	23.3	10.2	37.1	49.0	76.0	0.165	2.269	0.644	Mr,As
S12022	26.7	20.1	9.9	32.0	39.2	74.3	0.149	2.024	0.528	Mr,As
S12023	6.1	52.1	63.8	50.5	15.2	11.1	0.233	0.816	1.365	Mr,As
S12024	45.4	21.3	78.8	51.0	16.7	11.1	0.239	0.270	1.502	Mr,As
S12030	50.9	20.0	80.6	49.0	14.4	11.0	0.248	0.249	1.304	Mr,As
S12031	19.1	40.3	69.2	50.5	10.1	11.1	0.258	0.582	0.909	As
S12032	37.4	14.8	10.7	48.9	51.1	87.9	0.242	1.387	0.581	Mr,As
S12033	27.1	20.0	9.9	32.0	47.0	74.3	0.161	2.011	0.633	Mr,As
S12034	8.5	60.6	64.8	42.6	10.7	10.7	0.216	0.935	0.997	As
S12035	43.5	24.8	78.2	45.4	15.1	10.9	0.219	0.317	1.392	Mr,As
S12038	52.8	11.7	81.3	39.4	8.7	10.6	0.301	0.144	0.827	As
S12039	68.0	6.2	12.1	76.6	26.9	97.4	0.287	0.515	0.276	As
S12040	63.4	12.0	11.9	76.9	19.6	97.5	0.249	1.006	0.201	Mr,As
S12041	48.4	11.2	11.2	11.1	12.7	72.1	0.210	0.996	0.177	As
S12042	56.3	6.1	11.6	64.8	25.6	93.5	0.238	0.522	0.273	As
S12043	47.3	12.7	79.5	32.5	9.1	10.2	0.280	0.160	0.889	As
S12046	75.4	5.1	12.2	51.4	18.5	80.8	0.312	0.415	0.229	As
S12047	70.6	10.3	12.0	73.5	7.2	87.4	0.318	0.859	0.083	As
S12050	75.6	10.3	12.2	77.2	7.0	88.5	0.334	0.846	0.080	As
S12051	75.6	5.2	12.2	50.3	19.0	80.4	0.313	0.424	0.236	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 2529.3
Mr,x= 1127.1> Md,x= 550.4
Mr,y= 1819.3> Md,y= 668.2

13. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S13003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	60.3	6.7
S13004	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	55.6	8.0
S13007	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	60.2	7.0
S13008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	59.6	6.5
S13011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	55.9	5.6
S13012	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	60.5	23.5
S13013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	43.4	19.9
S13014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	36.1	7.9
S13015	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	62.8	25.7
S13016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	56.2	4.4
S13019	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	47.6	11.0
S13020	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	45.3	36.2
S13021	20x120	2400	2x4ø16 +	2x6ø12	29.64	76.36	0.012	505.5	300.0	32.4	27.1
S13022	20x120	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	28.3	22.5
S13023	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	44.4	31.0
S13024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	45.2	10.8
S13030	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	46.0	9.9
S13031	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	51.3	26.3
S13032	20x130	2600	2x4ø16 +	2x6ø12	29.64	48.23	0.011	538.2	325.0	53.5	29.4
S13033	20x120	2400	2x4ø16 +	2x6ø12	29.64	68.33	0.012	505.5	300.0	34.1	25.9
S13034	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	42.7	36.1
S13035	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	41.4	12.6
S13038	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	60.4	6.0
S13039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	60.5	13.2
S13040	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	51.6	9.9
S13041	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	41.7	7.0
S13042	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	45.7	13.2
S13043	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	55.3	5.7
S13046	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	60.7	9.0
S13047	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	60.2	6.2
S13050	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	65.4	6.3
S13051	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	61.1	9.0

13. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S13003	48.3	3.4	11.0	30.2	15.0	73.6	0.201	0.306	0.203	As
S13004	44.4	7.6	10.8	35.3	15.6	75.4	0.185	0.704	0.207	As
S13007	46.7	8.8	10.9	39.5	14.2	76.8	0.201	0.807	0.185	As
S13008	47.6	3.8	11.0	29.5	14.9	73.4	0.199	0.344	0.203	As
S13011	31.8	11.5	74.2	24.3	6.5	9.8	0.186	0.155	0.660	As
S13012	48.0	7.2	11.2	53.1	39.1	89.5	0.186	0.638	0.437	As
S13013	33.7	7.7	10.5	11.8	28.9	72.4	0.133	0.736	0.399	As
S13014	36.1	5.1	10.6	36.1	15.6	83.1	0.111	0.478	0.187	As
S13015	47.3	9.5	11.2	53.2	41.1	89.5	0.193	0.852	0.459	As
S13016	45.4	9.9	78.8	38.4	7.0	10.5	0.187	0.125	0.670	As
S13019	34.4	19.9	75.1	33.4	13.9	10.3	0.159	0.265	1.356	Mr,As
S13020	-2.4	52.4	60.1	32.3	11.9	10.2	0.151	0.872	1.167	Mr,As
S13021	23.0	22.1	9.7	24.8	41.9	71.5	0.108	2.273	0.587	Mr,As
S13022	17.1	19.2	9.4	20.4	35.3	69.7	0.094	2.052	0.506	Mr,As
S13023	9.0	47.1	65.0	31.7	14.1	10.2	0.148	0.724	1.381	Mr,As
S13024	33.8	18.8	74.9	31.8	15.6	10.2	0.151	0.251	1.529	Mr,As
S13030	26.7	17.4	72.2	30.2	13.3	10.1	0.153	0.241	1.313	Mr,As
S13031	50.5	41.2	80.5	33.4	9.2	10.3	0.171	0.512	0.891	As
S13032	22.6	13.8	9.8	33.4	46.4	82.0	0.165	1.405	0.566	Mr,As
S13033	17.7	19.1	9.4	23.2	38.8	70.8	0.114	2.027	0.547	Mr,As
S13034	2.6	52.3	62.3	28.0	9.9	10.0	0.142	0.839	0.988	As
S13035	32.5	21.9	74.4	29.6	14.2	10.1	0.138	0.295	1.404	Mr,As
S13038	36.6	10.5	75.8	41.7	8.0	10.7	0.201	0.138	0.752	As
S13039	45.4	5.4	11.1	49.8	23.8	88.3	0.186	0.487	0.270	As
S13040	40.3	11.7	10.8	17.6	17.7	87.4	0.159	1.078	0.202	Mr,As
S13041	29.9	10.6	10.3	7.4	11.4	70.4	0.128	1.030	0.162	Mr,As
S13042	33.0	5.4	10.4	37.8	24.0	83.8	0.141	0.520	0.286	As
S13043	31.9	11.6	74.2	21.3	8.3	9.6	0.184	0.157	0.865	As
S13046	48.6	4.7	11.0	34.3	19.2	75.1	0.202	0.427	0.255	As
S13047	44.2	9.5	10.8	36.0	7.0	75.6	0.201	0.879	0.092	As
S13050	49.7	9.6	11.1	39.2	6.1	76.7	0.218	0.868	0.080	As
S13051	48.8	4.8	11.0	33.6	17.6	74.8	0.204	0.439	0.235	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 1625.6
Mr,x= 1079.6> Md,x= 503.3
Mr,y= 1681.8> Md,y= 605.3

14. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S14003	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	27.8	6.0
S14004	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	24.9	6.3
S14007	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	26.4	5.8
S14008	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	27.2	5.4
S14011	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	25.2	5.4
S14012	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	27.9	24.1
S14013	20x130	2600	2x4ø16 + 2x6ø12	29.64	44.21	0.011	538.2	325.0	10.9	23.8
S14014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	22.2	9.7
S14015	20x130	2600	2x4ø16 + 2x6ø12	29.64	40.19	0.011	538.2	325.0	27.8	30.9
S14016	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	25.4	4.3
S14019	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	21.0	9.2
S14020	120x20	2400	2x4ø16 + 2x6ø12	29.64	68.33	0.012	505.5	300.0	18.1	40.5
S14021	20x120	2400	2x4ø16 + 2x6ø12	29.64	100.48	0.012	505.5	300.0	13.9	37.4
S14022	20x120	2400	2x4ø16 + 2x6ø12	29.64	80.38	0.012	505.5	300.0	9.8	26.8
S14023	120x20	2400	2x4ø16 + 2x6ø12	29.64	68.33	0.012	505.5	300.0	18.2	33.1
S14024	120x20	2400	2x4ø16 + 2x6ø12	29.64	56.27	0.012	505.5	300.0	19.2	10.5
S14030	120x20	2400	2x4ø16 + 2x6ø12	29.64	44.21	0.012	505.5	300.0	17.4	8.2
S14031	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	23.6	27.0
S14032	20x130	2600	2x4ø16 + 2x6ø12	29.64	68.33	0.011	538.2	325.0	22.2	35.6
S14033	20x120	2400	2x4ø16 + 2x6ø12	29.64	88.42	0.012	505.5	300.0	15.5	39.3
S14034	120x20	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	18.8	36.6
S14035	120x20	2400	2x4ø16 + 2x6ø12	29.64	48.23	0.012	505.5	300.0	17.1	9.3
S14038	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	29.9	5.8
S14039	20x130	2600	2x4ø16 + 2x6ø12	29.64	40.19	0.011	538.2	325.0	28.0	17.6
S14040	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	22.4	13.2
S14041	20x130	2600	2x4ø16 + 2x6ø12	29.64	48.23	0.011	538.2	325.0	16.1	9.0
S14042	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	14.2	13.8
S14043	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	26.6	6.1
S14046	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	27.7	6.6
S14047	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	25.0	6.1
S14050	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	30.9	9.1
S14051	20x120	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	28.4	10.6

14. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S14003	21.7	3.0	9.6	14.3	14.2	67.3	0.093	0.309	0.211	As
S14004	20.4	7.9	9.6	15.6	12.2	67.8	0.083	0.823	0.179	As
S14007	21.3	8.8	9.6	17.2	8.7	68.5	0.088	0.916	0.127	As
S14008	21.3	3.4	9.6	13.6	13.1	67.0	0.091	0.350	0.196	As
S14011	13.8	10.4	67.0	16.5	6.3	9.3	0.084	0.155	0.673	As
S14012	23.0	7.4	9.9	25.1	44.7	78.4	0.086	0.751	0.569	As
S14013	5.5	7.3	8.8	0.0	46.2	66.8	0.034	0.830	0.691	As
S14014	18.1	5.3	9.6	18.7	21.1	75.6	0.068	0.558	0.279	As
S14015	21.1	9.2	9.7	25.0	55.9	78.4	0.086	0.948	0.713	As
S14016	13.9	8.5	67.1	17.7	6.5	9.4	0.085	0.127	0.689	As
S14019	20.1	10.3	69.6	14.8	14.2	9.2	0.070	0.148	1.539	Mr,As
S14020	-5.1	63.8	58.9	12.4	12.5	9.1	0.060	1.084	1.373	Mr,As
S14021	10.0	22.4	9.0	11.5	68.0	66.1	0.046	2.494	1.030	Mr,As
S14022	6.3	19.5	8.7	7.1	47.0	64.2	0.033	2.231	0.732	Mr,As
S14023	0.0	54.6	61.2	12.1	14.9	9.1	0.061	0.892	1.645	Mr,As
S14024	13.4	10.8	66.9	13.4	16.2	9.2	0.064	0.162	1.764	Mr,As
S14030	7.3	10.5	64.3	11.6	12.5	9.0	0.058	0.164	1.378	Mr,As
S14031	23.6	45.4	71.0	13.7	9.5	9.2	0.079	0.639	1.031	Mr,As
S14032	11.4	14.2	9.2	13.7	63.3	73.2	0.068	1.551	0.864	Mr,As
S14033	5.7	19.4	8.7	11.5	71.7	66.1	0.052	2.231	1.086	Mr,As
S14034	1.5	59.7	61.8	12.2	10.4	9.1	0.063	0.965	1.146	Mr,As
S14035	6.0	16.4	63.7	13.7	14.2	9.2	0.057	0.257	1.544	Mr,As
S14038	23.3	12.8	70.9	24.8	9.5	9.8	0.100	0.180	0.964	As
S14039	21.6	10.8	9.8	23.8	35.9	77.9	0.086	1.106	0.462	Mr,As
S14040	13.9	9.5	9.3	18.9	27.1	75.7	0.069	1.023	0.358	Mr,As
S14041	12.0	12.8	9.2	16.0	21.0	74.3	0.049	1.388	0.283	Mr,As
S14042	8.4	3.6	9.0	11.6	27.3	72.3	0.044	0.398	0.377	As
S14043	13.5	11.8	66.9	16.2	8.7	9.3	0.089	0.177	0.930	As
S14046	21.7	4.4	9.6	16.5	16.1	68.2	0.092	0.461	0.236	As
S14047	17.9	9.6	9.4	21.5	12.4	70.2	0.083	1.016	0.177	Mr,As
S14050	24.0	9.2	9.8	26.0	23.3	72.0	0.103	0.945	0.323	As
S14051	22.0	4.8	9.6	16.4	22.1	68.2	0.095	0.501	0.324	As

Kat Kapasite Kontrolu:
Nmax= 9825.0> Nd,max= 709.8
Mr,x= 977.1> Md,x= 507.5
Mr,y= 1528.8> Md,y= 786.4

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU
BS25
fcd =192.3 fctd=13.38(kg/cm²)
fyd =3818.2(kg/cm²)
Rot kesme kuvvet kapasitesi:
Vr=2.12 (t) ø20 l=423 mm

PERDELERİN KESME GÜVENLİK KONTROLU

Vr = Ach (0.65 fctd + rsh fyd) Perde Kesme Dayanımı
Vrh = 0.22 fcd Ach Max. Beton Kesme Dayanımı
rshx = Asws.(Σ Letrx/s)/Ach rshy = Asws.(Σ Letry/s)/Ach
Vfr = μ N + fyd Asd = İş Derzi Sürtünme Kesme Dayanımı
N = Ng - Ne Min. Düşey Yük
μ = 1.4 (özel pürüzlendirme)

Kolon		N	Vd	Vr	Vrh	Vfr	ACIKLAMA
S3003	X yönü	144.239	2.199	49.181	94.769	359.340	✓
	Y yönü	99.067	17.916	77.827	94.769	296.101	✓
S3004	X yönü	172.489	3.856	49.181	94.769	491.031	✓
	Y yönü	10.813	26.089	77.827	94.769	264.684	✓
S3007	X yönü	193.113	4.134	49.181	94.769	504.548	✓
	Y yönü	41.822	24.999	77.827	94.769	292.741	✓
S3008	X yönü	139.539	2.130	49.181	94.769	352.762	✓
	Y yönü	92.701	18.823	77.827	94.769	287.188	✓
S3011	X yönü	64.262	27.192	68.875	94.769	258.890	✓
	Y yönü	141.893	3.557	46.623	94.769	367.574	✓
S3012	X yönü	197.927	4.048	51.086	101.538	381.715	✓
	Y yönü	170.441	33.361	82.290	101.538	343.235	✓
S3013	X yönü	193.068	3.143	55.038	108.308	374.913	✓
	Y yönü	205.433	24.317	86.753	108.308	392.223	✓
S3014	X yönü	79.654	2.424	55.038	108.308	323.630	✓
	Y yönü	-34.050	20.907	86.753	108.308	164.445	✓
S3015	X yönü	213.815	4.411	48.529	101.538	468.265	✓
	Y yönü	169.875	32.517	72.699	101.538	406.749	✓
S3016	X yönü	69.732	24.496	68.875	94.769	281.906	✓
	Y yönü	140.821	3.557	46.623	94.769	381.430	✓
S3019	X yönü	-44.183	31.495	77.827	94.769	172.334	✓
	Y yönü	158.795	4.828	49.181	94.769	456.503	✓
S3020	X yönü	163.209	35.713	68.875	94.769	382.060	✓
	Y yönü	163.045	4.723	46.623	94.769	381.830	✓
S3021	X yönü	31.753	6.796	46.623	94.769	167.308	✓
	Y yönü	116.532	24.392	68.875	94.769	285.999	✓
S3022	X yönü	101.876	5.414	49.181	94.769	238.606	✓
	Y yönü	114.388	23.370	77.827	94.769	256.123	✓
S3023	X yönü	147.302	34.250	68.875	94.769	329.077	✓
	Y yönü	156.056	4.886	46.623	94.769	341.331	✓
S3024	X yönü	-38.672	29.280	77.827	94.769	164.692	✓
	Y yönü	159.238	5.045	49.181	94.769	441.766	✓
S3030	X yönü	1.373	30.421	77.827	94.769	190.042	✓
	Y yönü	156.541	4.684	49.181	94.769	407.276	✓
S3031	X yönü	134.208	37.307	68.875	94.769	372.172	✓
	Y yönü	172.407	4.175	46.623	94.769	425.650	✓
S3033	X yönü	104.245	5.488	49.181	94.769	241.922	✓
	Y yönü	115.695	23.381	77.827	94.769	257.983	✓
S3034	X yönü	122.078	36.199	77.827	94.769	266.389	✓
	Y yönü	148.331	4.098	49.181	94.769	303.642	✓
S3035	X yönü	-20.170	29.753	77.827	94.769	175.239	✓
	Y yönü	138.488	4.808	49.181	94.769	397.360	✓
S3038	X yönü	81.615	26.698	68.875	94.769	298.542	✓
	Y yönü	173.780	3.605	46.623	94.769	427.572	✓
S3039	X yönü	155.279	3.758	51.086	101.538	359.440	✓
	Y yönü	119.482	25.568	82.290	101.538	309.324	✓
S3040	X yönü	149.725	4.331	55.038	108.308	329.589	✓
	Y yönü	61.648	18.846	86.753	108.308	206.282	✓
S3041	X yönü	156.324	4.237	55.038	108.308	354.185	✓
	Y yönü	47.358	20.082	86.753	108.308	201.632	✓
S3042	X yönü	150.660	3.706	51.086	101.538	306.904	✓
	Y yönü	108.582	23.894	82.290	101.538	247.994	✓

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S3043	X yönü	71.956	24.006	68.875	94.769	269.662	✓
	Y yönü	166.429	3.581	46.623	94.769	401.925	✓
S3046	X yönü	146.362	2.214	49.181	94.769	346.957	✓
	Y yönü	115.167	18.757	77.827	94.769	303.283	✓
S3047	X yönü	217.878	4.161	46.623	94.769	458.596	✓
	Y yönü	217.686	22.186	68.875	94.769	458.327	✓
S3050	X yönü	217.314	4.090	46.623	94.769	457.807	✓
	Y yönü	218.127	20.993	68.875	94.769	458.945	✓
S3051	X yönü	144.859	2.525	49.181	94.769	344.853	✓
	Y yönü	113.286	19.592	77.827	94.769	300.650	✓
S4003	X yönü	131.021	2.948	49.181	94.769	279.408	✓
	Y yönü	90.896	17.150	77.827	94.769	223.234	✓
S4004	X yönü	158.671	6.675	49.181	94.769	333.475	✓
	Y yönü	27.326	29.417	77.827	94.769	149.592	✓
S4007	X yönü	177.800	7.573	49.181	94.769	344.899	✓
	Y yönü	54.964	27.584	77.827	94.769	172.929	✓
S4008	X yönü	127.160	3.038	49.181	94.769	274.003	✓
	Y yönü	85.597	16.684	77.827	94.769	215.815	✓
S4011	X yönü	63.130	11.271	77.827	94.769	184.362	✓
	Y yönü	135.913	5.490	49.181	94.769	286.258	✓
S4012	X yönü	187.849	6.588	51.086	101.538	358.968	✓
	Y yönü	172.938	54.487	82.290	101.538	338.093	✓
S4013	X yönü	170.581	5.674	55.038	108.308	343.431	✓
	Y yönü	189.553	43.694	86.753	108.308	369.992	✓
S4014	X yönü	73.022	4.173	55.038	108.308	222.205	✓
	Y yönü	-31.369	16.664	86.753	108.308	76.058	✓
S4015	X yönü	199.941	8.406	51.086	101.538	384.535	✓
	Y yönü	171.110	55.915	82.290	101.538	344.172	✓
S4016	X yönü	68.739	11.997	77.827	94.769	192.214	✓
	Y yönü	134.330	5.467	49.181	94.769	284.042	✓
S4019	X yönü	-21.270	31.651	77.827	94.769	127.628	✓
	Y yönü	147.433	8.525	49.181	94.769	363.812	✓
S4020	X yönü	153.492	61.034	75.589	94.769	337.742	✓
	Y yönü	146.410	8.291	48.542	94.769	327.827	✓
S4021	X yönü	27.320	14.645	46.623	94.769	268.599	✓
	Y yönü	103.275	37.996	68.875	94.769	374.936	✓
S4022	X yönü	87.327	11.844	46.623	94.769	245.111	✓
	Y yönü	99.919	35.791	68.875	94.769	262.740	✓
S4023	X yönü	153.157	57.454	70.289	94.769	352.630	✓
	Y yönü	141.738	8.911	47.027	94.769	336.643	✓
S4024	X yönü	-17.597	31.830	77.827	94.769	132.770	✓
	Y yönü	145.616	9.044	49.181	94.769	361.269	✓
S4030	X yönü	19.989	33.023	68.875	94.769	166.135	✓
	Y yönü	142.431	8.527	46.623	94.769	337.614	✓
S4031	X yönü	138.532	56.062	77.827	94.769	289.324	✓
	Y yönü	156.751	6.902	49.181	94.769	315.431	✓
S4033	X yönü	94.718	12.033	46.623	94.769	255.459	✓
	Y yönü	101.083	38.712	68.875	94.769	264.369	✓
S4034	X yönü	128.176	65.624	77.827	94.769	290.783	✓
	Y yönü	134.673	7.029	49.181	94.769	299.878	✓
S4035	X yönü	-2.507	35.252	77.827	94.769	153.897	✓
	Y yönü	125.369	8.807	49.181	94.769	332.923	✓
S4038	X yönü	79.650	10.915	77.827	94.769	207.489	✓
	Y yönü	157.181	5.870	49.181	94.769	316.033	✓
S4039	X yönü	146.900	6.011	51.086	101.538	301.640	✓
	Y yönü	111.035	21.004	82.290	101.538	251.428	✓
S4040	X yönü	134.125	8.016	55.038	108.308	292.393	✓
	Y yönü	54.749	22.151	86.753	108.308	181.266	✓

S4041	X yönü	140.524	7.757	55.038	108.308	301.351	✓
	Y yönü	41.101	20.407	86.753	108.308	162.158	✓
S4042	X yönü	141.914	5.942	51.086	101.538	294.658	✓
	Y yönü	100.001	20.997	82.290	101.538	235.981	✓
S4043	X yönü	70.104	11.166	77.827	94.769	194.126	✓
	Y yönü	150.169	5.821	49.181	94.769	306.216	✓
S4046	X yönü	133.540	3.474	49.181	94.769	282.935	✓
	Y yönü	107.095	17.716	77.827	94.769	245.913	✓
S4047	X yönü	196.942	7.519	46.623	94.769	398.573	✓
	Y yönü	196.162	6.186	68.875	94.769	397.480	✓
S4050	X yönü	196.501	7.490	46.623	94.769	397.955	✓
	Y yönü	196.739	5.762	68.875	94.769	398.289	✓
S4051	X yönü	132.039	3.439	49.181	94.769	280.834	✓
	Y yönü	105.104	17.393	77.827	94.769	243.125	✓
S1001	X yönü	263.631	593.097	1779.203	3043.615	1941.226	✓
	Y yönü	126.611	17.720	1231.043	3043.615	1749.399	✓
S1005	X yönü	190.645	5.969	67.315	108.308	497.254	✓
	Y yönü	56.357	5.316	58.107	108.308	309.250	✓
S1006	X yönü	241.348	6.129	67.315	108.308	568.238	✓
	Y yönü	151.772	5.260	58.107	108.308	442.831	✓
S1026	X yönü	1084.172	139.583	842.748	1239.108	3107.261	✓
	Y yönü	1088.280	357.529	890.104	1239.108	3113.012	✓
S1048	X yönü	241.618	5.934	67.315	108.308	568.615	✓
	Y yönü	226.101	5.581	58.107	108.308	546.893	✓
S1049	X yönü	234.966	5.937	67.315	108.308	559.304	✓
	Y yönü	223.444	5.544	58.107	108.308	543.173	✓
S1053	X yönü	265.102	592.665	1778.709	3042.769	1943.286	✓
	Y yönü	148.689	17.344	1230.702	3042.769	1780.307	✓
S2001	X yönü	133.888	1195.954	1779.203	3043.615	1750.949	✓
	Y yönü	58.040	73.872	1231.043	3043.615	1644.762	✓
S2005	X yönü	178.962	18.615	67.315	108.308	480.897	✓
	Y yönü	46.310	12.812	58.107	108.308	295.184	✓
S2006	X yönü	234.678	19.330	67.315	108.308	558.900	✓
	Y yönü	154.180	13.516	58.107	108.308	446.202	✓
S2026	X yönü	1017.402	927.451	1022.380	1239.108	3013.782	✓
	Y yönü	1016.459	31.270	1086.958	1239.108	3012.462	✓
S2048	X yönü	232.032	18.839	67.315	108.308	555.195	✓
	Y yönü	228.977	14.754	58.107	108.308	550.919	✓
S2049	X yönü	226.165	18.473	67.315	108.308	546.982	✓
	Y yönü	226.615	14.347	58.107	108.308	547.611	✓
S2053	X yönü	135.097	1208.994	1778.709	3042.769	1752.641	✓
	Y yönü	72.988	68.591	1230.702	3042.769	1665.689	✓
S3005	X yönü	170.482	26.247	67.315	108.308	469.025	✓
	Y yönü	38.644	10.797	58.107	108.308	284.452	✓
S3006	X yönü	236.057	27.864	67.315	108.308	560.830	✓
	Y yönü	170.295	10.283	58.107	108.308	468.764	✓
S3026	X yönü	965.486	512.610	842.748	1239.108	2941.100	✓
	Y yönü	948.249	289.321	890.104	1239.108	2916.968	✓
S3048	X yönü	227.453	25.392	67.315	108.308	548.784	✓
	Y yönü	244.693	10.073	58.107	108.308	572.921	✓
S3049	X yönü	223.127	25.815	67.315	108.308	542.729	✓
	Y yönü	242.709	10.038	58.107	108.308	570.144	✓
S4005	X yönü	157.220	18.100	67.315	108.308	450.459	✓
	Y yönü	40.784	10.349	58.107	108.308	287.448	✓
S4006	X yönü	215.726	21.520	67.315	108.308	532.367	✓
	Y yönü	152.947	9.481	58.107	108.308	444.476	✓
S4026	X yönü	909.089	427.973	842.748	1239.108	2862.143	✓
	Y yönü	887.895	276.580	890.104	1239.108	2832.473	✓

S4048	X yönü	209.075	16.748	67.315	108.308	523.055	✓
	Y yönü	224.776	11.045	58.107	108.308	545.037	✓
S4049	X yönü	204.717	17.580	67.315	108.308	516.954	✓
	Y yönü	222.829	11.047	58.107	108.308	542.312	✓
S5005	X yönü	146.680	24.586	67.315	108.308	435.703	✓
	Y yönü	46.586	10.959	58.107	108.308	295.571	✓
S5006	X yönü	197.265	28.196	67.315	108.308	506.522	✓
	Y yönü	138.636	9.746	58.107	108.308	424.441	✓
S5026	X yönü	851.813	388.553	842.748	1239.108	2781.958	✓
	Y yönü	826.306	238.745	890.104	1239.108	2746.248	✓
S5048	X yönü	191.158	21.896	67.315	108.308	497.972	✓
	Y yönü	205.048	10.154	58.107	108.308	517.418	✓
S5049	X yönü	186.775	22.704	67.315	108.308	491.836	✓
	Y yönü	203.109	10.085	58.107	108.308	514.703	✓
S6005	X yönü	133.797	24.223	67.315	108.308	417.667	✓
	Y yönü	46.854	11.311	58.107	108.308	295.947	✓
S6006	X yönü	178.462	28.126	67.315	108.308	480.198	✓
	Y yönü	124.661	10.100	58.107	108.308	404.876	✓
S6026	X yönü	788.654	325.266	842.748	1239.108	2693.534	✓
	Y yönü	759.918	193.770	890.104	1239.108	2653.304	✓
S6048	X yönü	172.963	21.737	67.315	108.308	472.499	✓
	Y yönü	184.735	11.274	58.107	108.308	488.980	✓
S6049	X yönü	168.537	22.483	67.315	108.308	466.302	✓
	Y yönü	182.758	11.239	58.107	108.308	486.212	✓
S7005	X yönü	120.352	24.445	67.315	108.308	398.843	✓
	Y yönü	46.416	11.468	58.107	108.308	295.333	✓
S7006	X yönü	159.441	28.634	67.315	108.308	453.567	✓
	Y yönü	110.984	10.073	58.107	108.308	385.728	✓
S7026	X yönü	718.230	268.559	842.748	1239.108	2594.942	✓
	Y yönü	687.866	145.892	890.104	1239.108	2552.432	✓
S7048	X yönü	154.621	21.942	67.315	108.308	446.820	✓
	Y yönü	164.236	10.955	58.107	108.308	460.281	✓
S7049	X yönü	150.130	22.698	67.315	108.308	440.533	✓
	Y yönü	162.175	10.912	58.107	108.308	457.395	✓
S8005	X yönü	106.328	24.217	67.315	108.308	379.209	✓
	Y yönü	44.990	11.406	58.107	108.308	293.337	✓
S8006	X yönü	139.929	28.614	67.315	108.308	426.252	✓
	Y yönü	97.313	10.078	58.107	108.308	366.589	✓
S8026	X yönü	637.895	227.150	842.748	1239.108	2482.472	✓
	Y yönü	611.652	113.561	890.104	1239.108	2445.732	✓
S8048	X yönü	136.094	21.819	67.315	108.308	420.882	✓
	Y yönü	143.590	11.042	58.107	108.308	431.377	✓
S8049	X yönü	131.515	22.575	67.315	108.308	414.472	✓
	Y yönü	141.402	11.001	58.107	108.308	429.313	✓
S9005	X yönü	91.800	23.778	67.315	108.308	358.870	✓
	Y yönü	42.394	11.135	58.107	108.308	289.702	✓
S9006	X yönü	120.146	28.339	67.315	108.308	398.556	✓
	Y yönü	83.635	9.997	58.107	108.308	347.439	✓
S9026	X yönü	550.831	197.375	842.748	1239.108	2360.583	✓
	Y yönü	531.734	90.844	890.104	1239.108	2333.847	✓
S9048	X yönü	117.343	21.538	67.315	108.308	394.631	✓
	Y yönü	122.817	11.013	58.107	108.308	402.295	✓
S9049	X yönü	112.653	22.294	67.315	108.308	388.065	✓
	Y yönü	120.461	10.972	58.107	108.308	398.997	✓
S10005	X yönü	76.828	23.110	67.315	108.308	337.909	✓
	Y yönü	38.525	10.729	58.107	108.308	284.285	✓
S10006	X yönü	100.193	27.781	67.315	108.308	370.621	✓
	Y yönü	69.949	9.878	58.107	108.308	328.279	✓

S10026	X yönü	461.993	172.771	842.748	1239.108	2236.209	✔
	Y yönü	448.952	73.094	890.104	1239.108	2217.953	✔
S10048	X yönü	98.354	21.046	67.315	108.308	368.046	✔
	Y yönü	101.942	11.037	58.107	108.308	373.070	✔
S10049	X yönü	93.526	21.807	67.315	108.308	361.287	✔
	Y yönü	99.378	10.989	58.107	108.308	369.480	✔
S11005	X yönü	61.468	22.149	67.315	108.308	316.406	✔
	Y yönü	33.316	10.190	58.107	108.308	276.993	✔
S11006	X yönü	80.077	26.919	67.315	108.308	342.458	✔
	Y yönü	56.180	9.692	58.107	108.308	309.003	✔
S11026	X yönü	371.811	146.640	842.748	1239.108	2109.954	✔
	Y yönü	363.671	54.960	890.104	1239.108	2098.559	✔
S11048	X yönü	79.115	20.335	67.315	108.308	341.111	✔
	Y yönü	80.986	10.960	58.107	108.308	343.731	✔
S11049	X yönü	74.118	21.089	67.315	108.308	334.115	✔
	Y yönü	78.169	10.942	58.107	108.308	339.787	✔
S12005	X yönü	45.753	21.243	67.315	108.308	294.405	✔
	Y yönü	26.705	9.581	58.107	108.308	267.737	✔
S12006	X yönü	59.338	25.865	67.315	108.308	313.424	✔
	Y yönü	42.255	9.590	58.107	108.308	289.508	✔
S12026	X yönü	281.100	107.497	842.748	1239.108	1982.960	✔
	Y yönü	276.592	26.530	890.104	1239.108	1976.648	✔
S12048	X yönü	59.607	19.496	67.315	108.308	313.801	✔
	Y yönü	59.961	11.283	58.107	108.308	314.297	✔
S12049	X yönü	54.412	20.366	67.315	108.308	306.527	✔
	Y yönü	56.839	11.078	58.107	108.308	309.926	✔
S13005	X yönü	29.756	18.065	67.315	108.308	272.009	✔
	Y yönü	18.715	8.600	58.107	108.308	256.551	✔
S13006	X yönü	38.128	23.399	67.315	108.308	283.730	✔
	Y yönü	28.192	8.839	58.107	108.308	269.820	✔
S13026	X yönü	190.220	45.378	842.748	1239.108	1855.727	✔
	Y yönü	187.981	18.687	890.104	1239.108	1852.592	✔
S13048	X yönü	39.763	17.261	67.315	108.308	286.019	✔
	Y yönü	38.873	9.976	58.107	108.308	284.772	✔
S13049	X yönü	34.382	17.784	67.315	108.308	278.485	✔
	Y yönü	35.389	10.609	58.107	108.308	279.895	✔
S14005	X yönü	13.404	24.741	67.315	108.308	249.116	✔
	Y yönü	9.438	9.729	58.107	108.308	243.563	✔
S14006	X yönü	17.065	27.213	67.315	108.308	254.241	✔
	Y yönü	13.752	13.095	58.107	108.308	249.603	✔
S14026	X yönü	99.744	158.296	842.748	1239.108	1729.061	✔
	Y yönü	98.313	196.942	890.104	1239.108	1727.057	✔
S14048	X yönü	18.811	21.210	67.315	108.308	256.686	✔
	Y yönü	17.586	15.646	58.107	108.308	254.972	✔
S14049	X yönü	13.996	24.262	67.315	108.308	249.945	✔
	Y yönü	13.706	11.735	58.107	108.308	249.540	✔

RADYE MAT TEMELLERIN SONLU ELEMANLARLA ANALİZİ

ZEMİN YATAK KATSAYISI (t/m³) : 4500.0
ZEMİN EMNİYET GERİMESİ (t/m²) : 30.0
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETON ve ÇELİK MALZEME BİLGİLERİ
Beton dayanım gerilmesi (kg/cm²)..:250
Çelik akma gerilmesi (kg/cm²)..:4200

STATİK ANALİZ YÜK KOMBİNASYON NOTASYONLARI:

1. G+G+G+G+G	GENEL ÖLÜ YÜK
2. Q+Q+Q+Q+Q	1. GENEL HAREKETLİ YÜK
3. Q+o+Q+o+Q	2. HAREKETLİ YÜK
4. o+Q+o+Q+o	3. HAREKETLİ YÜK
5. Q+Q+o+Q+Q	4. HAREKETLİ YÜK
6. o+Q+Q+o+Q	5. HAREKETLİ YÜK
7. Q+o+Q+Q+o	6. HAREKETLİ YÜK
8. Gz	Yatay zemin itkisi
9. Ex + %5 x ey	X yönü deprem + %5 eksantrisite
10. Ex - %5 x ey	X yönü deprem - %5 eksantrisite
11. Ey + %5 x ex	Y yönü deprem + %5 eksantrisite
12. Ey - %5 x ex	Y yönü deprem - %5 eksantrisite
13. Wx + %5 x ey	X yönü rüzgar + %5 eksantrisite
14. Wx - %5 x ey	X yönü rüzgar - %5 eksantrisite
15. Wy + %5 x ex	Y yönü rüzgar + %5 eksantrisite
16. Wy - %5 x ex	Y yönü rüzgar - %5 eksantrisite

ZEMİN GERİLMESİ t/m²

Nok no	1 g	2 q	3 q	4 q	5 q	6 q	7 q	8 z	9 e	10 e	11 e	12 e	13 w	14 w	15 w	16 w	max. σ
601	16.97	1.397	1.399	1.397	1.397	1.398	1.399	0.00	0.23	0.244	0.716	0.705	0.030	0.029	0.09	0.089	18.37

max ZEMİN GERİLMESİ=18.375 t/m²

P1 - Z1

PROJE İSMİ.....:soyak gokyuzu evleri b-blok
KAT ADEDİ.....: 14
Bir kattaki KOLON SAYISI.....: 66
X yönü aks sayısı.....: 32
Y yönü aks sayısı.....: 23
DEPREM KATSAYISI.....(Ao).: .4
YAPI TİPİ KATSAYISI.....(R)..: 4
YAPI ÖNEM KATSAYISI.....(I)..: 1
ZEMİN HAKİM TİTREŞİM PERYODU..(Ta/Tb).: .1 / .3
HAREKETLİ YÜK KATSAYISI.....(n)..: .3
SIFIR RÖLATİF HAREKET YÜKSEKLİĞİ (m)..:.00
ZEMİN EMNİYET GERİLMESİ..... (t/m²)..:30.0
ZEMİN YATAK KATSAYISI..... (t/m³)..:4500.0
BETON YOĞUNLUĞU.....(t/m³)..:2.5
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETONARME KESİT DONATI HESAP YÖNTEMİ .....:BRÜT KESİTE GÖRE
DEPREM HESABI YÖNTEMİ .....:MOD SÜPERPOZİSYONU İLE DİNAMİK ANALİZ
TEMEL ANALİZ OPSİYONU.....:TEMELLER DİKKATE ALINMADAN, YAPI ANALİZİ
Zemin gerilmesi hareketli yük azaltma degeri..:.60
Zemin gerilmesi deprem azaltması.....:.50
Zemin gerilmesi rüzgar azaltması.....:.25
Kolonun oturduğu kiriş tesir çarpanı.....: 1.5
Kiriş & Kolon rijitlik bölgesi opsiyonu.....: Rijit davranış
Kiriş uçlarında elastik ankastrelik opsiyonu : Elastik ankastre

BETON ve ÇELİK MALZEME BİLGİLERİ	Kiriş\Kolon	Döşeme	Temel
Beton dayanım gerilmesi (kg/cm²)	250\300	250	250
Çelik akma gerilmesi (kg/cm²)	4200	4200	4200
Çelik akma gerilmesi (kg/cm²) (Etriye)	4200		4200

TAŞIMA GÜCÜ MALZEME KATSAYILARI	BETON 1.30	ÇELİK 1.10
TAŞIMA GÜCÜ YÜK KATSAYILARI	SABİT YÜK 1.40	HAREKETLİ YÜK 1.60

ELASTİSİTE MODÜLÜ (kg/cm²)

BS30	E1=	318000	G1=	127200
BS25	E2=	302500	G2=	121000

BETONARME HESAP YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

ZEMİN GERİLMESİ HAREKETLİ YÜK AZALTMA DEĞERLERİ

Kat	1	2	3	4	5	6	7	8	9	10
Eksiltme %				20	40	60	80	80	80	40

DEPREM RAPORU

Deprem yükü eksantirisitesi : 0.050
Dinamik Analiz min. deprem yükü oranı ß : 1.0

DİNAMİK ANALİZ BİLGİLERİ
TASARIM SPECTURUM BİLGİSİ

T (s)	Sa (m/s²) Ao.I.S(t)
0.00	4.000
0.10	10.000
0.30	10.000
0.40	7.944
0.50	6.644
0.60	5.744
0.70	5.076
0.80	4.564
0.90	4.152
1.00	3.816
1.10	3.536
1.20	3.300
1.30	3.096
1.40	2.916
1.50	2.800
5.00	2.800

MODAL ANALİZ - YAPI PERYOD ve VEKTORLERİ

Mod	1.mod	2.mod	3.mod	4.mod	5.mod	6.mod	7.mod	8.mod	9.mod
w	5.75	6.02	8.59	21.57	23.33	32.26	46.53	53.81	70.37
T	1.0922	1.0442	0.7319	0.2913	0.2693	0.1948	0.1350	0.1168	0.0893
yon	y	b	x	b	y	x	b	y	x
1x	0.00000	0.00000	0.00107	-0.00002	0.00000	0.00598	-0.00006	0.00001	0.01783
2x	-0.00001	-0.00001	0.00332	-0.00009	0.00000	0.01592	-0.00024	0.00002	0.04129
3x	-0.00005	-0.00003	0.01357	-0.00026	0.00000	0.05270	-0.00055	0.00004	0.10497
4x	-0.00008	-0.00003	0.02551	-0.00042	0.00000	0.08660	-0.00068	0.00006	0.13837
5x	-0.00011	-0.00001	0.03947	-0.00051	0.00000	0.11525	-0.00056	0.00007	0.13445
6x	-0.00014	0.00002	0.05462	-0.00054	0.00000	0.13264	-0.00017	0.00006	0.09102
7x	-0.00017	0.00006	0.07032	-0.00048	0.00000	0.13518	0.00031	0.00005	0.02068
8x	-0.00020	0.00010	0.08608	-0.00033	-0.00001	0.12141	0.00078	0.00003	-0.05480
9x	-0.00022	0.00017	0.10147	-0.00014	-0.00002	0.09198	0.00098	0.00000	-0.11054
10x	-0.00024	0.00024	0.11617	0.00009	-0.00004	0.04951	0.00098	-0.00003	-0.12756
11x	-0.00025	0.00032	0.13000	0.00034	-0.00005	-0.00197	0.00063	-0.00004	-0.09901
12x	-0.00025	0.00040	0.14283	0.00059	-0.00008	-0.05776	-0.00001	-0.00003	-0.03142
13x	-0.00025	0.00050	0.15474	0.00082	-0.00011	-0.11366	-0.00081	0.00000	0.05849
14x	-0.00023	0.00059	0.16585	0.00098	-0.00016	-0.16657	-0.00153	0.00007	0.15094
1y	0.00243	-0.00155	0.00001	0.00203	0.01432	0.00000	0.00124	0.03789	-0.00001
2y	0.00758	-0.00480	0.00003	0.00560	0.03908	-0.00001	0.00295	0.08759	-0.00003
3y	0.01649	-0.01036	0.00006	0.01058	0.07291	-0.00002	0.00456	0.12901	-0.00004
4y	0.02602	-0.01623	0.00010	0.01473	0.09973	-0.00001	0.00523	0.13493	-0.00003
5y	0.03691	-0.02288	0.00014	0.01798	0.11976	0.00000	0.00471	0.10796	0.00000
6y	0.04870	-0.03002	0.00019	0.01972	0.12917	0.00002	0.00304	0.05371	0.00004
7y	0.06102	-0.03742	0.00023	0.01959	0.12594	0.00003	0.00061	-0.01333	0.00007
8y	0.07354	-0.04490	0.00027	0.01741	0.10938	0.00004	-0.00192	-0.07510	0.00008
9y	0.08600	-0.05229	0.00031	0.01322	0.08029	0.00005	-0.00382	-0.11393	0.00005
10y	0.09819	-0.05947	0.00035	0.00732	0.04071	0.00003	-0.00450	-0.11815	0.00000
11y	0.10997	-0.06637	0.00037	0.00010	-0.00640	0.00001	-0.00368	-0.08516	-0.00005
12y	0.12126	-0.07295	0.00040	-0.00792	-0.05771	-0.00003	-0.00150	-0.02137	-0.00007
13y	0.13209	-0.07922	0.00042	-0.01627	-0.11019	-0.00009	0.00163	0.06049	-0.00005
14y	0.14248	-0.08521	0.00043	-0.02455	-0.16132	-0.00015	0.00513	0.14563	0.00002
1b	0.00001	0.00002	0.00000	0.00014	-0.00002	0.00000	0.00044	-0.00002	-0.00001
2b	0.00004	0.00008	0.00000	0.00041	-0.00007	-0.00001	0.00112	-0.00005	-0.00004
3b	0.00048	0.00083	-0.00001	0.00349	-0.00057	-0.00001	0.00719	-0.00029	-0.00004
4b	0.00105	0.00180	-0.00002	0.00681	-0.00109	-0.00001	0.01178	-0.00043	-0.00001
5b	0.00173	0.00296	-0.00002	0.00984	-0.00154	0.00001	0.01308	-0.00045	0.00005
6b	0.00249	0.00423	-0.00003	0.01189	-0.00184	0.00003	0.01018	-0.00031	0.00011
7b	0.00328	0.00554	-0.00003	0.01250	-0.00190	0.00005	0.00392	-0.00006	0.00011
8b	0.00406	0.00683	-0.00003	0.01145	-0.00170	0.00007	-0.00362	0.00022	0.00006
9b	0.00483	0.00808	-0.00003	0.00880	-0.00126	0.00008	-0.00969	0.00042	-0.00004
10b	0.00555	0.00924	-0.00003	0.00482	-0.00063	0.00007	-0.01207	0.00046	-0.00012
11b	0.00621	0.01030	-0.00002	-0.00008	0.00012	0.00004	-0.00981	0.00033	-0.00014
12b	0.00682	0.01126	-0.00001	-0.00538	0.00091	0.00000	-0.00341	0.00006	-0.00008
13b	0.00737	0.01211	0.00001	-0.01065	0.00167	-0.00005	0.00541	-0.00026	0.00003
14b	0.00788	0.01288	0.00002	-0.01554	0.00234	-0.00011	0.01448	-0.00055	0.00017
Mxr%	0.000	0.000	62.858	0.000	0.000	13.655	0.000	0.000	6.603
Myr%	48.042	17.679	0.001	0.407	16.049	0.000	0.012	7.573	0.000
Mbr%	14.823	41.074	0.000	10.459	0.224	0.000	4.989	0.005	0.000

Mod w T yon	10.mod 79.38 0.0792 b	11.mod 93.33 0.0673 y	12.mod 117.09 0.0537 b	13.mod 118.21 0.0532 x	14.mod 138.63 0.0453 y	15.mod 154.43 0.0407 b	16.mod 169.08 0.0372 x	17.mod 182.38 0.0345 b	18.mod 188.29 0.0334 y	
1x	0.00000	-0.00001	-0.00522	0.04126	-0.00004	-0.00120	0.08045	0.00046	-0.00007	
2x	-0.00016	-0.00002	-0.01064	0.08155	-0.00007	-0.00260	0.13298	0.00020	-0.00010	
3x	-0.00006	-0.00002	-0.01773	0.13897	-0.00008	-0.00161	0.11182	0.00186	-0.00003	
4x	0.00031	0.00000	-0.01440	0.11731	-0.00003	0.00100	0.00334	0.00152	0.00005	
5x	0.00074	0.00003	-0.00330	0.03228	0.00002	0.00256	-0.10194	-0.00067	0.00005	
6x	0.00111	0.00004	0.00929	-0.06849	0.00003	0.00148	-0.11010	-0.00228	-0.00001	
7x	0.00089	0.00003	0.01587	-0.12663	0.00001	-0.00077	-0.01610	-0.00115	-0.00004	
8x	0.00021	0.00000	0.01280	-0.10810	-0.00002	-0.00224	0.09472	0.00131	-0.00001	
9x	-0.00061	-0.00004	0.00236	-0.02445	-0.00001	-0.00183	0.11937	0.00217	0.00003	
10x	-0.00125	-0.00005	-0.00938	0.07283	0.00002	0.00021	0.03486	0.00074	0.00001	
11x	-0.00134	-0.00004	-0.01500	0.12353	0.00004	0.00174	-0.07987	-0.00120	-0.00003	
12x	-0.00071	0.00000	-0.01097	0.09325	0.00002	0.00166	-0.11541	-0.00162	-0.00004	
13x	0.00050	0.00004	0.00097	-0.00653	-0.00003	0.00028	-0.03214	-0.00049	0.00001	
14x	0.00172	0.00003	0.01573	-0.13044	-0.00003	-0.00176	0.11123	0.00145	0.00003	
1y	0.00106	0.06871	0.00090	0.00016	0.09495	0.00054	0.00008	0.00020	0.10629	
2y	0.00202	0.12725	0.00124	0.00022	0.12962	0.00031	0.00008	-0.00017	0.08978	
3y	0.00219	0.12115	0.00063	0.00012	0.03536	-0.00010	0.00000	0.00012	-0.06895	
4y	0.00159	0.05525	-0.00022	-0.00002	-0.07618	-0.00044	-0.00006	-0.00002	-0.12666	
5y	0.00014	-0.03703	-0.00111	-0.00016	-0.12564	-0.00033	-0.00006	0.00023	-0.03710	
6y	-0.00146	-0.10867	-0.00115	-0.00017	-0.07184	0.00042	-0.00001	0.00024	0.09607	
7y	-0.00237	-0.12397	-0.00012	-0.00004	0.04036	0.00093	0.00004	-0.00038	0.11868	
8y	-0.00203	-0.07511	0.00123	0.00013	0.12108	0.00030	0.00004	-0.00072	0.00242	
9y	-0.00057	0.01180	0.00165	0.00019	0.10438	-0.00095	0.00002	0.00014	-0.11735	
10y	0.00118	0.09088	0.00066	0.00007	0.00413	-0.00122	-0.00001	0.00107	-0.10164	
11y	0.00222	0.11969	-0.00088	-0.00010	-0.09690	-0.00002	0.00000	0.00049	0.02985	
12y	0.00189	0.07976	-0.00157	-0.00017	-0.11290	0.00120	0.00001	-0.00084	0.12105	
13y	0.00023	-0.01498	-0.00069	-0.00006	-0.02368	0.00084	-0.00002	-0.00086	0.05882	
14y	-0.00214	-0.12868	0.00127	0.00014	0.11565	-0.00096	-0.00001	0.00076	-0.10519	
1b	0.00107	-0.00002	0.00236	0.00029	-0.00002	0.00572	0.00004	0.00836	-0.00002	
2b	0.00235	-0.00005	0.00459	0.00051	-0.00005	0.00961	0.00002	0.01243	-0.00004	
3b	0.01071	-0.00018	0.01268	0.00160	-0.00007	0.01078	0.00026	-0.00157	0.00002	
4b	0.01308	-0.00019	0.00880	0.00119	-0.00005	-0.00139	0.00014	-0.00966	-0.00001	
5b	0.00759	-0.00008	-0.00359	-0.00037	0.00004	-0.01100	-0.00020	-0.00040	0.00002	
6b	-0.00261	0.00010	-0.01197	-0.00149	0.00012	-0.00450	-0.00026	0.00983	0.00003	
7b	-0.01092	0.00022	-0.00768	-0.00104	0.00006	0.00862	0.00008	0.00291	-0.00005	
8b	-0.01192	0.00019	0.00487	0.00051	-0.00009	0.00940	0.00029	-0.00928	-0.00009	
9b	-0.00491	0.00003	0.01235	0.00153	-0.00016	-0.00358	0.00006	-0.00500	0.00003	
10b	0.00523	-0.00016	0.00699	0.00092	-0.00006	-0.01139	-0.00027	0.00807	0.00014	
11b	0.01169	-0.00024	-0.00563	-0.00064	0.00012	-0.00277	-0.00015	0.00706	0.00003	
12b	0.00971	-0.00016	-0.01181	-0.00144	0.00017	0.00953	0.00019	-0.00618	-0.00014	
13b	-0.00015	0.00005	-0.00423	-0.00053	0.00003	0.00684	0.00017	-0.00758	-0.00008	
14b	-0.01284	0.00026	0.01109	0.00132	-0.00018	-0.00889	-0.00017	0.00714	0.00014	
Mxr%	0.000	0.000	0.083	5.241	0.000	0.001	5.384	0.000	0.000	Σ= 93.8
Myr%	0.002	4.533	0.000	0.000	2.623	0.000	0.000	0.000	1.329	Σ= 98.3
Mbr%	3.620	0.001	3.966	0.060	0.000	7.996	0.001	9.039	0.000	

Mxr=∑[(∑m.Φ)²/Mr]= %93.83 > %90.00 **Dinamik kütle oranı yeterli. ✓**
Myr=∑[(∑m.Φ)²/Mr]= %98.25 > %90.00 **Dinamik kütle oranı yeterli. ✓**

EŞDEĞER DEPREM HESABI 1. DOĞAL TİTREŞİM PERYODUNUN KONTROLU

Hn= m ∑Atx= >> Ctx= ∑Aty= >> Cty=

$T1x=Ctx \cdot Hn^{3/4}$ = s. < 1.0 Tx= s. ✓

$T1y=Cty \cdot Hn^{3/4}$ = s. < 1.0 Ty= s. ✓

KAT KÜTLESİ ve RİJİTLİK MERKEZİ (t)

Kat no	H (m)	Wq	Wq	Xg (m)	Xr (m)	Yg (m)	Yr (m)	∑Wk
1	3.50	1085.99	206.61	18.29	19.02	14.73	14.69	1147.975
2	6.71	1051.73	206.61	18.28	19.02	14.73	14.69	1113.716
3	10.21	788.96	195.59	18.90	19.04	14.68	14.73	847.640
4	13.15	740.03	186.45	18.90	19.04	14.73	14.73	795.967
5	16.09	744.07	189.95	18.87	19.03	14.74	14.75	801.058
6	19.03	735.25	185.08	18.87	19.03	14.71	14.75	790.771
7	21.97	744.07	189.95	18.87	19.03	14.74	14.75	801.058
8	24.91	729.81	185.08	18.87	19.03	14.71	14.75	785.332
9	27.85	738.63	189.95	18.86	19.03	14.74	14.75	795.619
10	30.79	729.81	185.08	18.87	19.03	14.71	14.75	785.332
11	33.73	733.19	189.95	18.86	19.03	14.74	14.75	790.180
12	36.67	724.37	185.08	18.87	19.03	14.71	14.75	779.893
13	39.61	733.19	189.95	18.86	19.03	14.74	14.75	790.180
14	42.55	647.89	136.83	18.94	19.03	14.69	14.75	688.941

∑Wt = 11713.659

İÇ YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

DEPREM KUVVETİ (t)

Deprem tepe yükü Ftx= 73.50 Fty= 79.63 (t)

Kat no	X YÖNÜ Modal Analiz	X YÖNÜ Eşdeğer dep.yön.	X YÖNÜ Deprem yükü	Y YÖNÜ Modal Analiz	Y YÖNÜ Eşdeğer dep.yön.	Y YÖNÜ Deprem yükü	Kat tipi
1	28.310	21.206	38.759	32.347	14.986	38.635	NORMAL
2	29.959	39.442	41.018	51.411	27.872	61.404	NORMAL
3	37.317	45.678	51.091	51.438	32.278	61.436	NORMAL
4	44.649	55.244	61.129	52.267	39.038	62.426	NORMAL
5	52.269	68.028	71.563	51.881	48.072	61.964	NORMAL
6	55.825	79.425	76.430	46.291	56.125	55.288	NORMAL
7	58.682	92.888	80.342	39.784	65.639	47.516	NORMAL
8	60.114	103.251	82.303	33.200	72.962	39.652	NORMAL
9	65.105	116.949	89.137	32.516	82.642	38.835	NORMAL
10	72.849	127.623	99.739	38.396	90.185	45.859	NORMAL
11	90.458	140.672	123.847	54.100	99.406	64.615	NORMAL
12	108.964	150.943	149.184	80.272	106.664	95.874	NORMAL
13	146.378	165.195	200.408	129.167	116.735	154.272	NORMAL
14	197.076	228.225	269.819	179.002	188.965	213.793	UST KAT
Σ	1047.955	1434.769	1434.769	872.072	1041.570	1041.570	GENEL

Vt=W.A(t) / Ra(t) > 0,10. Ao.I.W 1434.77 , 1041.57 > 468.55

X Deprem kontrol: 1.00 x 1434.769 = 1434.769 > 1047.955 >>> 1434.769 Y Deprem kontrol: 1.00 x 1041.570 = 1041.570 > 872.072 >>> 1041.570

Rüzgar kuvvetleri (t)

Kat no	X-yönü F	X-yönü ey m	Y-yönü F	Y-yönü ex m
1	6.174	17.975	7.550	14.700
2	5.662	17.975	6.924	14.700
3	8.870	18.950	8.938	14.700
4	7.451	18.950	7.508	14.700
5	7.451	18.950	7.508	14.700
6	7.451	18.950	7.508	14.700
7	10.245	18.950	10.323	14.700
8	10.245	18.950	10.323	14.700
9	10.245	18.950	10.323	14.700
10	10.245	18.950	10.323	14.700
11	10.245	18.950	10.323	14.700
12	10.245	18.950	10.323	14.700
13	10.245	18.950	10.323	14.700
14	10.245	18.950	10.323	14.700

Kat Deprem deplasmanları

Kat	9. yükleme		10. yükleme		11. yükleme		12. yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δy (m)	θz (rad)	δy (m)	θz (rad)
1	0.0002327	0.0000014	0.0002332	-0.000001	-0.000923	-0.000001	-0.000919	0.0000013
2	0.0007057	0.0000042	0.0007080	-0.000005	-0.002831	-0.000003	-0.002818	0.0000038
3	0.0028270	0.0000477	0.0028327	-0.000052	-0.006067	-0.000036	-0.006034	0.0000328
4	0.0052780	0.0001040	0.0052863	-0.000112	-0.009476	-0.000080	-0.009417	0.0000671
5	0.0081301	0.0001714	0.0081386	-0.000183	-0.013336	-0.000134	-0.013245	0.0001057
6	0.0112156	0.0002448	0.0112245	-0.000261	-0.017502	-0.000195	-0.017372	0.0001458
7	0.0144180	0.0003212	0.0144256	-0.000340	-0.021860	-0.000259	-0.021685	0.0001856
8	0.0176506	0.0003980	0.0176564	-0.000420	-0.026326	-0.000325	-0.026104	0.0002241
9	0.0208419	0.0004735	0.0208442	-0.000496	-0.030829	-0.000392	-0.030556	0.0002605
10	0.0239375	0.0005458	0.0239356	-0.000569	-0.035311	-0.000459	-0.034985	0.0002943
11	0.0269003	0.0006143	0.0268929	-0.000637	-0.039727	-0.000523	-0.039347	0.0003251
12	0.0297029	0.0006783	0.0296889	-0.000700	-0.044038	-0.000586	-0.043603	0.0003523
13	0.0323417	0.0007376	0.0323203	-0.000757	-0.048225	-0.000646	-0.047734	0.0003758
14	0.0348235	0.0007924	0.0347939	-0.000808	-0.052261	-0.000703	-0.051716	0.0003953

Deprem yapı salınımı: x= 0.00082 y= 0.00123

DEPREM PERDELERİ TABAN MOMENT KONTROLU

Kat deprem momenti (tm)

Kat	H (m)	Fx	Fx . H	Fy	Fy . H
1	3.50	38.76	135.66	38.63	135.22
2	6.71	41.02	275.23	61.40	412.02
3	10.21	51.09	521.64	61.44	627.26
4	13.15	61.13	803.85	62.43	820.91
5	16.09	71.56	1151.44	61.96	997.00
6	19.03	76.43	1454.47	55.29	1052.13
7	21.97	80.34	1765.12	47.52	1043.94
8	24.91	82.30	2050.18	39.65	987.74
9	27.85	89.14	2482.46	38.84	1081.57
10	30.79	99.74	3070.96	45.86	1412.01
11	33.73	123.85	4177.36	64.61	2179.46
12	36.67	149.18	5470.57	95.87	3515.70
13	39.61	200.41	7938.15	154.27	6110.71
14	42.55	269.82	11480.79	213.79	9096.91
		Mdx=	42777.86	Mdy=	29472.56

Perde taban momenti (tm)

M : Perde ve Panel deprem momenti

∑Mk : Perdelerde; bağlı olduğu kirişlerin deprem momentlerinin toplamı
Panellerde ise; başlık kolonlarından oluşan deprem momentlerinin toplamıdır.

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1001	6603.52	0.00	6603.52	34.63	184.13	218.76
S1026	1464.02	3627.01	5091.03	3773.78	208.35	3982.14
S1051	8097.23	0.00	8097.23	34.06	179.42	213.48
S1053	11.33	636.20	647.53	1493.10	240.79	1733.90
S1054	11.68	626.42	638.10	1530.26	246.40	1776.66
S1055	448.99	1616.89	2065.88	35.45	784.10	819.55
S1056	447.83	2263.51	2711.33	38.07	1021.90	1059.97
S1057	426.25	2144.75	2571.01	35.10	995.23	1030.33
S1058	425.48	1665.75	2091.24	38.22	1100.90	1139.12

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1059	9.68	399.27	408.95	1487.70	1340.40	2828.10
S1060	9.74	414.40	424.14	1527.04	847.08	2374.12
S1063	6.08	1412.00	1418.09	100.53	946.68	1047.21
S1064	6.55	845.41	851.96	100.22	858.19	958.42
S1065	5.68	998.54	1004.22	102.05	907.75	1009.80
S1066	6.11	1235.36	1241.47	102.05	915.97	1018.02
TOPLAM	17980.16		35865.69	10432.27		21209.58

X yönü αm =35865.69 / 42777.86 = 0.84
Y yönü αm =21209.58 / 29472.56 = 0.72

Perde taban kesme kuvveti oranı :
X yönü Vm =1378.62 / 1434.77 = 0.96
Y yönü Vm =870.68 / 1041.57 = 0.84

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU
A1,B2 düzensizliklerinin kontrolu
max(di/hi)=0.0035, 0.02/R =.005
1. kat X dust = -.0002327 + -.0000014 x (.12 - 14.69=-.0002538 (S1001)
1. kat X dalt = -.0002327 + -.0000014 x (29.28 - 14.69)=-.0002116 (S1051)
2. kat X dust = -.0007057 + -.0000042 x (.12 - 14.69) - -.0002538 = -.0005126 (S2002)
2. kat X dalt = -.0007057 + -.0000042 x (29.28 - 14.69) - -.0002116 = -.0004333 (S2009)

X YÖNÜ (+%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0002538	0.0002116	0.0002327	1.09	0.49	0.00007	0.00054	Normal kat
2	0.0005126	0.0004333	0.0004730	1.08	0.22	0.00016	0.00112	Normal kat
3	0.0026249	0.0016207	0.0021228	1.24	0.87	0.00075	0.00423	Normal kat
4	0.0031026	0.0018029	0.0024528	1.26	0.86	0.00106	0.00551	Normal kat
5	0.0036336	0.0020799	0.0028568	1.27	0.92	0.00124	0.00611	Normal kat
6	0.0039354	0.0022424	0.0030889	1.27	0.96	0.00134	0.00629	Normal kat
7	0.0040880	0.0023238	0.0032059	1.28	0.99	0.00139	0.00619	Normal kat
8	0.0041218	0.0023505	0.0032362	1.27	1.01	0.00140	0.00588	Normal kat
9	0.0040652	0.0023243	0.0031948	1.27	1.03	0.00138	0.00540	Normal kat
10	0.0039336	0.0022643	0.0030990	1.27	1.04	0.00134	0.00479	Normal kat
11	0.0037565	0.0021757	0.0029661	1.27	1.06	0.00128	0.00414	Normal kat
12	0.0035429	0.0020681	0.0028055	1.26	1.06	0.00121	0.00348	Normal kat
13	0.0033256	0.0019576	0.0026416	1.26	1.06	0.00113	0.00283	Normal kat
14	0.0031163	0.0018525	0.0024844	1.25	0.00	0.00106	0.00216	Normal kat

X YÖNÜ (-%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0002097	0.0002567	0.0002332	1.10	0.49	0.00007	0.00054	Normal kat
2	0.0004154	0.0005343	0.0004749	1.13	0.22	0.00017	0.00112	Normal kat
3	0.0015791	0.0026668	0.0021230	1.26	0.87	0.00076	0.00423	Normal kat
4	0.0017616	0.0031420	0.0024518	1.28	0.86	0.00107	0.00550	Normal kat
5	0.0020282	0.0036666	0.0028474	1.29	0.92	0.00125	0.00609	Normal kat
6	0.0021888	0.0039758	0.0030823	1.29	0.96	0.00135	0.00627	Normal kat
7	0.0022802	0.0041148	0.0031975	1.29	0.99	0.00140	0.00618	Normal kat
8	0.0023109	0.0041432	0.0032270	1.28	1.01	0.00141	0.00586	Normal kat
9	0.0022993	0.0040642	0.0031642	1.28	1.03	0.00138	0.00538	Normal kat
10	0.0022465	0.0039296	0.0030881	1.27	1.05	0.00134	0.00478	Normal kat
11	0.0021691	0.0037389	0.0029540	1.27	1.06	0.00127	0.00412	Normal kat
12	0.0020727	0.0035135	0.0027931	1.26	1.06	0.00120	0.00346	Normal kat
13	0.0019720	0.0032855	0.0026288	1.25	1.06	0.00112	0.00281	Normal kat
14	0.0018788	0.0030636	0.0024712	1.24	0.00	0.00104	0.00215	Normal kat

Y YÖNÜ (+%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0009040	0.0009398	0.0009219	1.02	0.48	0.00027	0.00296	Normal kat
2	0.0018656	0.0019469	0.0019063	1.02	0.59	0.00061	0.00626	Normal kat
3	0.0028490	0.0036161	0.0032326	1.12	0.95	0.00103	0.00927	Normal kat

4	0.0028888	0.0039223	0.0034055	1.15	0.88	0.00133	0.01132	Normal kat
5	0.0032226	0.0044904	0.0038565	1.16	0.93	0.00153	0.01253	Normal kat
6	0.0034518	0.0048707	0.0041612	1.17	0.96	0.00166	0.01312	Normal kat
7	0.0035982	0.0051064	0.0043523	1.17	0.98	0.00174	0.01314	Normal kat
8	0.0036835	0.0052382	0.0044609	1.17	0.99	0.00178	0.01259	Normal kat
9	0.0037143	0.0052805	0.0044974	1.17	1.00	0.00180	0.01155	Normal kat
10	0.0037013	0.0052516	0.0044765	1.17	1.01	0.00179	0.01016	Normal kat
11	0.0036531	0.0051682	0.0044107	1.17	1.02	0.00176	0.00865	Normal kat
12	0.0035744	0.0050369	0.0043057	1.17	1.03	0.00171	0.00713	Normal kat
13	0.0034808	0.0048832	0.0041820	1.17	1.04	0.00166	0.00572	Normal kat
14	0.0033652	0.0046991	0.0040322	1.17	0.00	0.00160	0.00442	Normal kat

Y YÖNÜ (-%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0009432	0.0008980	0.0009206	1.02	0.48	0.00027	0.00296	Normal kat
2	0.0019462	0.0018570	0.0019016	1.02	0.59	0.00061	0.00624	Normal kat
3	0.0035587	0.0028781	0.0032184	1.11	0.95	0.00102	0.00923	Normal kat
4	0.0037880	0.0029856	0.0033868	1.12	0.88	0.00129	0.01126	Normal kat
5	0.0042816	0.0033789	0.0038303	1.12	0.93	0.00146	0.01244	Normal kat
6	0.0045995	0.0036612	0.0041303	1.11	0.96	0.00156	0.01303	Normal kat
7	0.0047821	0.0038511	0.0043166	1.11	0.98	0.00163	0.01303	Normal kat
8	0.0048722	0.0039707	0.0044214	1.10	0.99	0.00166	0.01247	Normal kat
9	0.0048808	0.0040288	0.0044548	1.10	1.01	0.00166	0.01144	Normal kat
10	0.0048273	0.0040361	0.0044317	1.09	1.02	0.00164	0.01006	Normal kat
11	0.0047248	0.0040044	0.0043646	1.08	1.02	0.00161	0.00856	Normal kat
12	0.0045770	0.0039394	0.0042582	1.07	1.03	0.00156	0.00705	Normal kat
13	0.0044088	0.0038588	0.0041338	1.07	1.04	0.00150	0.00565	Normal kat
14	0.0042109	0.0037561	0.0039835	1.06	0.00	0.00143	0.00437	Normal kat

TDY 6.3.2.1 A1 burulma düzensizliği:
1.2< nbi=1.29 <2 , dinamik analizle çözülmüştür ✓
TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓
TDY 6.20 kosulu sağlanmaktadır. .0018 < .0035 ✓
TDY 6.21 koşulu sağlanmaktadır. max θi=.013 < 0.12 ✓

B1-Düşey doğrultudaki düzensizliklerinin kontrolu

Kat	Aw	Aqx	Aqy	ΣAex	ΣAey	ncix	nciy	AÇIKLAMA
1	9.29	28.80	12.82	38.10	22.11	1.00	1.00	Düzenli ✓
2	9.29	28.80	12.82	38.10	22.11	2.67	1.26	Düzenli ✓
3	2.49	11.80	15.02	14.29	17.51	1.00	1.00	Düzenli ✓
4	2.49	11.80	15.02	14.29	17.51	0.90	0.99	Düzenli ✓
5	5.45	10.47	12.26	15.92	17.71	1.00	1.00	Düzenli ✓
6	5.45	10.47	12.26	15.92	17.71	1.00	1.00	Düzenli ✓
7	5.45	10.47	12.26	15.92	17.71	1.03	1.02	Düzenli ✓
8	5.45	10.08	11.91	15.53	17.36	1.00	1.00	Düzenli ✓
9	5.45	10.08	11.91	15.53	17.36	1.00	1.00	Düzenli ✓
10	5.45	10.08	11.91	15.53	17.36	1.03	1.02	Düzenli ✓
11	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
12	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
13	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
14	5.45	9.69	11.56	15.14	17.01	1.00	1.00	üst kat ✓

A4 düzensizliği bulunmamıştır. ✓

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU
No = 0,85 . fcd . b . d +fyd . As
Nmax = 0,5 . fck . Ac
Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü
Md,x/y = x/y yönünde en büyük kombinasyonun momenti
Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti
Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti
Vr,max = 2 . fck½ . Ac
Ac = Kolon kesit alanı
As,g = Gerekli donatı alanı
As,m = Mevcut donatı alanı
rm = Mevcut donatı oranı
Mevcut kolon min. boyuna donatı oranı : 0.01
Mevcut kolon donatı korozyon oranı % : 0

1. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asq cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S1002	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	40.6	3.7
S1003	25x140	3500	2x5ø16 +	2x6ø16	44.21	44.21	0.013	740.9	437.5	363.6	9.3
S1008	25x140	3500	2x5ø16 +	2x6ø16	44.21	44.21	0.013	740.9	437.5	355.4	10.5
S1009	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	35.3	4.6
S1010	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	41.6	3.8
S1011	140x25	3500	2x5ø16 +	2x6ø16	44.21	44.21	0.013	740.9	437.5	287.8	7.3
S1013	25x160	4000	2x5ø16 +	2x7ø16	48.23	48.23	0.012	838.0	500.0	425.0	12.7
S1014	25x160	4000	2x5ø16 +	2x7ø16	48.23	48.23	0.012	838.0	500.0	265.2	13.0
S1016	140x25	3500	2x5ø16 +	2x6ø16	44.21	44.21	0.013	740.9	437.5	290.5	5.8
S1017	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	36.6	4.4

S1018	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	50.0	3.4
S1025	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	43.4	4.0
S1027	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	53.4	3.7
S1034	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	44.8	4.1
S1035	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	41.5	3.8
S1036	140x25	3500	2x5ø16 + 2x6ø16	44.21	44.21	0.013	740.9	437.5	297.8	7.5
S1038	25x160	4000	2x5ø16 + 2x7ø16	48.23	48.23	0.012	838.0	500.0	362.9	12.7
S1039	25x160	4000	2x5ø16 + 2x7ø16	48.23	48.23	0.012	838.0	500.0	349.3	13.3
S1041	140x25	3500	2x5ø16 + 2x6ø16	44.21	44.21	0.013	740.9	437.5	285.0	5.8
S1042	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	36.8	4.4
S1043	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	40.6	3.8
S1044	25x140	3500	2x5ø16 + 2x6ø16	44.21	44.21	0.013	740.9	437.5	373.4	9.3
S1049	25x140	3500	2x5ø16 + 2x6ø16	44.21	44.21	0.013	740.9	437.5	356.2	10.5
S1050	20x100	2000	2x3ø16 + 2x4ø16	28.13	28.13	0.014	434.3	250.0	36.8	4.6

1. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S1002	40.6	2.5	10.1	19.0	13.1	51.5	0.162	0.248	0.254	✓
S1003	363.6	8.2	26.8	99.5	37.0	144.4	0.831	0.306	0.256	✓
S1008	355.4	8.0	27.1	107.5	37.3	146.9	0.812	0.296	0.254	✓
S1009	35.3	1.4	9.8	16.9	13.8	50.9	0.141	0.144	0.271	✓
S1010	41.6	2.2	10.1	18.8	13.1	51.4	0.166	0.215	0.255	✓
S1011	101.4	47.6	145.0	287.8	6.5	29.0	0.658	0.328	0.224	✓
S1013	425.0	9.6	29.9	192.3	55.3	205.1	0.850	0.320	0.270	✓
S1014	248.8	5.6	32.1	25.9	55.3	144.1	0.530	0.175	0.384	✓
S1016	107.6	45.3	146.9	290.5	6.5	28.9	0.664	0.308	0.226	✓
S1017	36.6	1.5	9.9	16.3	13.8	50.7	0.147	0.149	0.271	✓
S1018	37.9	1.8	9.9	22.3	12.7	52.5	0.200	0.179	0.242	✓
S1025	33.8	1.3	9.7	18.8	13.3	51.4	0.174	0.133	0.259	✓
S1027	40.1	1.7	10.0	24.2	12.8	53.0	0.214	0.165	0.242	✓
S1034	34.6	1.3	9.7	19.6	13.3	51.7	0.179	0.130	0.258	✓
S1035	41.5	2.2	10.1	18.8	13.0	51.4	0.166	0.217	0.253	✓
S1036	115.7	47.4	149.1	297.8	6.7	28.8	0.681	0.318	0.233	✓
S1038	362.9	8.2	32.1	98.4	54.9	176.8	0.726	0.255	0.311	✓
S1039	349.3	7.9	32.4	87.6	55.7	172.6	0.699	0.243	0.323	✓
S1041	103.8	44.8	145.8	285.0	6.4	29.0	0.652	0.307	0.221	✓
S1042	36.8	1.4	9.9	16.4	13.7	50.7	0.147	0.144	0.269	✓
S1043	40.6	2.5	10.1	19.4	13.1	51.6	0.162	0.249	0.255	✓
S1044	373.4	8.4	26.4	112.9	37.2	148.3	0.853	0.319	0.251	✓
S1049	356.2	8.0	27.0	107.8	37.6	147.0	0.814	0.297	0.256	✓
S1050	27.3	1.2	9.3	17.9	13.9	51.2	0.147	0.133	0.272	✓

KAT KAPASİTE KONTROLU:
Nmax= 8500.0> Nd,max= 4513.4
Mr,x= 939.3> Md,x= 269.9
Mr,y= 2018.7> Md,y= 556.2

2. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S2002	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	20.3	13.4
S2003	25x140	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	333.9	14.7
S2008	25x140	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	334.0	18.7
S2009	20x100	2000	2x4ø16	+ 2x4ø16	32.15	32.15	0.016	449.7	250.0	18.0	15.8
S2010	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	20.6	14.9
S2011	140x25	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	278.0	18.5
S2013	25x160	4000	2x5ø16	+ 2x7ø16	48.23	48.23	0.012	838.0	500.0	390.8	16.3
S2014	25x160	4000	2x5ø16	+ 2x7ø16	48.23	48.23	0.012	838.0	500.0	205.9	21.7
S2016	140x25	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	279.0	13.7
S2017	20x100	2000	2x4ø16	+ 2x4ø16	32.15	32.15	0.016	449.7	250.0	18.1	17.0
S2018	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	24.9	12.8
S2025	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	21.7	15.3
S2027	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	26.6	13.8
S2034	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	22.3	15.5
S2035	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	20.5	14.8
S2036	140x25	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	277.2	18.4
S2038	25x160	4000	2x5ø16	+ 2x7ø16	48.23	48.23	0.012	838.0	500.0	324.3	20.0
S2039	25x160	4000	2x5ø16	+ 2x7ø16	48.23	48.23	0.012	838.0	500.0	310.6	23.1
S2041	140x25	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	275.2	14.0
S2042	20x100	2000	2x4ø16	+ 2x4ø16	32.15	32.15	0.016	449.7	250.0	18.2	16.9
S2043	20x100	2000	2x3ø16	+ 2x4ø16	28.13	28.13	0.014	434.3	250.0	20.3	13.6
S2044	25x140	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	343.8	14.3
S2049	25x140	3500	2x5ø16	+ 2x6ø16	44.21	44.21	0.013	740.9	437.5	334.9	18.8
S2050	20x100	2000	2x4ø16	+ 2x4ø16	32.15	32.15	0.016	449.7	250.0	18.8	16.1

2. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S2002	20.3	5.5	8.9	8.8	21.8	48.5	0.081	0.613	0.449	✓
S2003	333.9	7.5	27.8	82.8	32.1	139.0	0.763	0.271	0.231	✓
S2008	334.0	7.5	27.8	93.7	34.8	142.5	0.763	0.271	0.244	✓
S2009	13.1	3.4	9.4	7.7	25.5	55.2	0.072	0.366	0.463	✓
S2010	15.7	5.2	8.7	13.0	24.7	49.7	0.082	0.598	0.496	✓
S2011	278.0	43.7	171.4	88.2	6.0	22.6	0.635	0.255	0.265	✓
S2013	390.8	8.8	31.2	176.7	47.0	201.5	0.782	0.283	0.233	✓
S2014	205.9	4.6	30.6	-1.3	51.8	129.5	0.412	0.151	0.400	✓
S2016	279.0	40.8	171.4	106.1	6.9	23.7	0.638	0.238	0.291	✓
S2017	14.1	4.2	9.4	8.0	27.5	55.3	0.072	0.440	0.497	✓
S2018	19.4	5.2	8.9	15.6	21.1	50.5	0.100	0.589	0.419	✓
S2025	17.4	4.3	8.8	13.0	25.0	49.7	0.087	0.495	0.503	✓
S2027	20.4	4.9	9.0	16.8	22.8	50.8	0.106	0.549	0.449	✓
S2034	17.8	4.3	8.8	13.5	25.7	49.9	0.089	0.486	0.515	✓
S2035	15.6	5.1	8.7	13.0	24.5	49.7	0.082	0.594	0.492	✓
S2036	277.2	43.4	171.4	99.9	6.1	23.3	0.634	0.253	0.262	✓
S2038	324.3	7.3	32.9	70.7	49.5	165.4	0.649	0.222	0.299	✓
S2039	310.6	7.0	32.9	61.5	54.1	161.4	0.621	0.213	0.335	✓
S2041	275.2	40.4	171.4	100.6	7.0	23.3	0.629	0.235	0.299	✓
S2042	14.1	4.1	9.4	11.1	27.9	56.2	0.073	0.432	0.495	✓
S2043	20.3	5.5	8.9	9.1	22.1	48.6	0.081	0.618	0.454	✓
S2044	343.8	7.8	27.5	96.2	32.3	143.3	0.786	0.282	0.226	✓
S2049	334.9	7.5	27.8	93.8	35.5	142.6	0.765	0.272	0.249	✓
S2050	14.0	3.5	9.4	8.3	25.9	55.4	0.075	0.371	0.467	✓

KAT KAPASİTE KONTROLU:
Nmax= 8500.0> Nd,max= 3937.9
Mr,x= 1032.3> Md,x= 281.7
Mr,y= 1937.6> Md,y= 657.4

3. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S3003	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	310.6	11.1
S3008	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	320.5	13.5
S3011	140x20	2800	2x5ø16 +	2x4ø12	29.14	29.14	0.010	569.0	350.0	228.0	20.2
S3013	20x160	3200	2x4ø16 +	2x5ø12	27.38	27.38	0.009	627.6	400.0	358.5	17.5
S3014	20x160	3200	2x8ø16 +	2x5ø12	43.46	43.46	0.014	689.0	400.0	158.9	14.7
S3016	140x20	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	242.1	17.9
S3036	140x20	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	239.7	20.6
S3038	20x160	3200	2x4ø16 +	2x5ø12	27.38	27.38	0.009	627.6	400.0	285.3	13.3
S3039	20x160	3200	2x4ø16 +	2x5ø12	27.38	27.38	0.009	627.6	400.0	270.9	13.9
S3041	140x20	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	237.0	17.8
S3044	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	320.9	12.6
S3049	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	321.7	14.0

3. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S3003	310.6	6.5	14.9	290.5	39.6	110.7	0.888	0.438	0.357	✓
S3008	320.5	6.8	14.6	284.9	45.4	111.7	0.916	0.463	0.407	✓
S3011	12.6	53.8	75.3	139.8	5.1	15.4	0.651	0.715	0.329	✓
S3013	358.5	7.6	16.7	243.8	51.3	151.0	0.896	0.453	0.340	✓
S3014	158.9	3.3	20.3	-33.8	53.5	93.0	0.397	0.164	0.576	✓
S3016	22.6	48.9	70.0	162.2	5.6	15.8	0.692	0.698	0.353	✓
S3036	25.9	54.3	71.5	153.9	5.4	15.5	0.685	0.759	0.346	✓
S3038	285.3	6.0	18.6	38.0	47.1	94.7	0.713	0.323	0.498	✓
S3039	270.9	5.7	18.9	31.7	51.0	91.4	0.677	0.303	0.557	✓
S3041	19.5	48.4	68.6	156.0	5.8	15.6	0.677	0.706	0.370	✓
S3044	320.9	6.8	14.6	284.6	40.4	111.7	0.917	0.464	0.361	✓
S3049	321.7	6.8	14.6	286.2	45.4	111.5	0.919	0.466	0.407	✓

KAT KAPASİTE KONTROLU:
Nmax= 4400.0> Nd,max= 3294.3
Mr,x= 418.6> Md,x= 254.8
Mr,y= 938.1> Md,y= 395.5

4. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S4003	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	278.2	15.0
S4008	20x140	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	282.1	13.6
S4011	140x20	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	203.5	10.9
S4013	20x160	3200	2x4ø16 +	2x5ø12	27.38	27.38	0.009	627.6	400.0	315.5	36.3
S4014	20x160	3200	2x4ø16 +	2x5ø12	27.38	27.38	0.009	627.6	400.0	198.5	13.9
S4016	140x20	2800	2x4ø16 +	2x4ø12	25.12	25.12	0.009	553.6	350.0	213.8	11.7

S4036	140x20	2800	2x4ø16 + 2x4ø12	25.12	25.12	0.009	553.6	350.0	211.7	11.4
S4038	20x160	3200	2x4ø16 + 2x5ø12	27.38	27.38	0.009	627.6	400.0	265.6	19.1
S4039	20x160	3200	2x4ø16 + 2x5ø12	27.38	27.38	0.009	627.6	400.0	256.1	18.3
S4041	140x20	2800	2x4ø16 + 2x4ø12	25.12	25.12	0.009	553.6	350.0	208.6	11.8
S4044	20x140	2800	2x4ø16 + 2x4ø12	25.12	25.12	0.009	553.6	350.0	282.2	12.1
S4049	20x140	2800	2x4ø16 + 2x4ø12	25.12	25.12	0.009	553.6	350.0	282.8	12.5

4. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S4003	278.2	5.9	15.9	122.8	26.2	105.5	0.795	0.368	0.248	✓
S4008	282.1	5.9	15.8	136.9	25.9	108.7	0.806	0.376	0.238	✓
S4011	13.7	23.6	65.7	122.0	7.7	14.3	0.581	0.359	0.541	✓
S4013	145.3	6.7	16.3	219.8	54.6	149.9	0.789	0.413	0.364	✓
S4014	198.5	4.2	18.2	-32.1	18.4	53.9	0.496	0.231	0.341	✓
S4016	21.4	25.1	69.4	141.4	8.3	15.1	0.611	0.362	0.553	✓
S4036	24.7	23.9	70.9	133.4	8.4	14.8	0.605	0.337	0.571	✓
S4038	74.3	6.4	12.8	255.6	34.8	151.0	0.664	0.499	0.230	✓
S4039	88.7	6.6	13.6	242.0	34.0	151.0	0.640	0.482	0.226	✓
S4041	18.3	25.0	68.0	135.1	8.7	14.9	0.596	0.368	0.589	✓
S4044	282.2	5.9	15.8	137.3	23.7	108.8	0.806	0.376	0.218	✓
S4049	282.8	6.0	15.8	136.7	25.3	108.6	0.808	0.377	0.233	✓

KAT KAPASİTE KONTROLU:
Nmax= 4400.0> Nd,max= 2998.7
Mr,x= 398.3> Md,x= 145.2
Mr,y= 998.5> Md,y= 276.2

5. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S5003	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	247.3	12.3
S5008	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	245.0	12.4
S5011	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	196.2	11.7
S5013	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	274.9	26.7
S5014	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	178.7	11.8
S5016	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	198.5	11.5
S5036	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	193.4	12.2
S5038	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	237.5	14.7
S5039	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	228.8	14.1
S5041	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	195.5	11.6
S5044	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	245.0	11.3
S5049	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	245.4	11.9

5. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S5003	247.3	5.2	14.8	109.1	25.7	92.3	0.824	0.351	0.278	✓
S5008	245.0	5.2	14.9	118.1	26.3	93.7	0.817	0.346	0.281	✓
S5011	17.6	19.0	69.3	107.5	7.5	14.3	0.654	0.275	0.527	✓
S5013	185.8	7.0	16.8	196.9	48.8	121.7	0.846	0.414	0.401	✓
S5014	178.7	3.8	16.8	-29.1	13.6	64.7	0.550	0.229	0.210	✓
S5016	23.1	18.6	71.2	123.1	8.0	14.7	0.662	0.261	0.544	✓
S5036	26.3	19.5	72.4	116.0	8.0	14.5	0.645	0.269	0.551	✓
S5038	66.2	6.3	13.4	237.5	30.7	120.1	0.731	0.470	0.255	✓
S5039	79.5	6.5	14.0	228.8	30.3	120.8	0.704	0.467	0.251	✓
S5041	20.0	18.7	70.1	117.1	8.4	14.6	0.652	0.267	0.579	✓
S5044	245.0	5.2	14.9	118.4	24.6	93.8	0.817	0.346	0.263	✓
S5049	245.4	5.2	14.9	117.8	26.5	93.7	0.818	0.347	0.283	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 2686.2
Mr,x= 403.6> Md,x= 120.2
Mr,y= 858.9> Md,y= 258.4

6. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S6003	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	218.7	8.4
S6008	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	217.1	9.2
S6011	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	160.7	14.5
S6013	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	238.6	21.0
S6014	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	159.6	9.2
S6016	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	166.4	14.5
S6036	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	165.7	15.0
S6038	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	210.3	9.6
S6039	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	202.6	8.6
S6041	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	162.0	14.4
S6044	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	217.0	8.3
S6049	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	217.3	9.0

6. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S6003	57.8	4.7	12.2	96.2	15.5	90.2	0.729	0.384	0.172	✓
S6008	56.8	4.7	12.2	104.8	17.3	91.6	0.724	0.387	0.189	✓
S6011	18.8	20.8	69.7	92.8	8.2	13.8	0.536	0.298	0.596	✓
S6013	162.1	7.8	16.5	106.3	34.4	111.9	0.734	0.471	0.307	✓
S6014	159.6	4.1	16.4	-24.6	14.6	-66.9	0.491	0.247	0.218	✓
S6016	23.5	20.8	71.4	107.2	8.7	14.2	0.555	0.291	0.612	✓
S6036	61.9	24.4	82.6	101.0	8.6	14.0	0.552	0.295	0.614	✓
S6038	59.5	7.0	13.1	25.5	12.9	88.5	0.647	0.535	0.146	✓
S6039	71.5	7.4	13.7	19.6	13.6	86.2	0.623	0.538	0.158	✓
S6041	20.6	20.6	70.4	101.8	9.2	14.1	0.540	0.293	0.651	✓
S6044	57.1	4.7	12.2	105.0	15.7	91.6	0.723	0.383	0.171	✓
S6049	57.0	4.6	12.2	104.3	17.4	91.5	0.724	0.375	0.190	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 2336.0
Mr,x= 402.5> Md,x= 131.4
Mr,y= 774.5> Md,y= 176.0

7. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S7003	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	191.2	9.4
S7008	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	190.2	10.1
S7011	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	140.0	14.1
S7013	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	204.9	22.3
S7014	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	140.4	9.5
S7016	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	145.2	14.1
S7036	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	145.3	14.9
S7038	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	183.7	10.1
S7039	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	176.9	9.1
S7041	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	141.4	14.2
S7044	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	190.1	9.0
S7049	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	190.3	9.9

7. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S7003	51.3	4.8	11.9	84.1	16.3	87.9	0.637	0.407	0.185	✓
S7008	50.7	4.8	11.8	92.1	17.9	89.4	0.634	0.408	0.200	✓
S7011	50.0	21.5	79.3	79.5	8.5	13.2	0.467	0.271	0.644	✓
S7013	140.2	8.1	16.1	151.2	35.8	119.0	0.631	0.503	0.301	✓
S7014	140.4	4.0	16.1	-19.9	12.6	69.2	0.432	0.251	0.183	✓
S7016	54.7	21.3	80.6	92.6	9.1	13.8	0.484	0.265	0.665	✓

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S7036	58.3	22.7	81.6	87.6	9.0	13.6	0.484	0.279	0.663	✓
S7038	53.3	7.5	12.9	183.7	17.0	121.3	0.565	0.582	0.140	✓
S7039	63.9	7.8	13.3	17.7	11.3	85.5	0.544	0.586	0.132	✓
S7041	51.6	21.6	79.7	87.9	9.6	13.6	0.471	0.271	0.711	✓
S7044	50.8	4.8	11.8	92.3	16.2	89.4	0.634	0.408	0.181	✓
S7049	50.7	4.7	11.8	91.6	18.0	89.3	0.634	0.399	0.202	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 2039.6
Mr,x= 427.0> Md,x= 133.8
Mr,y= 805.1> Md,y= 181.5

8. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S8003	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	164.8	9.3
S8008	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	164.2	10.1
S8011	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	120.4	14.1
S8013	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	173.6	21.9
S8014	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	121.4	9.2
S8016	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	125.0	14.0
S8036	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	125.9	14.8
S8038	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	157.7	9.7
S8039	20x130	2600	2x4ø16 +	2x5ø16	36.17	36.17	0.014	563.1	325.0	151.8	8.7
S8041	120x20	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	121.8	14.1
S8044	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	164.1	9.0
S8049	20x120	2400	2x3ø16 +	2x5ø16	32.15	32.15	0.013	515.1	300.0	164.2	10.0

8. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S8003	45.2	4.9	11.5	72.8	15.3	85.4	0.549	0.421	0.179	✓
S8008	44.9	4.8	11.5	79.9	16.8	87.1	0.547	0.419	0.193	✓
S8011	46.9	20.8	78.5	67.4	8.7	12.7	0.401	0.264	0.687	✓
S8013	119.7	8.2	15.5	73.8	31.6	104.1	0.534	0.530	0.304	✓
S8014	121.4	4.0	15.6	-15.1	11.6	71.3	0.374	0.256	0.163	✓
S8016	50.8	20.6	79.5	78.9	9.4	13.2	0.417	0.259	0.712	✓
S8036	54.7	21.8	80.6	75.1	9.2	13.1	0.420	0.271	0.705	✓
S8038	47.3	7.7	12.6	157.7	15.4	119.6	0.485	0.609	0.129	✓
S8039	56.3	8.0	13.0	16.0	10.7	84.8	0.467	0.618	0.126	✓
S8041	48.0	20.8	78.8	74.8	9.9	13.1	0.406	0.264	0.762	✓
S8044	81.4	5.6	13.3	80.3	15.2	87.2	0.547	0.421	0.174	✓
S8049	44.6	4.7	11.5	79.4	17.0	87.1	0.547	0.411	0.195	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 1754.8
Mr,x= 421.9> Md,x= 131.9
Mr,y= 778.7> Md,y= 170.9

9. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S9003	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	139.3	9.3
S9008	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	138.9	10.1
S9011	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	101.5	13.5
S9013	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	143.8	21.4
S9014	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	102.7	8.8
S9016	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	105.5	13.3
S9036	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	107.4	14.5
S9038	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	132.4	9.3
S9039	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	127.5	8.2
S9041	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	102.9	13.6
S9044	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	138.8	8.9
S9049	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	138.9	10.0

9. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S9003	69.7	5.5	12.8	62.0	15.1	82.6	0.464	0.431	0.183	✓
S9008	69.6	5.5	12.8	68.2	16.2	84.2	0.463	0.429	0.192	✓
S9011	43.2	20.6	77.4	56.0	8.8	12.1	0.338	0.267	0.723	✓
S9013	100.0	8.2	14.8	59.3	30.5	99.8	0.442	0.554	0.305	✓
S9014	102.7	3.9	14.9	-10.5	10.3	73.4	0.316	0.260	0.141	✓
S9016	46.4	20.5	78.3	65.8	9.5	12.6	0.352	0.262	0.755	✓
S9036	50.8	22.0	79.5	63.6	9.3	12.5	0.358	0.276	0.742	✓
S9038	41.2	7.6	12.3	132.4	14.2	116.5	0.407	0.622	0.122	✓
S9039	48.5	8.1	12.6	14.3	9.7	84.1	0.392	0.638	0.115	✓
S9041	44.0	20.8	77.6	62.5	10.1	12.4	0.343	0.268	0.810	✓
S9044	69.8	5.6	12.8	68.6	14.6	84.3	0.463	0.436	0.173	✓
S9049	69.7	5.4	12.8	67.7	16.2	84.1	0.463	0.423	0.192	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 1479.6
Mr,x= 418.7> Md,x= 133.7
Mr,y= 758.7> Md,y= 164.4

10. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S10003	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	114.5	9.1
S10008	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	114.3	10.0
S10011	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	83.3	12.8
S10013	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	115.4	20.6
S10014	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	84.5	8.4
S10016	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	86.5	12.7
S10036	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	89.6	13.8
S10038	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	107.8	8.9
S10039	20x130	2600	2x4ø16 + 2x5ø16	36.17	36.17	0.014	563.1	325.0	103.9	7.7
S10041	120x20	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	84.5	12.9
S10044	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	114.2	8.7
S10049	20x120	2400	2x3ø16 + 2x5ø16	32.15	32.15	0.013	515.1	300.0	114.3	9.8

10. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	AÇIK.
S10003	58.3	5.4	12.2	51.4	15.4	79.7	0.382	0.443	0.193	✔
S10008	58.3	5.4	12.2	56.6	16.6	81.1	0.381	0.438	0.204	✔
S10011	38.7	20.2	76.0	45.4	8.7	11.6	0.278	0.265	0.754	✔
S10013	81.1	8.1	14.1	45.9	30.3	95.6	0.355	0.574	0.317	✔
S10014	84.5	3.7	14.2	-6.2	10.3	75.3	0.260	0.261	0.136	✔
S10016	41.1	20.0	76.8	53.5	9.5	12.0	0.288	0.260	0.794	✔
S10036	46.2	21.6	78.2	52.8	9.2	12.0	0.299	0.276	0.773	✔
S10038	34.9	7.5	12.0	107.8	14.0	112.2	0.332	0.625	0.125	✔
S10039	40.6	7.9	12.2	12.3	9.9	83.3	0.320	0.648	0.118	✔
S10041	39.1	20.3	76.2	50.7	10.1	11.8	0.282	0.267	0.852	✔
S10044	58.3	5.5	12.2	57.2	14.8	81.3	0.381	0.448	0.183	✔
S10049	58.2	5.3	12.2	56.2	16.1	81.0	0.381	0.434	0.199	✔

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 1212.7
Mr,x= 408.7> Md,x= 130.8
Mr,y= 736.9> Md,y= 165.0

11. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11003	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	90.3	8.9
S11008	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	90.2	9.8
S11011	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	65.5	11.9
S11013	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	88.0	19.8
S11014	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	66.8	7.9
S11016	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	68.0	11.8
S11036	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	72.4	13.2

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11038	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	84.0	8.5
S11039	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	81.0	7.3
S11041	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	66.6	12.1
S11044	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	90.0	8.5
S11049	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	90.2	9.7

11. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S11003	46.8	5.2	11.6	41.0	15.6	76.7	0.301	0.449	0.204	✔
S11008	46.9	5.1	11.6	45.1	16.8	77.9	0.301	0.442	0.216	✔
S11011	33.1	19.2	74.4	35.3	8.6	11.0	0.218	0.259	0.778	✔
S11013	62.6	7.8	13.3	33.3	29.9	91.5	0.271	0.590	0.327	✔
S11014	66.8	3.5	13.5	-2.3	10.4	77.1	0.206	0.262	0.135	✔
S11016	34.8	19.1	74.9	41.6	9.4	11.3	0.227	0.254	0.829	✔
S11036	40.8	21.1	76.7	42.7	9.1	11.4	0.241	0.275	0.798	✔
S11038	28.3	7.2	11.6	84.0	13.9	106.9	0.258	0.619	0.130	✔
S11039	32.3	7.7	11.8	10.1	10.1	82.3	0.249	0.650	0.123	✔
S11041	33.3	19.5	74.4	39.6	10.0	11.2	0.222	0.262	0.890	✔
S11044	46.7	5.3	11.6	45.8	15.0	78.1	0.300	0.456	0.192	✔
S11049	46.7	5.1	11.6	44.8	16.4	77.9	0.301	0.441	0.210	✔

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 952.9
Mr,x= 397.1> Md,x= 125.9
Mr,y= 713.5> Md,y= 165.2

12. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S12003	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	66.5	8.7
S12008	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	66.4	9.5
S12011	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	48.0	11.0
S12013	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	61.3	18.7
S12014	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	49.7	7.4
S12016	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	49.8	10.9
S12036	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	55.8	12.2
S12038	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	61.7	8.0
S12039	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	58.9	6.7
S12041	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	49.0	11.2
S12044	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	66.2	8.0
S12049	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	66.5	9.4

12. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S12003	35.1	5.0	11.0	30.6	15.6	73.6	0.222	0.452	0.212	✓
S12008	35.2	4.9	11.0	33.5	16.8	74.5	0.221	0.443	0.225	✓
S12011	26.2	18.2	72.3	25.6	8.3	10.4	0.160	0.251	0.797	✓
S12013	44.3	7.5	12.4	21.4	29.4	86.9	0.188	0.606	0.338	✓
S12014	49.7	3.3	12.7	49.7	13.4	96.9	0.153	0.261	0.138	✓
S12016	27.3	18.0	72.7	30.2	9.2	10.7	0.166	0.248	0.858	✓
S12036	34.4	19.7	74.8	33.3	8.9	10.9	0.186	0.263	0.816	✓
S12038	21.4	6.8	11.2	60.9	13.8	100.3	0.190	0.610	0.137	✓
S12039	23.6	7.3	11.4	7.5	9.9	81.2	0.181	0.646	0.122	✓
S12041	26.3	18.5	72.4	28.8	9.8	10.6	0.163	0.256	0.923	✓
S12044	34.8	5.1	11.0	34.3	14.6	74.7	0.221	0.462	0.196	✓
S12049	35.0	4.9	11.0	33.4	16.4	74.5	0.222	0.444	0.220	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 699.8
Mr,x= 383.8> Md,x= 119.2
Mr,y= 705.3> Md,y= 166.2

13. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S13003	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	43.1	7.9
S13008	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	43.0	8.8
S13011	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	30.6	9.4
S13013	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	34.8	17.3
S13014	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	33.3	6.4
S13016	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	31.6	9.3
S13036	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	39.7	12.3
S13038	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	39.6	7.2
S13039	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	37.6	6.2
S13041	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	31.5	9.8
S13044	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	42.7	7.9
S13049	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	43.1	8.6

13. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S13003	23.2	4.6	10.3	20.0	14.4	70.1	0.144	0.450	0.205	✓
S13008	23.2	4.5	10.3	21.9	15.8	70.8	0.143	0.439	0.223	✓
S13011	18.0	15.2	69.4	16.2	8.1	9.9	0.102	0.219	0.817	✓
S13013	25.9	7.2	11.5	10.0	25.5	82.3	0.107	0.628	0.310	✓
S13014	33.3	3.1	11.9	33.3	11.6	91.5	0.102	0.263	0.127	✓
S13016	18.6	14.9	69.6	19.0	9.0	10.1	0.105	0.215	0.891	✓
S13036	27.3	20.4	72.7	24.5	8.5	10.4	0.132	0.280	0.823	✓
S13038	14.0	6.4	10.8	38.6	12.1	93.2	0.122	0.596	0.130	✓
S13039	21.5	8.3	11.2	37.6	11.4	92.9	0.116	0.735	0.123	✓
S13041	18.1	15.8	69.4	18.3	9.6	10.0	0.105	0.227	0.956	✓
S13044	22.6	4.7	10.3	22.7	14.8	71.1	0.142	0.461	0.209	✓
S13049	23.0	4.6	10.3	21.8	15.1	70.8	0.144	0.443	0.213	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 450.7
Mr,x= 367.7> Md,x= 109.8
Mr,y= 683.1> Md,y= 156.0

14. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S14003	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	20.0	10.2
S14008	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	19.8	10.9
S14011	120x20	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	13.5	13.6
S14013	20x130	2600	2x5ø16 + 2x5ø16		40.19	40.19	0.015	578.5	325.0	8.8	23.4
S14014	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	19.9	8.9
S14016	120x20	2400	2x3ø16 + 2x5ø18		37.49	37.49	0.016	535.5	300.0	13.8	12.5
S14036	120x20	2400	2x3ø16 + 2x5ø18		37.49	37.49	0.016	535.5	300.0	23.6	7.0
S14038	20x130	2600	2x4ø16 + 2x5ø16		36.17	36.17	0.014	563.1	325.0	16.8	10.4
S14039	20x130	2600	2x4ø16 + 2x10ø18		66.94	66.94	0.026	680.6	325.0	16.4	9.0
S14041	120x20	2400	2x3ø16 + 2x5ø18		37.49	37.49	0.016	535.5	300.0	14.5	12.5
S14044	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	19.1	7.2
S14049	20x120	2400	2x3ø16 + 2x5ø16		32.15	32.15	0.013	515.1	300.0	20.0	11.1

14. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Nd,max/ Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S14003	11.1	5.2	9.6	9.3	20.3	66.3	0.067	0.543	0.306	✓
S14008	10.9	5.1	9.6	10.0	21.7	66.6	0.066	0.535	0.325	✓
S14011	13.5	23.8	67.8	7.7	8.2	9.4	0.045	0.351	0.878	✓
S14013	7.8	6.3	11.3	0.3	43.4	87.5	0.027	0.559	0.495	✓
S14014	10.3	6.1	10.6	17.5	18.5	85.4	0.061	0.579	0.216	✓
S14016	8.9	22.6	73.5	8.5	9.2	10.7	0.046	0.308	0.866	✓
S14036	23.6	13.2	77.9	16.1	10.7	11.1	0.079	0.170	0.967	✓
S14038	8.7	9.1	10.5	15.8	21.3	84.8	0.052	0.866	0.251	✓
S14039	14.2	18.1	17.6	16.4	16.2	128.7	0.050	1.029	0.126	Mr
S14041	9.0	23.0	73.5	8.5	10.0	10.7	0.048	0.312	0.937	✓
S14044	10.0	5.5	9.5	10.9	14.7	66.9	0.064	0.576	0.219	✓
S14049	10.9	5.1	9.6	10.1	21.7	66.6	0.067	0.536	0.326	✓

KAT KAPASİTE KONTROLU:
Nmax= 3700.0> Nd,max= 206.4
Mr,x= 381.0> Md,x= 143.2
Mr,y= 694.6> Md,y= 215.7

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU
BS25
fcd =192.3 fctd=13.38(kg/cm²)
fyd =3818.2(kg/cm²)
Rot kesme kuvvet kapasitesi:
Vr=2.12 (t) ø20 l=423 mm

PERDELERİN KESME GÜVENLİK KONTROLU

Vr = Ach (0.65 fctd + rsh fyd) **Perde Kesme Dayanımı**
Vrh = 0.22 fcd Ach **Max. Beton Kesme Dayanımı**
rshx = Asws.(∑ Letrx/s)/Ach rshy = Asws.(∑ Letry/s)/Ach
Vfr = μ N + fyd Asd = **İş Derzi Sürtünme Kesme Dayanımı**
N = Ng - Ne **Min. Düşey Yük**
μ = 1.4 **(özel pürüzlendirme)**

Kolon		N	Vd	Vr	Vrh	Vfr	ACIKLAMA	(t)
S3003	X yönü	100.227	2.057	49.181	94.769	236.297	✓	
	Y yönü	84.939	11.125	77.827	94.769	214.895	✓	
S3008	X yönü	103.365	1.685	49.181	94.769	240.690	✓	
	Y yönü	99.624	13.544	77.827	94.769	235.453	✓	
S3011	X yönü	24.669	20.194	77.827	94.769	145.872	✓	
	Y yönü	87.108	2.788	49.181	94.769	233.288	✓	
S3013	X yönü	183.360	2.240	55.038	108.308	361.321	✓	
	Y yönü	180.173	17.490	86.753	109.308	356.860	✓	
S3014	X yönü	51.843	1.399	55.038	108.308	238.624	✓	
	Y yönü	-25.518	14.722	86.753	108.308	130.319	✓	
S3016	X yönü	35.442	17.925	77.827	94.769	145.598	✓	
	Y yönü	106.378	3.110	49.181	94.769	244.909	✓	
S3036	X yönü	38.549	20.598	77.827	94.769	149.947	✓	
	Y yönü	98.732	2.969	49.181	94.769	234.204	✓	
S3038	X yönü	99.267	2.971	55.038	108.308	243.591	✓	
	Y yönü	53.004	13.289	86.753	108.308	178.823	✓	
S3039	X yönü	113.665	2.890	55.038	108.308	263.749	✓	
	Y yönü	45.961	13.983	86.753	108.308	168.963	✓	
S3041	X yönü	32.024	17.773	77.827	94.769	140.813	✓	
	Y yönü	101.031	3.267	49.181	94.769	237.422	✓	
S3044	X yönü	104.406	2.014	49.181	94.769	242.148	✓	
	Y yönü	98.673	12.589	77.827	94.769	234.121	✓	
S3049	X yönü	104.580	1.731	49.181	94.769	242.392	✓	
	Y yönü	99.165	13.991	77.827	94.769	234.810	✓	
S4003	X yönü	88.303	2.845	49.181	94.769	219.604	✓	
	Y yönü	74.864	14.960	77.827	94.769	200.788	✓	
S4008	X yönü	89.038	2.865	49.181	94.769	220.633	✓	
	Y yönü	86.564	13.631	77.827	94.769	217.169	✓	
S4011	X yönü	24.451	11.194	77.827	94.769	130.211	✓	
	Y yönü	75.944	5.208	49.181	94.769	202.300	✓	
S4013	X yönü	162.032	4.887	55.038	108.308	331.463	✓	
	Y yönü	163.747	36.349	86.753	108.308	333.864	✓	

S4014	X yönü	46.753	2.765	55.038	108.308	170.072	✓
	Y yönü	-24.663	13.863	86.753	108.308	70.089	✓
S4016	X yönü	32.775	11.875	77.827	94.769	141.864	✓
	Y yönü	93.029	5.622	49.181	94.769	226.220	✓
S4036	X yönü	35.880	11.360	77.827	94.769	146.212	✓
	Y yönü	85.561	5.692	49.181	94.769	215.765	✓
S4038	X yönü	87.776	5.393	55.038	108.308	227.504	✓
	Y yönü	45.611	19.094	86.753	108.308	168.473	✓
S4039	X yönü	101.446	5.119	55.038	108.308	246.642	✓
	Y yönü	38.721	18.282	86.753	108.308	158.827	✓
S4041	X yönü	29.297	11.820	77.827	94.769	136.995	✓
	Y yönü	87.649	5.898	49.181	94.769	218.689	✓
S4044	X yönü	89.842	2.768	49.181	94.769	221.758	✓
	Y yönü	85.448	12.817	77.827	94.769	215.607	✓
S4049	X yönü	89.873	2.727	49.181	94.769	221.802	✓
	Y yönü	85.833	13.103	77.827	94.769	216.145	✓
S1001	X yönü	253.486	754.547	1779.203	3043.615	1918.385	✓
	Y yönü	126.949	13.154	1231.043	3043.615	1741.233	✓
S1005	X yönü	182.959	4.388	67.315	108.308	486.493	✓
	Y yönü	68.757	3.849	58.107	108.308	326.610	✓
S1006	X yönü	198.608	4.206	67.315	108.308	508.402	✓
	Y yönü	134.079	3.775	58.107	108.308	418.061	✓
S1026	X yönü	927.338	45.830	842.748	1239.108	2887.692	✓
	Y yönü	923.517	220.306	890.104	1239.108	2882.343	✓
S1046	X yönü	209.760	4.358	67.315	108.308	524.014	✓
	Y yönü	188.018	3.995	58.107	108.308	493.576	✓
S1047	X yönü	219.538	4.324	67.315	108.308	537.704	✓
	Y yönü	190.113	3.961	58.107	108.308	496.509	✓
S1051	X yönü	252.858	744.821	1778.709	3042.769	1917.506	✓
	Y yönü	133.495	12.536	1230.702	3042.769	1750.398	✓
S1053	X yönü	641.745	5.291	278.806	588.923	1390.818	✓
	Y yönü	493.725	132.848	383.927	588.923	1183.589	✓
S1054	X yönü	629.915	5.478	278.806	588.923	1374.256	✓
	Y yönü	467.124	131.234	383.927	588.923	1146.348	✓
S1055	X yönü	293.577	15.208	386.388	605.846	894.744	✓
	Y yönü	565.537	10.800	285.871	605.846	1275.488	✓
S1056	X yönü	144.698	9.911	386.388	605.846	686.314	✓
	Y yönü	541.878	12.389	285.871	605.846	1242.366	✓
S1057	X yönü	88.693	16.913	386.388	605.846	607.906	✓
	Y yönü	486.049	10.736	285.871	605.846	1164.204	✓
S1058	X yönü	173.919	9.858	386.388	605.846	727.223	✓
	Y yönü	501.310	12.559	285.871	605.846	1185.571	✓
S1059	X yönü	614.612	4.591	278.806	588.923	1352.832	✓
	Y yönü	387.039	138.697	383.927	588.923	1034.230	✓
S1060	X yönü	685.657	5.376	278.408	588.415	1452.294	✓
	Y yönü	520.316	130.844	383.682	588.415	1220.817	✓
S1063	X yönü	71.099	3.140	106.483	186.222	306.854	✓
	Y yönü	150.486	19.377	144.081	186.222	417.996	✓
S1064	X yönü	68.185	3.327	106.483	186.222	302.775	✓
	Y yönü	144.232	19.656	144.081	186.222	409.240	✓
S1065	X yönü	155.734	2.742	106.483	186.222	425.343	✓
	Y yönü	132.393	18.875	144.081	186.222	392.666	✓
S1066	X yönü	117.841	2.844	106.483	186.222	372.293	✓
	Y yönü	124.337	18.732	144.081	186.222	381.387	✓
S2001	X yönü	127.620	1709.180	1921.134	3043.615	1742.172	✓
	Y yönü	56.520	69.495	1288.642	3043.615	1642.633	✓
S2005	X yönü	171.856	8.847	67.315	108.308	470.949	✓
	Y yönü	58.543	11.034	58.107	108.308	312.311	✓

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

S2006	X yönü	192.020	8.359	67.315	108.308	499.179	✓
	Y yönü	133.789	11.324	58.107	108.308	417.656	✓
S2026	X yönü	839.094	500.372	842.748	1239.108	2764.151	✓
	Y yönü	853.189	119.479	890.104	1239.108	2783.884	✓
S2046	X yönü	202.877	8.958	67.315	108.308	514.378	✓
	Y yönü	188.614	12.294	58.107	108.308	494.410	✓
S2047	X yönü	212.575	8.625	67.315	108.308	527.956	✓
	Y yönü	190.894	12.173	58.107	108.308	497.602	✓
S2051	X yönü	127.455	1714.341	1920.601	3042.769	1741.942	✓
	Y yönü	61.129	68.481	1288.285	3042.769	1649.086	✓
S2053	X yönü	604.544	13.524	278.806	588.923	1338.736	✓
	Y yönü	456.213	127.164	383.927	588.923	1131.072	✓
S2054	X yönü	595.581	14.102	278.806	588.923	1326.188	✓
	Y yönü	428.178	116.251	383.927	588.923	1091.824	✓
S2055	X yönü	254.731	315.924	386.388	605.846	894.588	✓
	Y yönü	522.049	21.322	285.871	605.846	1268.834	✓
S2056	X yönü	105.110	299.190	386.388	605.846	789.257	✓
	Y yönü	501.446	21.795	285.871	605.846	1344.127	✓
S2057	X yönü	52.064	316.781	386.388	605.846	772.579	✓
	Y yönü	452.591	19.727	285.871	605.846	1333.317	✓
S2058	X yönü	135.203	302.590	386.388	605.846	831.386	✓
	Y yönü	463.317	22.167	285.871	605.846	1290.746	✓
S2059	X yönü	581.400	12.737	278.806	588.923	1306.334	✓
	Y yönü	348.224	121.372	383.927	588.923	979.888	✓
S2060	X yönü	652.343	13.073	278.408	588.415	1405.655	✓
	Y yönü	482.997	111.889	383.682	588.415	1168.570	✓
S2063	X yönü	58.899	4.372	106.483	186.222	276.817	✓
	Y yönü	147.885	19.780	144.081	186.222	401.397	✓
S2064	X yönü	36.250	8.562	106.483	186.222	245.109	✓
	Y yönü	140.931	19.058	144.081	186.222	391.662	✓
S2065	X yönü	144.399	3.439	106.483	186.222	396.517	✓
	Y yönü	129.911	17.750	144.081	186.222	376.233	✓
S2066	X yönü	101.148	3.670	106.483	186.222	335.965	✓
	Y yönü	122.432	17.771	144.081	186.222	365.763	✓
S3005	X yönü	163.332	17.351	67.315	108.308	459.016	✓
	Y yönü	51.435	8.897	58.107	108.308	302.360	✓
S3006	X yönü	191.473	17.489	67.315	108.308	498.413	✓
	Y yönü	145.226	8.222	58.107	108.308	433.667	✓
S3026	X yönü	729.000	327.661	842.748	1239.108	2610.019	✓
	Y yönü	783.406	201.821	890.104	1239.108	2686.187	✓
S3046	X yönü	201.401	15.723	67.315	108.308	512.312	✓
	Y yönü	200.686	8.322	58.107	108.308	511.311	✓
S3047	X yönü	210.609	15.913	67.315	108.308	525.203	✓
	Y yönü	203.305	8.269	58.107	108.308	514.978	✓
S3053	X yönü	570.032	22.745	270.833	578.769	1299.057	✓
	Y yönü	417.398	124.256	379.023	578.769	1085.369	✓
S3054	X yönü	558.733	22.892	270.833	578.769	1283.238	✓
	Y yönü	387.764	119.859	379.023	578.769	1043.882	✓
S3055	X yönü	219.620	190.860	380.020	592.308	900.620	✓
	Y yönü	475.430	23.938	276.741	592.308	1258.755	✓
S3056	X yönü	71.076	192.468	380.020	592.308	784.800	✓
	Y yönü	460.164	25.201	276.741	592.308	1329.523	✓
S3057	X yönü	22.458	202.880	381.484	595.692	843.428	✓
	Y yönü	422.345	25.986	277.898	595.692	1403.268	✓
S3058	X yönü	102.821	191.018	381.484	595.692	829.243	✓
	Y yönü	426.708	25.555	277.898	595.692	1282.685	✓
S3059	X yönü	543.594	22.260	270.833	578.769	1262.044	✓
	Y yönü	307.112	137.889	379.023	578.769	930.969	✓

S3060	X yönü	617.129	25.524	270.833	578.769	1364.993	✓
	Y yönü	445.724	128.884	379.023	578.769	1125.026	✓
S3063	X yönü	51.387	22.211	102.591	181.483	270.619	✓
	Y yönü	143.835	23.728	141.724	181.483	400.047	✓
S3064	X yönü	-13.805	18.510	97.878	172.006	234.058	✓
	Y yönü	145.682	25.107	133.941	172.006	457.341	✓
S3065	X yönü	134.153	18.279	102.591	181.483	386.492	✓
	Y yönü	134.558	23.399	141.724	181.483	387.059	✓
S3066	X yönü	82.430	19.012	102.591	181.483	314.079	✓
	Y yönü	128.273	23.432	141.724	181.483	378.259	✓
S4005	X yönü	148.982	14.216	67.315	108.308	438.925	✓
	Y yönü	49.691	8.897	58.107	108.308	299.917	✓
S4006	X yönü	171.370	16.754	67.315	108.308	470.268	✓
	Y yönü	128.640	8.278	58.107	108.308	410.447	✓
S4026	X yönü	674.223	353.666	842.748	1239.108	2533.331	✓
	Y yönü	725.844	195.476	890.104	1239.108	2605.601	✓
S4046	X yönü	183.061	13.627	67.315	108.308	486.636	✓
	Y yönü	182.157	11.369	58.107	108.308	485.371	✓
S4047	X yönü	191.474	13.830	67.315	108.308	498.415	✓
	Y yönü	184.505	11.438	58.107	108.308	488.658	✓
S4053	X yönü	533.183	24.458	270.833	578.769	1225.874	✓
	Y yönü	384.299	95.521	379.023	578.769	1017.436	✓
S4054	X yönü	510.024	24.418	270.833	578.769	1193.452	✓
	Y yönü	355.294	101.411	379.023	578.769	976.828	✓
S4055	X yönü	203.001	162.301	380.020	592.308	763.619	✓
	Y yönü	432.792	29.254	276.741	592.308	1085.326	✓
S4056	X yönü	60.191	163.603	380.020	592.308	563.684	✓
	Y yönü	419.402	29.475	276.741	592.308	1066.580	✓
S4057	X yönü	12.051	163.234	381.484	595.692	550.516	✓
	Y yönü	385.320	35.009	277.898	595.692	1073.094	✓
S4058	X yönü	88.102	154.166	381.484	595.692	602.760	✓
	Y yönü	389.044	29.774	277.898	595.692	1024.078	✓
S4059	X yönü	491.857	21.124	270.833	578.769	1168.017	✓
	Y yönü	278.721	116.096	379.023	578.769	869.627	✓
S4060	X yönü	563.438	30.338	270.833	578.769	1268.230	✓
	Y yönü	408.955	104.332	379.023	578.769	1051.954	✓
S4063	X yönü	44.967	44.941	102.591	181.483	421.437	✓
	Y yönü	128.272	38.485	141.724	181.483	538.063	✓
S4064	X yönü	-7.689	30.287	97.878	172.006	328.042	✓
	Y yönü	131.215	28.886	133.941	172.006	522.509	✓
S4065	X yönü	118.677	34.957	102.591	181.483	364.826	✓
	Y yönü	121.272	36.912	141.724	181.483	368.458	✓
S4066	X yönü	76.529	38.144	102.591	181.483	376.843	✓
	Y yönü	114.591	39.650	141.724	181.483	430.130	✓
S5005	X yönü	137.630	18.522	67.315	108.308	423.032	✓
	Y yönü	51.765	9.514	58.107	108.308	302.821	✓
S5006	X yönü	154.927	20.737	67.315	108.308	447.249	✓
	Y yönü	115.499	8.651	58.107	108.308	392.049	✓
S5026	X yönü	622.147	319.424	842.748	1239.108	2460.425	✓
	Y yönü	671.029	162.858	890.104	1239.108	2528.861	✓
S5046	X yönü	165.501	16.063	67.315	108.308	462.051	✓
	Y yönü	164.301	9.952	58.107	108.308	460.373	✓
S5047	X yönü	172.999	16.088	67.315	108.308	472.550	✓
	Y yönü	166.374	9.981	58.107	108.308	463.275	✓
S5053	X yönü	496.859	24.742	263.495	562.692	1162.063	✓
	Y yönü	353.624	78.527	364.779	562.692	961.533	✓
S5054	X yönü	462.478	24.820	263.495	562.692	1113.930	✓
	Y yönü	325.501	82.308	364.779	562.692	922.162	✓

S5055	X yönü	195.930	146.367	366.287	576.231	727.804	✓
	Y yönü	393.925	31.125	269.607	576.231	1004.997	✓
S5056	X yönü	62.424	148.892	366.287	576.231	540.896	✓
	Y yönü	382.762	32.827	269.607	576.231	989.370	✓
S5057	X yönü	13.753	151.019	366.287	576.231	472.757	✓
	Y yönü	352.799	38.246	269.607	576.231	947.422	✓
S5058	X yönü	83.646	137.488	366.287	576.231	570.607	✓
	Y yönü	355.753	33.759	269.607	576.231	951.557	✓
S5059	X yönü	441.783	23.835	263.495	562.692	1084.957	✓
	Y yönü	253.718	107.498	364.779	562.692	821.665	✓
S5060	X yönü	511.340	32.121	263.495	562.692	1182.336	✓
	Y yönü	375.604	94.001	364.779	562.692	992.306	✓
S5063	X yönü	41.995	45.013	93.164	162.529	389.922	✓
	Y yönü	113.130	34.192	126.158	162.529	489.511	✓
S5064	X yönü	6.541	31.338	97.878	172.006	340.287	✓
	Y yönü	121.351	30.708	133.941	172.006	501.021	✓
S5065	X yönü	104.560	34.955	93.164	162.529	327.785	✓
	Y yönü	110.477	31.461	126.158	162.529	336.069	✓
S5066	X yönü	76.528	37.713	93.164	162.529	356.206	✓
	Y yönü	105.548	33.943	126.158	162.529	396.834	✓
S6005	X yönü	124.316	17.874	67.315	108.308	404.393	✓
	Y yönü	49.087	9.565	58.107	108.308	299.072	✓
S6006	X yönü	138.599	20.886	67.315	108.308	424.390	✓
	Y yönü	102.796	9.017	58.107	108.308	374.265	✓
S6026	X yönü	566.780	288.821	842.748	1239.108	2382.911	✓
	Y yönü	612.914	132.760	890.104	1239.108	2447.499	✓
S6046	X yönü	147.844	16.826	67.315	108.308	437.333	✓
	Y yönü	146.404	11.449	58.107	108.308	435.316	✓
S6047	X yönü	154.349	16.768	67.315	108.308	446.439	✓
	Y yönü	148.187	11.498	58.107	108.308	437.812	✓
S6053	X yönü	445.685	26.275	263.495	562.692	1312.131	✓
	Y yönü	320.264	67.358	364.779	562.692	1136.542	✓
S6054	X yönü	413.397	26.445	263.495	562.692	1045.216	✓
	Y yönü	293.647	71.223	364.779	562.692	877.565	✓
S6055	X yönü	188.965	130.123	366.287	576.231	718.054	✓
	Y yönü	353.444	33.884	269.607	576.231	948.325	✓
S6056	X yönü	66.152	135.841	366.287	576.231	546.116	✓
	Y yönü	344.344	35.209	269.607	576.231	935.584	✓
S6057	X yönü	18.718	132.330	366.287	576.231	479.708	✓
	Y yönü	319.790	39.690	269.607	576.231	901.208	✓
S6058	X yönü	81.548	117.950	366.287	576.231	567.670	✓
	Y yönü	321.506	34.825	269.607	576.231	903.611	✓
S6059	X yönü	394.678	23.277	263.495	562.692	1019.009	✓
	Y yönü	231.347	93.352	364.779	562.692	790.345	✓
S6060	X yönü	457.015	31.805	263.495	562.692	1106.281	✓
	Y yönü	339.057	77.840	364.779	562.692	941.140	✓
S6063	X yönü	41.990	31.662	93.164	162.529	397.593	✓
	Y yönü	101.136	31.614	126.158	162.529	480.398	✓
S6064	X yönü	20.358	34.671	97.878	172.006	359.630	✓
	Y yönü	108.184	32.127	133.941	172.006	482.387	✓
S6065	X yönü	91.590	40.335	93.164	162.529	377.293	✓
	Y yönü	97.395	27.451	126.158	162.529	385.420	✓
S6066	X yönü	76.270	43.403	93.164	162.529	430.228	✓
	Y yönü	92.496	30.589	126.158	162.529	452.945	✓
S7005	X yönü	110.816	18.694	67.315	108.308	385.496	✓
	Y yönü	46.178	10.333	58.107	108.308	294.999	✓
S7006	X yönü	122.524	21.259	67.315	108.308	401.884	✓
	Y yönü	90.647	9.189	58.107	108.308	357.256	✓

S7026	X yönü	509.030	253.078	842.748	1239.108	2302.062	✓
	Y yönü	552.033	105.132	890.104	1239.108	2362.265	✓
S7046	X yönü	130.463	16.379	67.315	108.308	412.999	✓
	Y yönü	128.821	10.706	58.107	108.308	410.700	✓
S7047	X yönü	135.944	16.253	67.315	108.308	420.672	✓
	Y yönü	130.309	10.719	58.107	108.308	412.783	✓
S7053	X yönü	393.853	25.055	263.495	562.692	1017.854	✓
	Y yönü	286.459	52.965	364.779	562.692	867.502	✓
S7054	X yönü	364.030	25.326	263.495	562.692	976.102	✓
	Y yönü	261.649	56.820	364.779	562.692	832.768	✓
S7055	X yönü	182.456	112.204	366.287	576.231	708.942	✓
	Y yönü	314.036	34.144	269.607	576.231	893.153	✓
S7056	X yönü	71.925	124.840	366.287	576.231	554.198	✓
	Y yönü	306.963	37.021	269.607	576.231	883.251	✓
S7057	X yönü	26.153	123.700	366.287	576.231	490.117	✓
	Y yönü	286.989	43.017	269.607	576.231	855.287	✓
S7058	X yönü	81.047	108.648	366.287	576.231	566.968	✓
	Y yönü	287.709	38.656	269.607	576.231	856.296	✓
S7059	X yönü	347.558	24.147	263.495	562.692	953.041	✓
	Y yönü	208.822	85.726	364.779	562.692	758.810	✓
S7060	X yönü	402.743	33.200	263.495	562.692	1030.301	✓
	Y yönü	302.551	67.960	364.779	562.692	890.032	✓
S7063	X yönü	42.702	52.180	93.164	162.529	413.947	✓
	Y yönü	89.766	33.073	126.158	162.529	479.836	✓
S7064	X yönü	34.926	33.212	97.878	172.006	302.283	✓
	Y yönü	97.542	31.554	133.941	172.006	389.945	✓
S7065	X yönü	79.920	39.183	93.164	162.529	360.955	✓
	Y yönü	85.661	27.530	126.158	162.529	368.993	✓
S7066	X yönü	77.391	41.890	93.164	162.529	431.799	✓
	Y yönü	82.572	30.884	126.158	162.529	439.052	✓
S8005	X yönü	97.026	17.942	67.315	108.308	366.188	✓
	Y yönü	42.776	9.982	58.107	108.308	290.237	✓
S8006	X yönü	106.622	20.458	67.315	108.308	379.622	✓
	Y yönü	78.900	8.891	58.107	108.308	340.811	✓
S8026	X yönü	449.396	227.011	842.748	1239.108	2218.573	✓
	Y yönü	488.582	87.647	890.104	1239.108	2273.434	✓
S8046	X yönü	113.290	16.645	67.315	108.308	388.956	✓
	Y yönü	111.533	11.131	58.107	108.308	386.497	✓
S8047	X yönü	117.784	16.658	67.315	108.308	395.248	✓
	Y yönü	112.723	11.281	58.107	108.308	388.163	✓
S8053	X yönü	341.770	24.597	256.438	533.077	931.981	✓
	Y yönü	252.106	47.039	356.955	533.077	806.452	✓
S8054	X yönü	314.759	24.987	256.438	533.077	894.166	✓
	Y yönü	229.329	50.280	356.955	533.077	774.564	✓
S8055	X yönü	171.959	101.472	357.511	543.231	694.245	✓
	Y yönü	273.000	35.293	261.598	543.231	835.702	✓
S8056	X yönü	74.633	111.268	357.511	543.231	557.389	✓
	Y yönü	267.558	37.188	261.598	543.231	828.084	✓
S8057	X yönü	32.659	112.487	357.511	543.231	499.225	✓
	Y yönü	252.973	42.040	261.598	543.231	807.666	✓
S8058	X yönü	79.400	94.080	357.511	543.231	564.663	✓
	Y yönü	252.854	36.799	261.598	543.231	807.498	✓
S8059	X yönü	300.625	21.781	256.438	533.077	874.377	✓
	Y yönü	185.660	74.203	356.955	533.077	713.427	✓
S8060	X yönü	348.647	30.247	256.438	533.077	941.609	✓
	Y yönü	265.622	56.665	356.955	533.077	825.373	✓
S8063	X yönü	42.373	52.244	93.164	162.529	413.486	✓
	Y yönü	78.171	33.711	126.158	162.529	463.603	✓

S8064	X yönü	44.549	33.623	97.878	172.006	315.754	✓
	Y yönü	85.036	33.145	133.941	172.006	372.436	✓
S8065	X yönü	67.786	41.064	93.164	162.529	418.351	✓
	Y yönü	73.926	28.960	126.158	162.529	426.946	✓
S8066	X yönü	75.185	43.554	93.164	162.529	428.710	✓
	Y yönü	71.480	32.778	126.158	162.529	423.523	✓
S9005	X yönü	83.074	18.327	67.315	108.308	346.654	✓
	Y yönü	38.767	10.420	58.107	108.308	284.625	✓
S9006	X yönü	90.804	20.623	67.315	108.308	357.476	✓
	Y yönü	67.418	9.275	58.107	108.308	324.735	✓
S9026	X yönü	388.576	198.811	842.748	1239.108	2133.426	✓
	Y yönü	423.347	70.726	890.104	1239.108	2182.106	✓
S9046	X yönü	96.248	16.192	67.315	108.308	349.741	✓
	Y yönü	94.469	11.124	58.107	108.308	347.250	✓
S9047	X yönü	99.822	15.688	67.315	108.308	370.101	✓
	Y yönü	95.355	10.889	58.107	108.308	363.848	✓
S9053	X yönü	290.285	22.528	256.438	533.077	859.902	✓
	Y yönü	217.666	39.572	356.955	533.077	758.235	✓
S9054	X yönü	266.351	23.003	256.438	533.077	826.395	✓
	Y yönü	197.014	42.544	356.955	533.077	729.322	✓
S9055	X yönü	160.284	87.415	357.511	543.231	677.901	✓
	Y yönü	233.771	34.198	261.598	543.231	780.782	✓
S9056	X yönü	76.788	97.671	357.511	543.231	561.006	✓
	Y yönü	230.024	36.627	261.598	543.231	775.536	✓
S9057	X yönü	38.405	102.235	357.511	543.231	507.270	✓
	Y yönü	219.139	42.788	261.598	543.231	760.298	✓
S9058	X yönü	77.103	87.708	357.511	543.231	561.447	✓
	Y yönü	218.552	39.013	261.598	543.231	759.475	✓
S9059	X yönü	254.845	21.494	256.438	533.077	810.286	✓
	Y yönü	162.212	71.080	356.955	533.077	680.599	✓
S9060	X yönü	295.716	30.357	256.438	533.077	867.505	✓
	Y yönü	228.754	52.612	356.955	533.077	773.759	✓
S9063	X yönü	41.402	50.753	93.164	162.529	436.602	✓
	Y yönü	67.081	33.748	126.158	162.529	472.552	✓
S9064	X yönü	52.745	31.516	97.878	172.006	259.563	✓
	Y yönü	74.627	32.684	133.941	172.006	290.198	✓
S9065	X yönü	56.791	38.086	93.164	162.529	328.574	✓
	Y yönü	62.907	27.413	126.158	162.529	337.136	✓
S9066	X yönü	65.442	40.107	93.164	162.529	340.685	✓
	Y yönü	62.784	31.333	126.158	162.529	336.964	✓
S10005	X yönü	68.943	16.988	67.315	108.308	326.871	✓
	Y yönü	34.044	9.764	58.107	108.308	278.013	✓
S10006	X yönü	75.083	18.684	67.315	108.308	335.467	✓
	Y yönü	56.110	8.774	58.107	108.308	308.904	✓
S10026	X yönü	326.436	165.436	842.748	1239.108	2046.432	✓
	Y yönü	356.434	54.055	890.104	1239.108	2088.127	✓
S10046	X yönü	79.306	15.054	67.315	108.308	341.379	✓
	Y yönü	77.580	10.809	58.107	108.308	338.962	✓
S10047	X yönü	82.050	14.950	67.315	108.308	345.220	✓
	Y yönü	78.214	10.961	58.107	108.308	339.850	✓
S10053	X yönü	238.912	21.781	256.438	533.077	787.980	✓
	Y yönü	182.455	36.320	356.955	533.077	708.940	✓
S10054	X yönü	218.320	22.404	256.438	533.077	759.151	✓
	Y yönü	164.047	38.509	356.955	533.077	683.168	✓
S10055	X yönü	143.087	78.241	357.511	543.231	653.825	✓
	Y yönü	193.115	35.498	261.598	543.231	723.363	✓
S10056	X yönü	73.729	89.978	357.511	543.231	556.723	✓
	Y yönü	190.866	38.040	261.598	543.231	720.716	✓

S10057	X yönü	40.739	92.473	357.511	543.231	510.538	✓
	Y yönü	183.843	42.828	261.598	543.231	710.884	✓
S10058	X yönü	71.568	77.197	357.511	543.231	553.698	✓
	Y yönü	183.006	38.816	261.598	543.231	709.711	✓
S10059	X yönü	209.541	19.781	256.438	533.077	746.860	✓
	Y yönü	137.625	65.646	356.955	533.077	646.178	✓
S10060	X yönü	243.329	28.559	256.438	533.077	794.164	✓
	Y yönü	191.293	46.906	356.955	533.077	721.314	✓
S10063	X yönü	37.640	48.477	93.164	162.529	446.692	✓
	Y yönü	55.275	33.440	126.158	162.529	471.380	✓
S10064	X yönü	54.312	29.417	97.878	172.006	261.757	✓
	Y yönü	61.815	32.307	133.941	172.006	272.261	✓
S10065	X yönü	46.024	37.777	93.164	162.529	313.500	✓
	Y yönü	51.856	27.835	126.158	162.529	321.665	✓
S10066	X yönü	49.072	39.453	93.164	162.529	317.768	✓
	Y yönü	52.166	32.091	126.158	162.529	322.099	✓
S11005	X yönü	54.742	16.813	67.315	108.308	306.989	✓
	Y yönü	28.565	9.862	58.107	108.308	270.342	✓
S11006	X yönü	59.375	18.561	67.315	108.308	305.797	✓
	Y yönü	44.868	8.973	58.107	108.308	285.488	✓
S11026	X yönü	264.292	145.975	842.748	1239.108	1959.429	✓
	Y yönü	288.611	43.742	890.104	1239.108	1993.474	✓
S11046	X yönü	62.438	14.963	67.315	108.308	317.764	✓
	Y yönü	60.853	11.114	58.107	108.308	315.544	✓
S11047	X yönü	64.422	14.650	67.315	108.308	320.541	✓
	Y yönü	61.225	11.134	58.107	108.308	316.066	✓
S11053	X yönü	187.636	19.239	249.381	503.462	716.193	✓
	Y yönü	146.308	30.861	349.131	503.462	658.334	✓
S11054	X yönü	170.677	19.953	249.381	503.462	692.451	✓
	Y yönü	130.259	32.404	349.131	503.462	635.866	✓
S11055	X yönü	122.656	63.027	348.734	510.231	625.221	✓
	Y yönü	153.483	33.533	253.589	510.231	668.379	✓
S11056	X yönü	68.146	74.074	348.734	510.231	548.907	✓
	Y yönü	152.777	36.036	253.589	510.231	667.391	✓
S11057	X yönü	39.843	79.186	348.734	510.231	509.282	✓
	Y yönü	147.880	40.930	253.589	510.231	660.535	✓
S11058	X yönü	63.395	64.806	348.734	510.231	542.256	✓
	Y yönü	147.032	37.477	253.589	510.231	659.348	✓
S11059	X yönü	164.744	17.758	249.381	503.462	684.144	✓
	Y yönü	111.633	58.571	349.131	503.462	609.789	✓
S11060	X yönü	191.450	26.182	249.381	503.462	721.533	✓
	Y yönü	152.883	40.692	349.131	503.462	667.539	✓
S11063	X yönü	32.816	45.386	93.164	162.529	377.372	✓
	Y yönü	43.783	32.911	126.158	162.529	392.425	✓
S11064	X yönü	53.470	26.840	97.878	172.006	260.578	✓
	Y yönü	50.871	31.818	133.941	172.006	256.939	✓
S11065	X yönü	36.237	34.884	93.164	162.529	299.799	✓
	Y yönü	41.323	26.829	126.158	162.529	306.919	✓
S11066	X yönü	35.620	36.172	93.164	162.529	298.935	✓
	Y yönü	43.308	31.134	126.158	162.529	309.698	✓
S12005	X yönü	10.430	15.623	67.315	108.308	286.953	✓
	Y yönü	22.308	9.463	58.107	108.308	261.582	✓
S12006	X yönü	43.587	17.012	67.315	108.308	291.372	✓
	Y yönü	33.590	8.805	58.107	108.308	277.377	✓
S12026	X yönü	201.625	105.083	842.748	1239.108	1871.694	✓
	Y yönü	219.949	19.945	890.104	1239.108	1897.348	✓
S12046	X yönü	45.576	13.974	67.315	108.308	294.157	✓
	Y yönü	44.236	11.089	58.107	108.308	292.281	✓

S12047	X yönü	46.859	13.780	67.315	108.308	295.953	✔
	Y yönü	44.325	11.110	58.107	108.308	292.405	✔
S12053	X yönü	137.260	17.942	249.381	503.462	645.666	✔
	Y yönü	109.787	22.554	349.131	503.462	607.205	✔
S12054	X yönü	124.158	18.343	249.381	503.462	627.324	✔
	Y yönü	96.198	23.803	349.131	503.462	588.181	✔
S12055	X yönü	96.835	47.159	348.734	510.231	589.072	✔
	Y yönü	112.977	33.606	253.589	510.231	611.671	✔
S12056	X yönü	57.236	58.475	348.734	510.231	533.634	✔
	Y yönü	113.725	36.385	253.589	510.231	612.718	✔
S12057	X yönü	35.172	65.087	348.734	510.231	502.743	✔
	Y yönü	111.082	41.076	253.589	510.231	609.017	✔
S12058	X yönü	51.868	51.100	348.734	510.231	526.118	✔
	Y yönü	110.448	37.872	253.589	510.231	608.130	✔
S12059	X yönü	121.237	16.331	249.381	503.462	623.235	✔
	Y yönü	84.795	49.899	349.131	503.462	572.215	✔
S12060	X yönü	140.895	24.635	249.381	503.462	650.756	✔
	Y yönü	114.164	32.163	349.131	503.462	613.332	✔
S12063	X yönü	26.246	42.858	93.164	162.529	360.195	✔
	Y yönü	32.015	32.098	126.158	162.529	368.271	✔
S12064	X yönü	44.975	24.504	97.878	172.006	248.685	✔
	Y yönü	37.396	30.703	133.941	172.006	238.074	✔
S12065	X yönü	26.454	32.994	93.164	162.529	286.102	✔
	Y yönü	30.214	25.772	126.158	162.529	291.366	✔
S12066	X yönü	22.644	33.811	93.164	162.529	280.768	✔
	Y yönü	32.000	30.576	126.158	162.529	293.866	✔
S13005	X yönü	26.067	13.556	67.315	108.308	266.845	✔
	Y yönü	15.210	8.684	58.107	108.308	251.645	✔
S13006	X yönü	27.742	15.548	67.315	108.308	269.189	✔
	Y yönü	22.233	8.167	58.107	108.308	261.476	✔
S13026	X yönü	138.727	57.999	842.748	1239.108	1783.638	✔
	Y yönü	150.733	12.013	890.104	1239.108	1800.446	✔
S13046	X yönü	28.703	11.901	67.315	108.308	270.535	✔
	Y yönü	27.660	10.610	58.107	108.308	269.075	✔
S13047	X yönü	29.348	11.667	67.315	108.308	271.438	✔
	Y yönü	27.485	10.802	58.107	108.308	268.930	✔
S13053	X yönü	87.001	14.356	249.381	503.462	575.304	✔
	Y yönü	72.136	13.325	349.131	503.462	554.493	✔
S13054	X yönü	78.107	16.622	249.381	503.462	562.353	✔
	Y yönü	61.206	14.383	349.131	503.462	539.191	✔
S13055	X yönü	66.968	32.415	348.734	510.231	547.258	✔
	Y yönü	73.458	30.059	253.589	510.231	556.344	✔
S13056	X yönü	42.659	43.141	348.734	510.231	513.225	✔
	Y yönü	75.591	32.082	253.589	510.231	559.331	✔
S13057	X yönü	26.468	51.673	348.734	510.231	490.558	✔
	Y yönü	73.622	35.989	253.589	510.231	556.573	✔
S13058	X yönü	36.896	37.313	348.734	510.231	505.157	✔
	Y yönü	73.376	33.338	253.589	510.231	556.230	✔
S13059	X yönü	78.342	13.485	249.381	503.462	563.181	✔
	Y yönü	56.429	39.941	349.131	503.462	532.303	✔
S13060	X yönü	90.923	21.723	249.381	503.462	580.795	✔
	Y yönü	74.444	23.053	349.131	503.462	557.724	✔
S13063	X yönü	18.664	36.208	93.164	162.529	349.580	✔
	Y yönü	20.892	28.976	126.158	162.529	352.700	✔
S13064	X yönü	26.682	19.792	97.878	172.006	223.376	✔
	Y yönü	25.470	29.101	133.941	172.006	221.378	✔
S13065	X yönü	17.483	27.794	93.164	162.529	205.878	✔
	Y yönü	19.495	24.024	126.158	162.529	208.694	✔

S13066	X yönü	14.549	28.203	93.164	162.529	269.435	✓
	Y yönü	23.088	26.699	126.158	162.529	281.390	✓
S14005	X yönü	11.665	19.030	67.315	108.308	246.681	✓
	Y yönü	7.599	10.662	58.107	108.308	240.989	✓
S14006	X yönü	11.834	18.169	67.315	108.308	246.918	✓
	Y yönü	10.728	10.494	58.107	108.308	245.369	✓
S14026	X yönü	75.857	70.546	842.748	1239.108	1695.619	✓
	Y yönü	80.688	119.394	890.104	1239.108	1702.383	✓
S14046	X yönü	11.922	19.248	67.315	108.308	247.041	✓
	Y yönü	11.321	12.971	58.107	108.308	246.200	✓
S14047	X yönü	11.938	17.873	67.315	108.308	247.064	✓
	Y yönü	10.751	11.972	58.107	108.308	245.402	✓
S14053	X yönü	37.305	25.133	249.381	503.462	505.730	✓
	Y yönü	33.754	44.324	349.131	503.462	500.758	✓
S14054	X yönü	32.814	15.102	249.381	503.462	499.443	✓
	Y yönü	25.967	44.347	349.131	503.462	489.856	✓
S14055	X yönü	32.668	48.791	348.734	510.231	499.238	✓
	Y yönü	32.021	41.774	253.589	510.231	498.332	✓
S14056	X yönü	24.228	16.441	348.734	510.231	487.422	✓
	Y yönü	35.955	47.087	253.589	510.231	503.839	✓
S14057	X yönü	15.097	15.014	348.734	510.231	474.639	✓
	Y yönü	34.924	53.061	253.589	510.231	502.396	✓
S14058	X yönü	19.134	14.794	348.734	510.231	480.290	✓
	Y yönü	35.393	49.695	253.589	510.231	503.053	✓
S14059	X yönü	36.007	17.477	249.381	503.462	503.912	✓
	Y yönü	26.936	33.006	349.131	503.462	491.213	✓
S14060	X yönü	41.577	25.026	249.381	503.462	511.710	✓
	Y yönü	34.146	25.416	349.131	503.462	501.308	✓
S14063	X yönü	10.303	49.216	93.164	162.529	454.490	✓
	Y yönü	9.616	42.267	126.158	162.529	453.529	✓
S14064	X yönü	9.180	26.336	97.878	172.006	266.238	✓
	Y yönü	10.768	35.854	133.941	172.006	268.460	✓
S14065	X yönü	7.730	37.492	93.164	162.529	341.951	✓
	Y yönü	7.789	30.280	126.158	162.529	342.034	✓
S14066	X yönü	6.817	38.417	93.164	162.529	348.351	✓
	Y yönü	12.613	44.787	126.158	162.529	356.466	✓

RADYE MAT TEMELLERIN SONLU ELEMANLARLA ANALİZİ

ZEMİN YATAK KATSAYISI (t/m³) : 4500.0
ZEMİN EMNİYET GERİLMESİ (t/m²) : 30.0
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETON ve ÇELİK MALZEME BİLGİLERİ
Beton dayanım gerilmesi (kg/cm²).:250
Çelik akma gerilmesi (kg/cm²).:4200

BETONARME HESAP YÜK KOMBİNASYON PARAMETRESİ

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

STATİK ANALİZ YÜK KOMBİNASYON NOTASYONLARI:

1. G+G+G+G+G	GENEL ÖLÜ YÜK
2. Q+Q+Q+Q+Q	1. GENEL HAREKETLİ YÜK
3. Q+o+Q+o+Q	2. HAREKETLİ YÜK
4. o+Q+o+Q+o	3. HAREKETLİ YÜK
5. Q+Q+o+Q+Q	4. HAREKETLİ YÜK
6. o+Q+Q+o+Q	5. HAREKETLİ YÜK
7. Q+o+Q+Q+o	6. HAREKETLİ YÜK
8. Gz	Yatay zemin itkisi
9. Ex + %5 x ey	X yönü deprem + %5 eksantrisite
10. Ex - %5 x ey	X yönü deprem - %5 eksantrisite
11. Ey + %5 x ex	Y yönü deprem + %5 eksantrisite
12. Ey - %5 x ex	Y yönü deprem - %5 eksantrisite
13. Wx + %5 x ey	X yönü rüzgar + %5 eksantrisite
14. Wx - %5 x ey	X yönü rüzgar - %5 eksantrisite
15. Wy + %5 x ex	Y yönü rüzgar + %5 eksantrisite
16. Wy - %5 x ex	Y yönü rüzgar - %5 eksantrisite

ZEMİN GERİLMESİ t/m²

Nok no	1 g	2 q	3 q	4 q	5 q	6 q	7 q	8 z	9 e	10 e	11 e	12 e	13 w	14 w	15 w	16 w	max. σ
593	18.44	1.378	1.378	1.38	1.378	1.378	1.379	0.0	3.215	2.867	-3.42	-3.18	0.192	0.216	-0.35	-0.33	19.82

max ZEMİN GERİLMESİ=19.829 t/m²

P1-Z2

PROJE İSMİ.....:soyak gokyuzu evleri b-blok
KAT ADEDİ.....: 14
Bir kattaki KOLON SAYISI.....: 66
X yönü aks sayısı.....: 32
Y yönü aks sayısı.....: 23
DEPREM KATSAYISI.....(Ao).: .4
YAPI TİPİ KATSAYISI.....(R)..: 4
YAPI ÖNEM KATSAYISI.....(I)..: 1
ZEMİN HAKİM TİTREŞİM PERYODU..(Ta/Tb).: .15 / .4
HAREKETLİ YÜK KATSAYISI.....(n)..: .3
SIFIR RÖLATİF HAREKET YÜKSEKLİĞİ (m)...:.00
ZEMİN EMNİYET GERİLMESİ..... (t/m²)..:30.0
ZEMİN YATAK KATSAYISI..... (t/m³)..:4500.0
BETON YOĞUNLUĞU.....(t/m³)..:2.5
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETONARME KESİT DONATI HESAP YÖNTEMİ .....:BRÜT KESİTE GÖRE
DEPREM HESABI YÖNTEMİ .....:MOD SÜPERPOZİSYONU İLE DİNAMİK ANALİZ
TEMEL ANALİZ OPSİYONU.....:TEMELLER DİKKATE ALINMADAN, YAPI ANALİZİ
Zemin gerilmesi hareketli yük azaltma degeri..:.60
Zemin gerilmesi deprem azaltması.....:.50
Zemin gerilmesi rüzgar azaltması.....:.25
Kolonun oturduğu kiriş tesir çarpanı.....: 1.5
Kiriş & Kolon rijitlik bölgesi opsiyonu.....: Rijit davranış
Kiriş uçlarında elastik ankastrelik opsiyonu : Elastik ankastre

BETON ve ÇELİK MALZEME BİLGİLERİ	Kiriş\Kolon	Döşeme	Temel
Beton dayanım gerilmesi (kg/cm²)	250\300	250	250
Çelik akma gerilmesi (kg/cm²)	4200	4200	4200
Çelik akma gerilmesi (kg/cm²) (Etriye)	4200		4200

TAŞIMA GÜCÜ MALZEME KATSAYILARI	BETON 1.30	ÇELİK 1.10
TAŞIMA GÜCÜ YÜK KATSAYILARI	SABİT YÜK 1.40	HAREKETLİ YÜK 1.60

ELASTİSİTE MODÜLÜ (kg/cm²)

BS30	E1=	318000	G1=	127200
BS25	E2=	302500	G2=	121000

BETONARME HESAP YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

ZEMİN GERİLMESİ HAREKETLİ YÜK AZALTMA DEĞERLERİ

Kat	1	2	3	4	5	6	7	8	9	10
Eksiltme %				20	40	60	80	80	80	40

DEPREM RAPORU

Deprem yükü eksantirisitesi : 0.050
Dinamik Analiz min. deprem yükü oranı ß : 1.0

DİNAMİK ANALİZ BİLGİLERİ
TASARIM SPECTURUM BİLGİSİ

T (s)	Sa (m/s²) Ao.I.S(t)
0.00	4.000
0.15	10.000
0.40	10.000
0.50	8.364
0.60	7.228
0.70	6.392
0.80	5.744
0.90	5.228
1.00	4.804
1.10	4.452
1.20	4.152
1.30	3.896
1.40	3.672
1.50	3.472
1.60	3.300
1.70	3.144
1.80	3.004
1.90	2.876
2.00	2.800
5.00	2.800

MODAL ANALIZ - YAPI PERYOD ve VEKTORLERI

Mod	1.mod	2.mod	3.mod	4.mod	5.mod	6.mod	7.mod	8.mod	9.mod
w	5.75	6.02	8.59	21.57	23.33	32.26	46.53	53.81	70.37
T	1.0922	1.0442	0.7319	0.2913	0.2693	0.1948	0.1350	0.1168	0.0893
yon	y	b	x	b	y	x	b	y	x
1x	0.00000	0.00000	0.00107	-0.00002	0.00000	0.00598	-0.00006	0.00001	0.01783
2x	-0.00001	-0.00001	0.00332	-0.00009	0.00000	0.01592	-0.00024	0.00002	0.04129
3x	-0.00005	-0.00003	0.01357	-0.00026	0.00000	0.05270	-0.00055	0.00004	0.10497
4x	-0.00008	-0.00003	0.02551	-0.00042	0.00000	0.08660	-0.00068	0.00006	0.13837
5x	-0.00011	-0.00001	0.03947	-0.00051	0.00000	0.11525	-0.00056	0.00007	0.13445
6x	-0.00014	0.00002	0.05462	-0.00054	0.00000	0.13264	-0.00017	0.00006	0.09102
7x	-0.00017	0.00006	0.07032	-0.00048	0.00000	0.13518	0.00031	0.00005	0.02068
8x	-0.00020	0.00010	0.08608	-0.00033	-0.00001	0.12141	0.00078	0.00003	-0.05480
9x	-0.00022	0.00017	0.10147	-0.00014	-0.00002	0.09198	0.00098	0.00000	-0.11054
10x	-0.00024	0.00024	0.11617	0.00009	-0.00004	0.04951	0.00098	-0.00003	-0.12756
11x	-0.00025	0.00032	0.13000	0.00034	-0.00005	-0.00197	0.00063	-0.00004	-0.09901
12x	-0.00025	0.00040	0.14283	0.00059	-0.00008	-0.05776	-0.00001	-0.00003	-0.03142
13x	-0.00025	0.00050	0.15474	0.00082	-0.00011	-0.11366	-0.00081	0.00000	0.05849
14x	-0.00023	0.00059	0.16585	0.00098	-0.00016	-0.16657	-0.00153	0.00007	0.15094
1y	0.00243	-0.00155	0.00001	0.00203	0.01432	0.00000	0.00124	0.03789	-0.00001
2y	0.00758	-0.00480	0.00003	0.00560	0.03908	-0.00001	0.00295	0.08759	-0.00003
3y	0.01649	-0.01036	0.00006	0.01058	0.07291	-0.00002	0.00456	0.12901	-0.00004
4y	0.02602	-0.01623	0.00010	0.01473	0.09973	-0.00001	0.00523	0.13493	-0.00003
5y	0.03691	-0.02288	0.00014	0.01798	0.11976	0.00000	0.00471	0.10796	0.00000
6y	0.04870	-0.03002	0.00019	0.01972	0.12917	0.00002	0.00304	0.05371	0.00004
7y	0.06102	-0.03742	0.00023	0.01959	0.12594	0.00003	0.00061	-0.01333	0.00007
8y	0.07354	-0.04490	0.00027	0.01741	0.10938	0.00004	-0.00192	-0.07510	0.00008
9y	0.08600	-0.05229	0.00031	0.01322	0.08029	0.00005	-0.00382	-0.11393	0.00005
10y	0.09819	-0.05947	0.00035	0.00732	0.04071	0.00003	-0.00450	-0.11815	0.00000
11y	0.10997	-0.06637	0.00037	0.00010	-0.00641	0.00001	-0.00368	-0.08516	-0.00005
12y	0.12126	-0.07295	0.00040	-0.00792	-0.05771	-0.00003	-0.00150	-0.02137	-0.00007
13y	0.13209	-0.07922	0.00042	-0.01627	-0.11019	-0.00009	0.00163	0.06049	-0.00005
14y	0.14248	-0.08521	0.00043	-0.02455	-0.16132	-0.00015	0.00513	0.14563	0.00002
1b	0.00001	0.00002	0.00000	0.00014	-0.00002	0.00000	0.00044	-0.00002	-0.00001
2b	0.00004	0.00008	0.00000	0.00041	-0.00007	-0.00001	0.00112	-0.00005	-0.00004
3b	0.00048	0.00083	-0.00001	0.00349	-0.00057	-0.00001	0.00719	-0.00029	-0.00004
4b	0.00105	0.00180	-0.00002	0.00681	-0.00109	-0.00001	0.01178	-0.00043	-0.00001
5b	0.00173	0.00296	-0.00002	0.00984	-0.00154	0.00001	0.01308	-0.00045	0.00005
6b	0.00249	0.00423	-0.00003	0.01189	-0.00184	0.00003	0.01018	-0.00031	0.00011
7b	0.00328	0.00554	-0.00003	0.01250	-0.00190	0.00005	0.00392	-0.00006	0.00011
8b	0.00406	0.00683	-0.00003	0.01145	-0.00170	0.00007	-0.00362	0.00022	0.00006
9b	0.00483	0.00808	-0.00003	0.00880	-0.00126	0.00008	-0.00969	0.00042	-0.00004
10b	0.00555	0.00924	-0.00003	0.00482	-0.00063	0.00007	-0.01207	0.00046	-0.00012
11b	0.00621	0.01030	-0.00002	-0.00008	0.00012	0.00004	-0.00981	0.00033	-0.00014
12b	0.00682	0.01126	-0.00001	-0.00538	0.00091	0.00000	-0.00341	0.00006	-0.00008
13b	0.00737	0.01211	0.00001	-0.01065	0.00167	-0.00005	0.00541	-0.00026	0.00003
14b	0.00788	0.01288	0.00002	-0.01554	0.00234	-0.00011	0.01448	-0.00055	0.00017
Mxr%	0.000	0.000	62.858	0.000	0.000	13.655	0.000	0.000	6.603
Myr%	48.042	17.679	0.001	0.407	16.049	0.000	0.012	7.573	0.000
Mbr%	14.823	41.074	0.000	10.459	0.224	0.000	4.989	0.005	0.000

Mod w T yon	10.mod 79.38 0.0792 b	11.mod 93.33 0.0673 y	12.mod 117.09 0.0537 b	13.mod 118.21 0.0532 x	14.mod 138.63 0.0453 y	15.mod 154.43 0.0407 b	16.mod 169.08 0.0372 x	17.mod 182.38 0.0345 b	18.mod 188.29 0.0334 y	
1x	0.00000	-0.00001	-0.00522	0.04126	-0.00004	-0.00120	0.08045	0.00046	-0.00007	
2x	-0.00016	-0.00002	-0.01064	0.08155	-0.00007	-0.00260	0.13298	0.00020	-0.00010	
3x	-0.00006	-0.00002	-0.01773	0.13897	-0.00008	-0.00161	0.11182	0.00186	-0.00003	
4x	0.00031	0.00000	-0.01440	0.11731	-0.00003	0.00100	0.00334	0.00152	0.00005	
5x	0.00074	0.00003	-0.00330	0.03228	0.00002	0.00256	-0.10194	-0.00067	0.00005	
6x	0.00111	0.00004	0.00929	-0.06849	0.00003	0.00148	-0.11010	-0.00228	-0.00001	
7x	0.00089	0.00003	0.01587	-0.12663	0.00001	-0.00077	-0.01610	-0.00115	-0.00004	
8x	0.00021	0.00000	0.01280	-0.10810	-0.00002	-0.00224	0.09472	0.00131	-0.00001	
9x	-0.00061	-0.00004	0.00236	-0.02445	-0.00001	-0.00183	0.11937	0.00217	0.00003	
10x	-0.00125	-0.00005	-0.00938	0.07283	0.00002	0.00021	0.03486	0.00074	0.00001	
11x	-0.00134	-0.00004	-0.01500	0.12353	0.00004	0.00174	-0.07987	-0.00120	-0.00003	
12x	-0.00071	0.00000	-0.01097	0.09325	0.00002	0.00166	-0.11541	-0.00162	-0.00004	
13x	0.00050	0.00004	0.00097	-0.00653	-0.00003	0.00028	-0.03214	-0.00049	0.00001	
14x	0.00172	0.00003	0.01573	-0.13044	-0.00003	-0.00176	0.11123	0.00145	0.00003	
1y	0.00106	0.06871	0.00090	0.00016	0.09495	0.00054	0.00008	0.00020	0.10629	
2y	0.00202	0.12725	0.00124	0.00022	0.12962	0.00031	0.00008	-0.00017	0.08978	
3y	0.00219	0.12115	0.00063	0.00012	0.03536	-0.00010	0.00000	0.00012	-0.06895	
4y	0.00159	0.05525	-0.00022	-0.00002	-0.07618	-0.00044	-0.00006	-0.00002	-0.12666	
5y	0.00014	-0.03703	-0.00111	-0.00016	-0.12564	-0.00033	-0.00006	0.00023	-0.03710	
6y	-0.00146	-0.10867	-0.00115	-0.00017	-0.07184	0.00042	-0.00001	0.00024	0.09607	
7y	-0.00237	-0.12397	-0.00012	-0.00004	0.04036	0.00093	0.00004	-0.00038	0.11868	
8y	-0.00203	-0.07511	0.00123	0.00013	0.12108	0.00030	0.00004	-0.00072	0.00242	
9y	-0.00057	0.01180	0.00165	0.00019	0.10438	-0.00095	0.00002	0.00014	-0.11735	
10y	0.00118	0.09088	0.00066	0.00007	0.00413	-0.00122	-0.00001	0.00107	-0.10164	
11y	0.00222	0.11969	-0.00088	-0.00010	-0.09690	-0.00002	0.00000	0.00049	0.02985	
12y	0.00189	0.07976	-0.00157	-0.00017	-0.11290	0.00120	0.00001	-0.00084	0.12105	
13y	0.00023	-0.01498	-0.00069	-0.00006	-0.02368	0.00084	-0.00002	-0.00086	0.05882	
14y	-0.00214	-0.12868	0.00127	0.00014	0.11565	-0.00096	-0.00001	0.00076	-0.10519	
1b	0.00107	-0.00002	0.00236	0.00029	-0.00002	0.00572	0.00004	0.00836	-0.00002	
2b	0.00235	-0.00005	0.00459	0.00051	-0.00005	0.00961	0.00002	0.01243	-0.00004	
3b	0.01071	-0.00018	0.01268	0.00160	-0.00007	0.01078	0.00026	-0.00157	0.00002	
4b	0.01308	-0.00019	0.00880	0.00119	-0.00005	-0.00139	0.00014	-0.00966	-0.00001	
5b	0.00759	-0.00008	-0.00359	-0.00037	0.00004	-0.01100	-0.00020	-0.00040	0.00002	
6b	-0.00261	0.00010	-0.01197	-0.00149	0.00012	-0.00450	-0.00026	0.00983	0.00003	
7b	-0.01092	0.00022	-0.00768	-0.00104	0.00006	0.00862	0.00008	0.00291	-0.00005	
8b	-0.01192	0.00019	0.00487	0.00051	-0.00009	0.00940	0.00029	-0.00928	-0.00009	
9b	-0.00491	0.00003	0.01235	0.00153	-0.00016	-0.00358	0.00006	-0.00500	0.00003	
10b	0.00523	-0.00016	0.00699	0.00092	-0.00006	-0.01139	-0.00027	0.00807	0.00014	
11b	0.01169	-0.00024	-0.00563	-0.00064	0.00012	-0.00277	-0.00015	0.00706	0.00003	
12b	0.00971	-0.00016	-0.01181	-0.00144	0.00017	0.00953	0.00019	-0.00618	-0.00014	
13b	-0.00015	0.00005	-0.00423	-0.00053	0.00003	0.00684	0.00017	-0.00758	-0.00008	
14b	-0.01284	0.00026	0.01109	0.00132	-0.00018	-0.00889	-0.00017	0.00714	0.00014	
Mxr%	0.000	0.000	0.083	5.241	0.000	0.001	5.384	0.000	0.000	∑= 93.8
Myr%	0.002	4.533	0.000	0.000	2.623	0.000	0.000	0.000	1.329	∑= 98.3
Mbr%	3.620	0.001	3.966	0.060	0.000	7.996	0.001	9.039	0.000	

Mxr=∑[(∑m.Φ)²/Mr]= %93.83 > %90.00 **Dinamik kütle oranı yeterli.** ✓

Myr=∑[(∑m.Φ)²/Mr]= %98.25 > %90.00 **Dinamik kütle oranı yeterli.** ✓

EŞDEĞER DEPREM HESABI 1. DOĞAL TİTREŞİM PERYODUNUN KONTROLU

Hn= m ∑Atx= >> Ctx= ∑Aty= >> Cty=

$T1x=Ctx \cdot Hn^{3/4}$ = s. < 1.0 Tx= s. ✓

$T1y=Cty \cdot Hn^{3/4}$ = s. < 1.0 Ty= s. ✓

KAT KÜTLESİ ve RİJİTLİK MERKEZİ (t)

Kat no	H (m)	Wg	Wq	Xg (m)	Xr (m)	Yg (m)	Yr (m)	∑Wk
1	3.50	1085.99	206.61	18.29	19.02	14.73	14.69	1147.975
2	6.71	1051.73	206.61	18.28	19.02	14.73	14.69	1113.716
3	10.21	788.96	195.59	18.90	19.04	14.68	14.73	847.640
4	13.15	740.03	186.45	18.90	19.04	14.73	14.73	795.967
5	16.09	744.07	189.95	18.87	19.03	14.74	14.75	801.058
6	19.03	735.25	185.08	18.87	19.03	14.71	14.75	790.771
7	21.97	744.07	189.95	18.87	19.03	14.74	14.75	801.058
8	24.91	729.81	185.08	18.87	19.03	14.71	14.75	785.332
9	27.85	738.63	189.95	18.86	19.03	14.74	14.75	795.619
10	30.79	729.81	185.08	18.87	19.03	14.71	14.75	785.332
11	33.73	733.19	189.95	18.86	19.03	14.74	14.75	790.180
12	36.67	724.37	185.08	18.87	19.03	14.71	14.75	779.893
13	39.61	733.19	189.95	18.86	19.03	14.74	14.75	790.180
14	42.55	647.89	136.83	18.94	19.03	14.69	14.75	688.941

∑Wt = 11713.659

DEPREM KUVVETİ (t)
Deprem tepe yükü Ftx= 92.53 Fty= 100.24 (t)

Kat no	X YÖNÜ Modal Analiz	X YÖNÜ Eşdeğer dep.yön.	X YÖNÜ Deprem yükü	Y YÖNÜ Modal Analiz	Y YÖNÜ Eşdeğer dep.yön.	Y YÖNÜ Deprem yükü	Kat tipi
1	24.485	26.694	35.215	29.079	18.863	37.694	NORMAL
2	26.745	49.650	38.465	47.004	35.085	60.930	NORMAL
3	36.070	57.498	51.876	48.419	40.631	62.764	NORMAL
4	45.881	69.541	65.988	51.190	49.141	66.356	NORMAL
5	57.200	85.632	82.266	54.021	60.512	70.025	NORMAL
6	65.514	99.979	94.223	52.940	70.650	68.625	NORMAL
7	74.154	116.926	106.649	51.872	82.626	67.240	NORMAL
8	80.745	129.971	116.129	49.989	91.843	64.799	NORMAL
9	90.857	147.214	130.672	53.116	104.028	68.852	NORMAL
10	101.598	160.650	146.121	60.315	113.523	78.185	NORMAL
11	120.658	177.076	173.533	75.863	125.131	98.339	NORMAL
12	139.037	190.005	199.967	100.005	134.266	129.633	NORMAL
13	174.931	207.945	251.591	146.304	146.944	189.650	NORMAL
14	217.888	287.286	313.372	191.333	237.866	248.019	UST KAT
Σ	1255.762	1806.068	1806.068	1011.450	1311.110	1311.110	GENEL

Vt=W.A(t) / Ra(t)> 0,10. Ao.I.W 1806.07 , 1311.11 > 468.55
X Deprem kontrol: 1.00 x 1806.068 = 1806.068 > 1255.762 >>> 1806.068 Y Deprem kontrol: 1.00 x 1311.110 = 1311.110 > 1011.450 >>> 1311.110
Rüzgar kuvvetleri (t)

Kat no	X-yönü F	X-yönü ey m	Y-yönü F	Y-yönü ex m
1	6.174	17.975	7.550	14.700
2	5.662	17.975	6.924	14.700
3	8.870	18.950	8.938	14.700
4	7.451	18.950	7.508	14.700
5	7.451	18.950	7.508	14.700
6	7.451	18.950	7.508	14.700
7	10.245	18.950	10.323	14.700
8	10.245	18.950	10.323	14.700
9	10.245	18.950	10.323	14.700
10	10.245	18.950	10.323	14.700
11	10.245	18.950	10.323	14.700
12	10.245	18.950	10.323	14.700
13	10.245	18.950	10.323	14.700
14	10.245	18.950	10.323	14.700

Kat Deprem deplasmanları

Kat	9. yükleme		10. yükleme		11. yükleme		12. yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δy (m)	θz (rad)	δy (m)	θz (rad)
1	0.0002951	0.0000018	0.0002957	-0.000002	-0.001184	-0.000001	-0.001179	0.0000016
2	0.0009009	0.0000053	0.0009038	-0.000007	-0.003651	-0.000004	-0.003634	0.0000048
3	0.0036312	0.0000614	0.0036385	-0.000068	-0.007854	-0.000046	-0.007811	0.0000428
4	0.0067948	0.0001343	0.0068055	-0.000145	-0.012300	-0.000104	-0.012223	0.0000880
5	0.0104833	0.0002215	0.0104944	-0.000237	-0.017345	-0.000175	-0.017226	0.0001391
6	0.0144778	0.0003168	0.0144894	-0.000337	-0.022795	-0.000255	-0.022625	0.0001924
7	0.0186226	0.0004160	0.0186327	-0.000440	-0.028490	-0.000339	-0.028263	0.0002454
8	0.0227988	0.0005154	0.0228068	-0.000543	-0.034312	-0.000426	-0.034023	0.0002965
9	0.0269078	0.0006127	0.0269114	-0.000642	-0.040158	-0.000513	-0.039802	0.0003443
10	0.0308746	0.0007055	0.0308728	-0.000735	-0.045945	-0.000598	-0.045522	0.0003882
11	0.0346502	0.0007928	0.0346414	-0.000822	-0.051616	-0.000681	-0.051123	0.0004276
12	0.0382025	0.0008738	0.0381852	-0.000901	-0.057125	-0.000761	-0.056562	0.0004618
13	0.0415332	0.0009485	0.0415064	-0.000972	-0.062458	-0.000836	-0.061824	0.0004910
14	0.0446599	0.0010173	0.0446225	-0.001036	-0.067593	-0.000908	-0.066889	0.0005149

Deprem yapı salınımı: x= 0.00105 y= 0.00159
DEPREM PERDELERİ TABAN MOMENT KONTROLU
Kat deprem momenti (tm)

Kat	H (m)	Fx	Fx . H	Fy	Fy . H
1	3.50	35.21	123.25	37.69	131.93
2	6.71	38.46	258.10	60.93	408.84
3	10.21	51.88	529.66	62.76	640.82
4	13.15	65.99	867.74	66.36	872.59
5	16.09	82.27	1323.67	70.03	1126.70
6	19.03	94.22	1793.07	68.62	1305.93
7	21.97	106.65	2343.09	67.24	1477.26
8	24.91	116.13	2892.78	64.80	1614.14
9	27.85	130.67	3639.22	68.85	1917.54
10	30.79	146.12	4499.08	78.18	2407.30
11	33.73	173.53	5853.28	98.34	3316.96
12	36.67	199.97	7332.78	129.63	4753.64
13	39.61	251.59	9965.51	189.65	7512.02
14	42.55	313.37	13333.97	248.02	10553.19
		Mdx=	54755.18	Mdy=	38038.87

Perde taban momenti (tm)
M : Perde ve Panel deprem momenti
∑Mk : Perdelerde; bağlı olduğu kirişlerin deprem momentlerinin toplamı
Panellerde ise; başlık kolonlarından oluşan deprem momentlerinin toplamıdır.

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1001	8429.96	0.00	8429.96	44.28	238.02	282.30
S1026	1872.32	4651.26	6523.58	4863.26	269.81	5133.07
S1051	10335.42	0.00	10335.42	43.54	231.92	275.45
S1053	14.32	816.57	830.89	1920.47	311.57	2232.04
S1054	14.78	803.94	818.72	1968.11	318.99	2287.10
S1055	571.29	2076.36	2647.65	45.37	1014.13	1059.50
S1056	570.04	2904.17	3474.21	48.72	1321.40	1370.12
S1057	542.34	2749.92	3292.26	44.92	1287.14	1332.06
S1058	541.57	2136.25	2677.82	48.92	1423.28	1472.20
S1059	12.24	512.01	524.25	1913.48	1733.58	3647.06
S1060	12.32	531.52	543.84	1963.96	1095.70	3059.66
S1063	7.71	1810.74	1818.46	128.75	1224.00	1352.75
S1064	8.31	1085.23	1093.54	128.34	1109.80	1238.14
S1065	7.20	1280.63	1287.83	130.68	1173.99	1304.67
S1066	7.74	1584.75	1592.50	130.69	1184.54	1315.23
TOPLAM	22947.55		45890.90	13423.48		27361.34

X yönü αm =45890.9 / 54755.18 = 0.84
Y yönü αm =27361.34 / 38038.87 = 0.72

Perde taban kesme kuvveti oranı :
X yönü Vm =1734.9 / 1806.07 = 0.96
Y yönü Vm =1093.99 / 1311.11 = 0.83

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU
A1,B2 düzensizliklerinin kontrolu
max(di/hi)=0.0035, 0.02/R =.005
1. kat X dust = -.0002951 + -.0000018 x (.12 - 14.69=-.0003217 (S1001)
1. kat X dalt = -.0002951 + -.0000018 x (29.28 - 14.69)=-.0002685 (S1051)
2. kat X dust = -.0009009 + -.0000053 x (.12 - 14.69) - -.0003217 = -.0006566 (S2002)
2. kat X dalt = -.0009009 + -.0000053 x (29.28 - 14.69) - -.0002685 = -.0005549 (S2009)

X YÖNÜ (+%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0003217	0.0002685	0.0002951	1.09	0.49	0.00009	0.00055	Normal kat
2	0.0006566	0.0005549	0.0006058	1.08	0.22	0.00020	0.00113	Normal kat
3	0.0033797	0.0020849	0.0027323	1.24	0.86	0.00097	0.00426	Normal kat
4	0.0040060	0.0023256	0.0031658	1.27	0.86	0.00136	0.00551	Normal kat
5	0.0047012	0.0026879	0.0036946	1.27	0.92	0.00160	0.00608	Normal kat
6	0.0050971	0.0029006	0.0039988	1.27	0.96	0.00173	0.00622	Normal kat
7	0.0052936	0.0030050	0.0041493	1.28	0.99	0.00180	0.00610	Normal kat
8	0.0053277	0.0030342	0.0041810	1.27	1.02	0.00181	0.00578	Normal kat
9	0.0052362	0.0029907	0.0041135	1.27	1.04	0.00178	0.00533	Normal kat
10	0.0050416	0.0029005	0.0039710	1.27	1.05	0.00171	0.00478	Normal kat
11	0.0047872	0.0027724	0.0037798	1.27	1.06	0.00163	0.00418	Normal kat
12	0.0044899	0.0026223	0.0035561	1.26	1.07	0.00153	0.00357	Normal kat
13	0.0041959	0.0024725	0.0033342	1.26	1.07	0.00143	0.00297	Normal kat
14	0.0039240	0.0023358	0.0031299	1.25	0.00	0.00133	0.00234	Normal kat

X YÖNÜ (-%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0002660	0.0003253	0.0002957	1.10	0.49	0.00009	0.00055	Normal kat
2	0.0005321	0.0006843	0.0006082	1.13	0.22	0.00021	0.00113	Normal kat
3	0.0020321	0.0034330	0.0027325	1.26	0.86	0.00098	0.00426	Normal kat
4	0.0022730	0.0040562	0.0031646	1.28	0.86	0.00138	0.00551	Normal kat
5	0.0026218	0.0047432	0.0036825	1.29	0.92	0.00161	0.00606	Normal kat
6	0.0028320	0.0051489	0.0039904	1.29	0.96	0.00175	0.00621	Normal kat
7	0.0029494	0.0053276	0.0041385	1.29	0.99	0.00181	0.00609	Normal kat
8	0.0029840	0.0053545	0.0041693	1.28	1.02	0.00182	0.00577	Normal kat
9	0.0029597	0.0052403	0.0041000	1.28	1.04	0.00178	0.00531	Normal kat
10	0.0028791	0.0050351	0.0039571	1.27	1.05	0.00171	0.00476	Normal kat
11	0.0027661	0.0047626	0.0037644	1.27	1.06	0.00162	0.00416	Normal kat
12	0.0026308	0.0044496	0.0035402	1.26	1.07	0.00151	0.00356	Normal kat
13	0.0024940	0.0041417	0.0033178	1.25	1.07	0.00141	0.00295	Normal kat
14	0.0023724	0.0038538	0.0031131	1.24	0.00	0.00131	0.00233	Normal kat

Y YÖNÜ (+%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0011608	0.0012060	0.0011834	1.02	0.48	0.00034	0.00302	Normal kat
2	0.0024112	0.0025162	0.0024637	1.02	0.59	0.00078	0.00637	Normal kat
3	0.0037001	0.0046989	0.0041995	1.12	0.95	0.00134	0.00935	Normal kat
4	0.0037650	0.0051157	0.0044404	1.15	0.98	0.00174	0.01130	Normal kat
5	0.0042093	0.0058709	0.0050401	1.16	0.93	0.00200	0.01236	Normal kat
6	0.0045124	0.0063741	0.0054432	1.17	0.96	0.00217	0.01290	Normal kat

7	0.0047002	0.0066769	0.0056886	1.17	0.98	0.00227	0.01273	Normal kat
8	0.0048000	0.0068307	0.0058154	1.17	1.00	0.00232	0.01221	Normal kat
9	0.0048212	0.0068554	0.0058383	1.17	1.01	0.00233	0.01131	Normal kat
10	0.0047809	0.0067802	0.0057805	1.17	1.02	0.00231	0.01014	Normal kat
11	0.0046945	0.0066338	0.0056641	1.17	1.03	0.00226	0.00883	Normal kat
12	0.0045728	0.0064321	0.0055025	1.17	1.03	0.00219	0.00745	Normal kat
13	0.0044394	0.0062136	0.0053265	1.17	1.04	0.00211	0.00612	Normal kat
14	0.0042869	0.0059716	0.0051292	1.16	0.00	0.00203	0.00485	Normal kat

Y YÖNÜ (-%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0012098	0.0011533	0.0011815	1.02	0.48	0.00035	0.00302	Normal kat
2	0.0025149	0.0024001	0.0024575	1.02	0.59	0.00078	0.00635	Normal kat
3	0.0046261	0.0037360	0.0041810	1.11	0.95	0.00132	0.00931	Normal kat
4	0.0049444	0.0038875	0.0044160	1.12	0.88	0.00168	0.01124	Normal kat
5	0.0056040	0.0044080	0.0050060	1.12	0.93	0.00191	0.01227	Normal kat
6	0.0060272	0.0047792	0.0054032	1.12	0.96	0.00205	0.01271	Normal kat
7	0.0062619	0.0050228	0.0056423	1.11	0.98	0.00213	0.01263	Normal kat
8	0.0063621	0.0051667	0.0057644	1.10	1.00	0.00216	0.01210	Normal kat
9	0.0063434	0.0052233	0.0057833	1.10	1.01	0.00216	0.01121	Normal kat
10	0.0062365	0.0052092	0.0057228	1.09	1.02	0.00212	0.01003	Normal kat
11	0.0060653	0.0051444	0.0056048	1.08	1.03	0.00206	0.00873	Normal kat
12	0.0058425	0.0050405	0.0054415	1.07	1.03	0.00199	0.00737	Normal kat
13	0.0056057	0.0049236	0.0052646	1.06	1.04	0.00191	0.00605	Normal kat
14	0.0053464	0.0047873	0.0050668	1.06	0.00	0.00182	0.00479	Normal kat

TDY 6.3.2.1 A1 burulma düzensizliği:
1.2< nbi=1.29 <2 , dinamik analizle çözülmüştür ✓
TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓
TDY 6.20 kosulu sağlanmaktadır. .0023 < .0035 ✓
TDY 6.21 koşulu sağlanmaktadır. max θi=.013 < 0.12 ✓

B1-Düşey doğrultudaki düzensizliklerinin kontrolu

Kat	Aw	Agx	Agy	ΣAex	ΣAey	ncix	nciy	AÇIKLAMA
1	9.29	28.80	12.82	38.10	22.11	1.00	1.00	Düzenli ✓
2	9.29	28.80	12.82	38.10	22.11	2.67	1.26	Düzenli ✓
3	2.49	11.80	15.02	14.29	17.51	1.00	1.00	Düzenli ✓
4	2.49	11.80	15.02	14.29	17.51	0.90	0.99	Düzenli ✓
5	5.45	10.47	12.26	15.92	17.71	1.00	1.00	Düzenli ✓
6	5.45	10.47	12.26	15.92	17.71	1.00	1.00	Düzenli ✓
7	5.45	10.47	12.26	15.92	17.71	1.03	1.02	Düzenli ✓
8	5.45	10.08	11.91	15.53	17.36	1.00	1.00	Düzenli ✓
9	5.45	10.08	11.91	15.53	17.36	1.00	1.00	Düzenli ✓
10	5.45	10.08	11.91	15.53	17.36	1.03	1.02	Düzenli ✓
11	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
12	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
13	5.45	9.69	11.56	15.14	17.01	1.00	1.00	Düzenli ✓
14	5.45	9.69	11.56	15.14	17.01	1.00	1.00	üst kat ✓

A4 düzensizliği bulunmamıştır. ✓

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU
No = 0,85 . fcd . b . d +fyd . As
Nmax = 0,5 . fck . Ac
Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü
Md,x/y = x/y yönünde en büyük kombinasyonun momenti
Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti
Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti
Vr,max = 2 . fck½ . Ac
Ac = Kolon kesit alanı
As,g = Gerekli donatı alanı
As,m = Mevcut donatı alanı
rm = Mevcut donatı oranı
Mevcut kolon min. boyuna donatı oranı : 0.01
Mevcut kolon donatı korozyon oranı % : 0

1. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S1002	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	40.6	4.7
S1003	25x140	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	363.6	11.7
S1008	25x140	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	355.4	13.2
S1009	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	35.3	5.8
S1010	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	41.6	4.7
S1011	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	287.8	8.3
S1013	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	425.0	15.8
S1014	25x160	4000	2x5ø16 +	2x9ø12	40.44	58.66	0.010	808.3	500.0	292.6	16.4
S1016	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	290.5	6.8
S1017	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	36.6	5.5
S1018	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	50.0	4.2
S1025	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	43.4	5.0

S1027	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	53.4	4.5
S1034	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	44.8	5.1
S1035	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	41.5	4.7
S1036	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	297.8	8.6
S1038	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	362.9	15.9
S1039	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	349.3	16.7
S1041	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	285.0	6.9
S1042	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.8	5.5
S1043	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	40.6	4.7
S1044	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	373.4	11.7
S1049	25x140	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	356.2	13.1
S1050	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.8	5.8

1. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S1002	40.6	2.5	9.7	18.5	16.7	53.1	0.162	0.258	0.314	✓
S1003	363.6	8.2	25.0	78.2	47.4	129.0	0.831	0.328	0.368	✓
S1008	355.4	8.0	25.3	90.0	47.9	133.4	0.812	0.317	0.359	✓
S1009	35.3	1.4	9.5	16.4	17.7	52.5	0.141	0.149	0.337	✓
S1010	41.6	2.2	9.7	18.1	16.7	53.0	0.166	0.224	0.315	✓
S1011	73.5	61.2	127.3	287.8	6.5	27.0	0.658	0.481	0.240	✓
S1013	425.0	9.6	27.7	188.5	70.6	195.1	0.850	0.347	0.362	✓
S1014	248.8	5.6	29.6	-1.5	70.9	112.0	0.585	0.189	0.634	✓
S1016	81.0	58.3	130.1	290.5	6.5	27.0	0.664	0.448	0.243	✓
S1017	28.5	1.4	9.1	15.4	17.5	52.1	0.147	0.157	0.337	✓
S1018	38.8	1.9	9.6	21.3	16.1	54.0	0.200	0.200	0.299	✓
S1025	34.8	1.4	9.4	17.5	16.9	52.8	0.174	0.149	0.321	✓
S1027	40.9	1.8	9.7	23.2	16.3	54.6	0.214	0.184	0.297	✓
S1034	35.6	1.4	9.5	18.4	16.9	53.1	0.179	0.146	0.319	✓
S1035	41.5	2.2	9.7	18.0	16.6	53.0	0.166	0.225	0.313	✓
S1036	89.9	61.0	133.3	297.8	6.7	26.8	0.681	0.458	0.250	✓
S1038	362.9	8.2	29.6	76.0	70.4	154.2	0.726	0.276	0.456	✓
S1039	349.3	7.9	30.0	63.8	71.4	148.6	0.699	0.263	0.480	✓
S1041	77.1	57.7	128.7	285.0	6.4	27.1	0.652	0.449	0.238	✓
S1042	28.5	1.4	9.1	15.5	17.4	52.1	0.147	0.155	0.334	✓
S1043	40.6	2.5	9.7	18.9	16.8	53.3	0.162	0.259	0.315	✓
S1044	373.4	8.4	24.7	94.6	47.6	135.1	0.853	0.342	0.353	✓
S1049	356.2	8.0	25.2	90.5	48.2	133.5	0.814	0.318	0.361	✓
S1050	27.7	1.3	9.1	17.4	17.8	52.8	0.147	0.148	0.337	✓

Kat Kapasite Kontrolu:
Nmax= 8500.0> Nd,max= 4540.9
Mr,x= 850.2> Md,x= 323.7
Mr,y= 1885.2> Md,y= 704.2

2. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asq cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S2002	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	20.3	17.2
S2003	25x140	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	333.9	18.6
S2008	25x140	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	334.0	23.4
S2009	20x100	2000	2x4ø16 + 2x5ø12		27.38	36.17	0.014	431.5	250.0	18.0	20.5
S2010	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	20.6	18.9
S2011	140x25	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	306.7	21.1
S2013	25x160	4000	2x5ø16 + 2x9ø12		40.44	48.23	0.010	808.3	500.0	390.8	20.4
S2014	25x160	4000	2x5ø16 + 2x9ø12		40.44	63.74	0.010	808.3	500.0	205.9	27.7
S2016	140x25	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	306.3	16.5
S2017	20x100	2000	2x4ø16 + 2x5ø12		27.38	36.17	0.014	431.5	250.0	18.1	21.8
S2018	20x100	2000	2x4ø16 + 2x5ø12		27.38	28.13	0.014	431.5	250.0	24.9	16.1
S2025	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	21.7	19.4
S2027	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	26.6	17.2
S2034	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	22.3	19.6
S2035	20x100	2000	2x4ø16 + 2x5ø12		27.38	32.15	0.014	431.5	250.0	20.5	18.8
S2036	140x25	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	303.6	20.8
S2038	25x160	4000	2x5ø16 + 2x9ø12		40.44	48.23	0.010	808.3	500.0	324.3	25.8
S2039	25x160	4000	2x5ø16 + 2x9ø12		40.44	48.23	0.010	808.3	500.0	327.5	29.8
S2041	140x25	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	302.5	16.7
S2042	20x100	2000	2x4ø16 + 2x5ø12		27.38	36.17	0.014	431.5	250.0	18.2	21.6
S2043	20x100	2000	2x4ø16 + 2x4ø16		32.15	32.15	0.016	449.7	250.0	20.3	17.4
S2044	25x140	3500	2x5ø16 + 2x8ø12		38.18	44.21	0.011	717.9	437.5	343.8	18.1
S2049	25x140	3500	2x5ø16 + 2x8ø12		38.19	44.21	0.011	717.9	437.5	334.9	23.5
S2050	20x100	2000	2x4ø16 + 2x5ø12		27.38	36.17	0.014	431.5	250.0	18.8	20.7

2. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S2002	20.3	5.5	8.7	8.3	28.1	49.7	0.081	0.628	0.565	✓
S2003	333.9	7.5	26.0	60.8	42.1	122.0	0.763	0.290	0.345	✓
S2008	334.0	7.5	26.0	75.4	46.0	128.0	0.763	0.290	0.359	✓
S2009	13.2	3.8	8.3	7.2	33.1	49.3	0.072	0.451	0.671	✓
S2010	16.0	5.7	8.5	12.6	31.0	51.2	0.082	0.670	0.606	✓
S2011	306.7	55.1	166.0	78.0	7.7	20.0	0.701	0.332	0.384	✓
S2013	390.8	8.8	28.8	173.2	60.2	190.9	0.782	0.306	0.315	✓
S2014	205.9	4.6	28.2	-30.5	67.1	93.1	0.412	0.165	0.721	✓
S2016	4.8	34.0	95.5	99.8	8.9	21.4	0.700	0.356	0.414	✓
S2017	14.5	4.6	8.4	7.5	35.2	49.5	0.072	0.551	0.712	✓
S2018	20.0	5.9	8.7	10.6	26.0	50.5	0.100	0.680	0.515	✓
S2025	18.0	5.0	8.6	12.4	31.4	51.1	0.087	0.578	0.615	✓
S2027	21.0	5.6	8.8	16.3	28.0	52.4	0.106	0.635	0.535	✓
S2034	18.4	4.9	8.6	12.9	32.1	51.3	0.089	0.569	0.626	✓
S2035	15.9	5.6	8.5	12.6	30.8	51.2	0.082	0.663	0.602	✓
S2036	303.6	55.0	166.2	91.7	7.8	20.9	0.694	0.331	0.375	✓
S2038	324.3	7.3	30.3	45.8	64.3	139.2	0.649	0.241	0.462	✓
S2039	310.6	7.0	30.3	35.8	70.1	133.9	0.655	0.231	0.524	✓
S2041	1.7	33.3	93.8	93.6	9.0	21.0	0.691	0.354	0.427	✓
S2042	14.5	4.6	8.4	7.6	34.9	49.5	0.073	0.541	0.706	✓
S2043	20.3	5.5	9.7	8.7	28.4	55.5	0.081	0.567	0.512	✓
S2044	343.8	7.8	25.7	77.4	42.3	128.7	0.786	0.302	0.328	✓
S2049	334.9	7.5	25.9	75.5	46.7	128.1	0.765	0.291	0.364	✓
S2050	14.2	3.9	8.4	7.9	33.5	49.6	0.075	0.461	0.675	✓

Kat Kapasite Kontrolu:
Nmax= 8500.0> Nd,max= 4064.4
Mr,x= 846.5> Md,x= 296.0
Mr,y= 1758.1> Md,y= 844.7

3. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S3003	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	312.9	14.3
S3008	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	320.5	17.1
S3011	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	228.0	24.5
S3013	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	358.5	22.6
S3014	20x160	3200	2x4ø16 +	2x7ø12	31.90	57.09	0.010	644.9	400.0	158.9	18.8
S3016	140x20	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	242.1	22.0
S3036	140x20	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	239.7	24.9
S3038	20x160	3200	2x4ø16 +	2x7ø12	31.90	31.40	0.010	644.9	400.0	285.3	17.0
S3039	20x160	3200	2x4ø16 +	2x7ø12	31.90	35.42	0.010	644.9	400.0	270.9	18.0
S3041	140x20	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	237.0	21.8
S3044	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	320.9	15.8
S3049	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	321.7	17.6

3. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S3003	310.6	6.5	16.3	312.9	51.1	110.8	0.894	0.401	0.461	✓
S3008	320.5	6.8	16.0	303.7	58.1	112.7	0.916	0.423	0.515	✓
S3011	-14.8	67.5	64.5	134.8	6.4	16.3	0.651	1.047	0.393	Mr
S3013	358.5	7.6	17.6	242.3	66.3	154.5	0.896	0.429	0.429	✓
S3014	34.8	2.9	11.5	-65.7	69.3	42.5	0.397	0.256	1.631	Mr
S3016	-3.9	61.9	69.6	160.8	7.0	17.2	0.692	0.888	0.407	✓
S3036	0.7	67.9	71.7	150.7	6.8	16.9	0.685	0.947	0.402	✓
S3038	69.8	4.7	13.5	9.3	61.2	88.7	0.713	0.345	0.691	✓
S3039	224.7	6.5	19.7	3.1	66.1	85.4	0.677	0.330	0.774	✓
S3041	-7.1	61.3	68.2	153.9	7.3	17.0	0.677	0.898	0.427	✓
S3044	320.9	6.8	16.0	303.4	51.9	112.8	0.917	0.424	0.460	✓
S3049	321.7	6.8	15.9	305.2	58.2	112.4	0.919	0.426	0.517	✓

Kat Kapasite Kontrolu:
Nmax= 4400.0> Nd,max= 3296.6
Mr,x= 400.5> Md,x= 307.0
Mr,y= 887.2> Md,y= 509.6

4. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S4003	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	278.2	17.5
S4008	20x140	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	282.1	16.5
S4011	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	203.5	14.0
S4013	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	315.5	13.9
S4014	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	227.7	16.5

S4016	140x20	2800	2x4ø16 + 2x7ø12	31.90	25.12	0.011	579.5	350.0	213.8	15.0
S4036	140x20	2800	2x4ø16 + 2x7ø12	31.90	25.12	0.011	579.5	350.0	211.7	14.5
S4038	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	291.8	21.5
S4039	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	282.2	20.6
S4041	140x20	2800	2x4ø16 + 2x7ø12	31.90	25.12	0.011	579.5	350.0	208.6	15.1
S4044	20x140	2800	2x4ø16 + 2x7ø12	31.90	25.12	0.011	579.5	350.0	282.2	14.9
S4049	20x140	2800	2x4ø16 + 2x7ø12	31.90	25.12	0.011	579.5	350.0	282.8	15.3

4. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S4003	57.7	5.1	12.6	102.5	32.5	107.4	0.795	0.405	0.302	✓
S4008	58.3	5.2	12.6	120.0	32.8	111.4	0.806	0.411	0.294	✓
S4011	-10.1	30.1	66.8	116.7	9.8	15.5	0.581	0.451	0.629	✓
S4013	143.6	8.4	17.2	220.0	68.8	153.7	0.789	0.487	0.448	✓
S4014	227.7	5.4	19.8	-61.3	25.4	45.7	0.569	0.271	0.556	✓
S4016	-1.6	32.0	70.6	139.6	10.5	16.5	0.611	0.453	0.635	✓
S4036	2.9	30.5	72.6	129.8	10.6	16.1	0.605	0.419	0.656	✓
S4038	61.0	8.4	13.0	6.0	20.4	86.9	0.730	0.647	0.234	✓
S4039	81.2	8.6	14.2	-0.2	20.4	83.5	0.706	0.606	0.244	✓
S4041	-4.9	31.8	69.2	132.6	10.9	16.2	0.596	0.459	0.673	✓
S4044	59.6	5.0	12.7	120.4	30.2	111.4	0.806	0.392	0.271	✓
S4049	59.6	4.9	12.7	119.6	32.2	111.3	0.808	0.389	0.289	✓

Kat Kapasite Kontrolu:
Nmax= 4400.0> Nd,max= 3080.2
Mr,x= 394.0> Md,x= 175.3
Mr,y= 875.6> Md,y= 304.3

5. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S5003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	247.3	14.8
S5008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	245.0	15.2
S5011	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	215.9	14.8
S5013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	274.9	32.9
S5014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	204.9	14.5
S5016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	217.7	14.7
S5036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	211.5	15.4
S5038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	260.9	17.1
S5039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	252.3	16.5
S5041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	214.8	14.8
S5044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	245.0	13.9
S5049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	245.4	14.7

5. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S5003	50.6	5.3	11.1	91.1	30.9	91.8	0.824	0.480	0.337	✓
S5008	49.0	5.3	11.0	103.3	32.2	94.4	0.817	0.484	0.341	✓
S5011	-2.1	25.0	60.2	102.1	9.4	13.2	0.720	0.415	0.716	✓
S5013	126.2	8.1	14.3	198.8	59.4	117.1	0.846	0.563	0.507	✓
S5014	204.9	4.9	15.5	-55.2	19.4	35.5	0.630	0.318	0.546	✓
S5016	3.9	24.6	62.8	120.9	10.1	13.7	0.726	0.391	0.735	✓
S5036	8.3	25.5	64.7	112.0	10.0	13.5	0.705	0.394	0.743	✓
S5038	54.4	8.3	11.5	260.9	36.0	112.9	0.803	0.723	0.318	✓
S5039	73.1	8.5	12.4	252.3	35.6	114.3	0.776	0.690	0.312	✓
S5041	0.7	24.6	61.5	114.2	10.5	13.6	0.716	0.400	0.777	✓
S5044	50.0	5.3	11.1	103.6	30.1	94.5	0.817	0.476	0.318	✓
S5049	49.9	5.2	11.1	102.7	32.4	94.3	0.818	0.467	0.343	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 2835.4
Mr,x= 347.2> Md,x= 150.6
Mr,y= 808.9> Md,y= 316.1

6. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S6003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	218.7	10.7
S6008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	217.1	11.9
S6011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	160.7	17.4
S6013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	238.6	27.5
S6014	20x130	2600	2x4ø16 +	2x6ø12	29.64	40.19	0.011	538.2	325.0	182.6	11.8
S6016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	166.4	17.5
S6036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	165.7	18.0
S6038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	230.8	12.0
S6039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	223.1	11.0
S6041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	162.0	17.4
S6044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	217.0	10.8
S6049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	217.3	11.7

6. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S6003	45.2	5.9	10.9	80.3	19.6	89.2	0.729	0.541	0.220	✓
S6008	44.2	5.9	10.8	91.7	22.1	91.9	0.724	0.549	0.241	✓
S6011	2.6	25.7	62.3	87.5	10.3	12.7	0.536	0.412	0.813	✓
S6013	161.3	9.5	15.1	103.9	44.9	104.9	0.734	0.632	0.428	✓
S6014	182.6	5.2	15.4	-47.6	18.4	40.1	0.562	0.340	0.483	✓
S6016	7.8	25.7	64.5	104.9	11.0	13.3	0.555	0.399	0.824	✓
S6036	12.0	26.2	66.3	97.1	10.8	13.0	0.552	0.395	0.830	✓
S6038	49.3	9.2	11.3	5.0	17.4	69.2	0.710	0.820	0.252	✓
S6039	66.2	9.5	22.1	-1.0	15.0	66.3	0.687	0.792	0.272	✓
S6041	4.7	25.5	63.2	98.9	11.5	13.1	0.540	0.404	0.876	✓
S6044	44.8	5.9	10.8	92.0	20.2	92.0	0.723	0.541	0.219	✓
S6049	44.7	5.7	10.8	91.1	22.3	91.8	0.724	0.531	0.243	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 2399.9
Mr,x= 353.4> Md,x= 160.1
Mr,y= 697.5> Md,y= 227.5

7. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S7003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	191.2	11.7
S7008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	190.2	12.9
S7011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	140.5	17.0
S7013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	204.9	28.9
S7014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	160.1	12.1
S7016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	145.2	17.0
S7036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	145.3	17.8
S7038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	201.2	12.5
S7039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	194.5	11.5
S7041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	141.4	17.1
S7044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	190.1	11.6
S7049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	190.3	12.7

7. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S7003	40.6	6.0	10.6	70.5	20.1	86.6	0.637	0.566	0.232	✓
S7008	40.1	6.0	10.6	80.9	22.4	89.3	0.634	0.570	0.251	✓
S7011	7.6	23.3	64.4	74.5	10.6	12.1	0.467	0.361	0.877	✓
S7013	139.8	9.9	14.7	86.5	42.0	100.4	0.631	0.675	0.419	✓
S7014	160.1	5.2	15.1	-39.5	17.0	45.0	0.493	0.346	0.377	✓
S7016	11.9	23.2	66.2	90.3	11.5	12.8	0.484	0.351	0.897	✓
S7036	16.1	24.3	68.0	83.8	11.2	12.5	0.484	0.358	0.897	✓
S7038	44.7	9.8	11.0	5.9	14.7	69.6	0.619	0.885	0.211	✓
S7039	59.6	10.1	11.8	0.1	15.3	66.8	0.598	0.858	0.229	✓
S7041	9.1	23.5	65.0	84.9	12.0	12.6	0.471	0.361	0.957	✓
S7044	40.3	6.0	10.6	81.2	20.3	89.4	0.634	0.567	0.228	✓
S7049	40.1	5.9	10.6	80.2	22.5	89.2	0.634	0.557	0.253	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 2094.3
Mr,x= 358.7> Md,x= 153.3
Mr,y= 686.4> Md,y= 219.7

8. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S8003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	164.8	11.6
S8008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	164.2	12.9
S8011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	120.4	16.7
S8013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	173.6	28.5
S8014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	137.8	11.7
S8016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	125.0	16.7
S8036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	125.9	17.6
S8038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	172.2	12.1
S8039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	166.6	11.0
S8041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	121.8	16.8
S8044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	164.1	11.6
S8049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	164.2	12.7

8. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S8003	36.4	6.0	10.4	61.3	18.6	84.0	0.549	0.575	0.221	✓
S8008	36.1	6.0	10.4	70.6	20.9	86.6	0.547	0.576	0.241	✓
S8011	12.0	21.7	66.3	62.7	10.8	11.6	0.401	0.328	0.929	✓
S8013	119.7	10.0	14.2	70.6	41.3	95.6	0.534	0.709	0.432	✓
S8014	137.8	5.1	14.6	-31.5	15.4	49.8	0.424	0.352	0.309	✓
S8016	15.4	21.8	67.8	76.6	11.7	12.2	0.417	0.322	0.958	✓
S8036	46.2	26.0	79.1	71.6	11.4	12.0	0.420	0.328	0.951	✓
S8038	40.2	10.0	10.8	6.8	13.6	70.1	0.530	0.920	0.194	✓
S8039	53.0	10.3	11.4	1.2	14.1	67.4	0.513	0.901	0.210	✓
S8041	12.9	21.8	66.7	72.0	12.3	12.0	0.406	0.327	1.023	Mr
S8044	36.1	6.0	10.4	71.0	18.9	86.7	0.547	0.575	0.217	✓
S8049	35.9	5.9	10.4	69.9	21.0	86.4	0.547	0.565	0.244	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 1800.6
Mr,x= 372.5> Md,x= 150.6
Mr,y= 674.4> Md,y= 210.0

9. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S9003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	139.3	11.5
S9008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.9	12.8
S9011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	101.5	15.8
S9013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	143.6	27.7
S9014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	116.0	11.2
S9016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	105.5	15.8
S9036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	107.4	16.9
S9038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	144.1	11.6
S9039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	139.5	10.4
S9041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	102.9	16.0
S9044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.8	11.4
S9049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.9	12.6

9. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S9003	32.2	5.8	10.2	52.5	18.7	81.2	0.464	0.570	0.231	✓
S9008	32.1	5.8	10.2	60.5	20.4	83.7	0.463	0.564	0.244	✓
S9011	36.5	24.4	75.8	51.7	10.8	11.2	0.338	0.323	0.965	✓
S9013	100.3	10.0	13.5	56.0	39.9	90.5	0.442	0.739	0.441	✓
S9014	116.0	5.0	14.0	-23.8	13.9	54.2	0.357	0.355	0.256	✓
S9016	39.7	24.5	76.9	63.6	11.8	11.7	0.352	0.318	1.008	Mr
S9036	44.9	26.0	78.7	60.3	11.4	11.5	0.358	0.331	0.992	✓
S9038	35.6	9.9	10.6	7.6	12.8	70.4	0.444	0.934	0.181	✓
S9039	46.2	10.3	11.1	2.2	13.0	67.9	0.429	0.928	0.192	✓
S9041	37.2	24.8	76.0	59.8	12.4	11.5	0.343	0.326	1.077	Mr
S9044	62.8	6.6	11.6	61.1	18.6	83.9	0.463	0.571	0.221	✓
S9049	31.7	5.7	10.2	60.0	19.9	83.5	0.463	0.558	0.239	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 1516.7
Mr,x= 398.8> Md,x= 158.8
Mr,y= 661.2> Md,y= 203.7

10. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S10003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	114.5	11.1
S10008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	114.3	12.5
S10011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	83.3	14.8
S10013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	115.4	26.5
S10014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	94.8	10.5
S10016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	86.5	14.7
S10036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	89.6	16.0
S10038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	117.0	11.0
S10039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	113.4	9.8
S10041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	84.5	14.9
S10044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	114.2	11.0
S10049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	114.3	12.3

10. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S10003	52.5	6.4	11.2	43.9	19.0	78.3	0.382	0.566	0.242	✓
S10006	53.0	6.3	11.2	50.6	20.7	80.5	0.381	0.563	0.258	✓
S10011	34.3	23.6	75.1	41.6	10.6	10.7	0.278	0.315	0.993	✓
S10013	81.6	9.7	12.7	42.5	39.5	85.5	0.355	0.764	0.462	✓
S10014	94.8	4.7	13.2	-16.5	14.0	58.3	0.292	0.357	0.240	✓
S10016	36.7	23.6	75.9	51.4	11.7	11.1	0.288	0.311	1.046	Mr
S10036	42.5	25.3	77.9	49.9	11.3	11.1	0.299	0.325	1.021	Mr
S10038	30.6	9.6	10.3	8.1	13.1	70.7	0.360	0.934	0.185	✓
S10039	38.3	10.1	20.6	2.8	15.4	68.2	0.549	0.937	0.136	✓
S10041	34.6	23.9	75.1	48.3	12.3	11.0	0.282	0.318	1.121	Mr
S10044	52.9	6.4	11.2	51.3	18.8	80.8	0.381	0.574	0.232	✓
S10049	52.8	6.3	11.2	50.1	20.3	80.4	0.381	0.558	0.253	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 1241.7
Mr,x= 395.8> Md,x= 156.0
Mr,y= 646.6> Md,y= 204.7

11. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	90.3	10.8
S11008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	90.2	12.1
S11011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	65.5	13.5
S11013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	86.0	25.2
S11014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	74.4	9.9
S11016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	68.0	13.5
S11036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	72.4	15.0
S11038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	90.8	10.4
S11039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	88.3	9.1
S11041	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	66.6	13.8
S11044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	90.0	10.6
S11049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	90.2	12.0

11. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S11003	42.6	6.0	10.7	35.3	19.1	75.4	0.301	0.562	0.253	✓
S11008	43.0	6.0	10.7	40.5	20.9	77.2	0.301	0.556	0.271	✓
S11011	30.6	22.2	73.8	32.2	10.3	10.2	0.218	0.301	1.010	Mr
S11013	63.1	9.3	11.9	30.1	38.6	80.6	0.271	0.783	0.479	✓
S11014	74.4	4.5	12.4	-9.9	14.0	61.9	0.229	0.360	0.226	✓
S11016	32.3	22.2	74.4	39.8	11.4	10.6	0.227	0.299	1.079	Mr
S11036	38.9	24.3	76.6	40.4	11.1	10.6	0.241	0.317	1.041	Mr
S11038	25.2	9.2	10.0	8.0	13.2	70.6	0.279	0.923	0.187	✓
S11039	31.1	9.7	10.3	2.9	13.5	68.2	0.272	0.941	0.198	✓
S11041	30.6	22.7	73.8	37.5	12.1	10.5	0.222	0.307	1.157	Mr
S11044	42.7	6.1	10.7	41.4	18.8	77.5	0.300	0.572	0.243	✓
S11049	42.7	6.0	10.7	40.2	20.4	77.1	0.301	0.555	0.265	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 974.6
Mr,x= 386.1> Md,x= 148.2
Mr,y= 630.3> Md,y= 203.4

12. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S12003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	66.5	10.3
S12008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	66.4	11.6
S12011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	48.0	12.1
S12013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	61.3	23.8
S12014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	54.9	9.1
S12016	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	49.8	12.1
S12036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	55.8	13.6
S12038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	65.6	9.8
S12039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	64.1	8.4
S12041	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	49.0	12.5
S12044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	66.2	9.9
S12049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	66.5	11.5

12. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S12003	32.4	5.7	10.2	26.5	16.8	72.1	0.222	0.553	0.261	✓
S12008	32.5	5.6	10.2	30.3	20.6	73.7	0.221	0.545	0.280	✓
S12011	25.1	20.5	71.6	23.3	9.9	9.7	0.160	0.286	1.022	Mr
S12013	44.9	8.9	11.0	18.5	37.5	75.5	0.188	0.805	0.497	✓
S12014	54.9	4.2	11.5	-4.0	13.2	64.8	0.169	0.361	0.204	✓
S12016	26.1	20.6	72.0	28.8	11.1	10.0	0.166	0.286	1.104	Mr
S12036	33.8	22.3	74.9	31.6	10.7	10.2	0.186	0.298	1.050	Mr
S12038	19.2	8.7	9.6	65.6	17.0	93.9	0.202	0.905	0.181	✓
S12039	22.6	9.2	9.6	2.5	15.0	67.9	0.197	0.956	0.192	✓
S12041	24.9	21.0	71.5	27.1	11.8	9.9	0.163	0.294	1.185	Mr
S12044	32.1	5.8	10.2	31.4	18.1	74.0	0.221	0.566	0.244	✓
S12049	32.2	5.6	10.2	30.1	20.2	73.6	0.222	0.548	0.275	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 714.1
Mr,x= 373.0> Md,x= 138.0
Mr,y= 635.4> Md,y= 202.0

13. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S13003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	43.1	9.3
S13008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	43.0	10.6
S13011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	30.6	10.2
S13013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	34.8	21.7
S13014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	36.2	7.9
S13016	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	31.6	10.2
S13036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	39.7	13.4
S13038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	41.4	8.7
S13039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	41.0	7.7
S13041	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	31.5	10.7
S13044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	42.7	9.6
S13049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	43.1	10.4

13. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S13003	21.5	5.2	9.6	17.5	17.1	68.6	0.144	0.542	0.249	✓
S13008	21.6	5.1	9.6	19.8	19.0	69.5	0.143	0.530	0.274	✓
S13011	17.6	17.0	68.6	14.7	9.6	9.2	0.102	0.248	1.039	Mr
S13013	26.4	8.4	10.1	7.6	32.4	70.4	0.107	0.841	0.460	✓
S13014	36.2	3.9	10.6	1.2	12.8	67.3	0.112	0.365	0.189	✓
S13016	18.1	16.9	68.8	18.0	10.7	9.4	0.105	0.245	1.140	Mr
S13036	27.5	22.7	72.6	23.6	10.2	9.7	0.132	0.313	1.048	Mr
S13038	12.5	8.2	9.2	41.4	14.9	85.1	0.127	0.886	0.175	✓
S13039	20.8	10.0	9.7	0.9	12.2	67.2	0.126	1.032	0.181	Mr
S13041	17.5	17.7	68.6	17.2	11.5	9.4	0.105	0.258	1.222	Mr
S13044	20.9	5.3	9.6	21.0	18.0	70.0	0.142	0.556	0.257	✓
S13049	21.3	5.2	9.6	19.8	18.3	69.5	0.144	0.537	0.264	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 458.8
Mr,x= 356.7> Md,x= 125.6
Mr,y= 605.5> Md,y= 186.6

14. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S14003	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	20.0	12.0
S14008	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	19.8	13.3
S14011	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	13.5	13.6
S14013	20x130	2600	2x4ø16 +	2x6ø12	29.64	45.53	0.011	538.2	325.0	8.8	29.0
S14014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	19.9	10.7
S14016	120x20	2400	2x4ø16 +	2x6ø12	29.64	42.58	0.012	505.5	300.0	13.8	13.0
S14036	120x20	2400	2x4ø16 +	2x6ø12	29.64	42.58	0.012	505.5	300.0	23.6	8.2
S14038	20x130	2600	2x4ø16 +	2x6ø12	29.64	41.51	0.011	538.2	325.0	16.9	12.4
S14039	20x130	2600	2x4ø16 +	2x6ø12	29.64	66.94	0.011	538.2	325.0	18.1	9.7
S14041	120x20	2400	2x4ø16 +	2x6ø12	29.64	42.58	0.012	505.5	300.0	14.5	13.3
S14044	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	19.1	9.0
S14049	20x120	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	20.0	13.5

14. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIK.
S14003	10.4	5.7	9.0	8.1	23.8	64.7	0.067	0.639	0.368	✓
S14008	10.2	5.7	9.0	9.1	26.3	65.0	0.066	0.633	0.404	✓
S14011	8.9	23.5	65.0	7.1	9.7	8.8	0.045	0.362	1.105	Mr
S14013	8.3	7.5	9.0	-3.0	51.4	65.3	0.027	0.832	0.787	✓
S14014	9.4	7.2	9.0	18.3	22.0	75.4	0.061	0.797	0.292	✓
S14016	8.9	24.2	65.0	8.1	11.0	8.8	0.046	0.373	1.246	Mr
S14036	23.6	13.2	71.0	15.9	12.8	9.3	0.079	0.187	1.381	Mr
S14038	7.9	10.5	9.0	16.9	25.2	74.7	0.052	1.171	0.338	Mr
S14039	14.2	10.1	9.3	18.1	19.0	75.3	0.056	1.940	0.260	Mr
S14041	8.9	24.7	65.0	8.0	11.9	8.8	0.048	0.381	1.346	Mr
S14044	9.2	6.1	8.9	10.3	17.9	65.6	0.064	0.679	0.274	✓
S14049	10.1	5.7	9.0	9.2	26.3	65.1	0.067	0.638	0.404	✓

Kat Kapasite Kontrolu:
Nmax= 3700.0> Nd,max= 208.2
Mr,x= 338.1> Md,x= 152.2
Mr,y= 586.8> Md,y= 258.0

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU

BS25
fcd =192.3 fctd=13.38(kg/cm²)
fyd =3818.2(kg/cm²)
Rot kesme kuvvet kapasitesi:
Vr=2.12 (t) ø20 l=423 mm

PERDELERİN KESME GÜVENLİK KONTROLU

Vr = Ach (0.65 fctd + rsh fyd) Perde Kesme Dayanımı
Vrh = 0.22 fcd Ach Max. Beton Kesme Dayanımı
rshx = Asws.(∑ Letrx/s)/Ach rshy = Asws.(∑ Letry/s)/Ach
Vfr = μ N + fyd Asd = İş Derzi Sürtünme Kesme Dayanımı
N = Ng - Ne Min. Düşey Yük
μ = 1.4 (özel pürüzlendirme)

Kolon		N	Vd	Vr	Vrh	Vfr	ACIKLAMA	(t)
S3003	X yönü	82.743	2.522	49.181	94.769	211.819	✓	
	Y yönü	62.264	14.327	77.827	94.769	183.149	✓	
S3008	X yönü	85.824	2.141	49.181	94.769	216.133	✓	
	Y yönü	80.262	17.092	77.827	94.769	208.346	✓	
S3011	X yönü	-2.752	24.513	77.827	94.769	153.554	✓	
	Y yönü	77.304	3.572	49.181	94.769	265.631	✓	
S3013	X yönü	181.357	2.833	55.038	108.308	358.518	✓	
	Y yönü	176.877	22.612	86.753	108.308	352.245	✓	
S3014	X yönü	43.039	1.735	55.038	108.308	278.368	✓	
	Y yönü	-57.386	18.882	86.753	108.308	137.770	✓	
S3016	X yönü	8.938	21.961	77.827	94.769	154.563	✓	
	Y yönü	99.924	3.957	49.181	94.769	281.943	✓	
S3036	X yönü	13.338	24.911	77.827	94.769	160.723	✓	
	Y yönü	90.587	3.781	49.181	94.769	268.871	✓	
S3038	X yönü	84.783	3.652	55.038	108.308	238.671	✓	
	Y yönü	24.322	17.039	86.753	108.308	154.026	✓	
S3039	X yönü	105.312	3.575	55.038	108.308	282.768	✓	
	Y yönü	17.431	18.027	86.753	108.308	159.735	✓	
S3041	X yönü	5.438	21.760	77.827	94.769	149.663	✓	
	Y yönü	93.953	4.132	49.181	94.769	273.584	✓	
S3044	X yönü	87.308	2.475	49.181	94.769	218.211	✓	
	Y yönü	79.192	15.849	77.827	94.769	206.848	✓	
S3049	X yönü	87.496	2.209	49.181	94.769	218.473	✓	
	Y yönü	79.784	17.568	77.827	94.769	207.677	✓	
S4003	X yönü	72.248	3.562	49.181	94.769	197.126	✓	
	Y yönü	54.239	17.544	77.827	94.769	171.914	✓	
S4008	X yönü	72.932	3.607	49.181	94.769	198.084	✓	
	Y yönü	69.082	16.478	77.827	94.769	192.694	✓	
S4011	X yönü	0.700	14.346	77.827	94.769	96.959	✓	
	Y yönü	66.649	6.569	49.181	94.769	189.288	✓	
S4013	X yönü	160.375	5.998	55.038	108.308	329.142	✓	
	Y yönü	162.317	43.935	86.753	108.308	331.861	✓	

S4014	X yönü	38.779	3.563	55.038	108.308	158.909	✓
	Y yönü	-53.859	16.497	86.753	108.308	29.215	✓
S4016	X yönü	9.740	15.177	77.827	94.769	109.616	✓
	Y yönü	86.960	7.047	49.181	94.769	217.723	✓
S4036	X yönü	14.088	14.513	77.827	94.769	115.702	✓
	Y yönü	77.797	7.114	49.181	94.769	204.896	✓
S4038	X yönü	74.488	6.783	55.038	108.308	208.901	✓
	Y yönü	19.420	21.524	86.753	108.308	131.806	✓
S4039	X yönü	93.967	6.498	55.038	108.308	236.171	✓
	Y yönü	12.610	20.600	86.753	108.308	122.272	✓
S4041	X yönü	6.169	15.077	77.827	94.769	104.616	✓
	Y yönü	80.950	7.356	49.181	94.769	209.310	✓
S4044	X yönü	74.134	3.484	49.181	94.769	199.767	✓
	Y yönü	67.824	15.610	77.827	94.769	190.934	✓
S4049	X yönü	74.172	3.439	49.181	94.769	199.820	✓
	Y yönü	68.313	15.944	77.827	94.769	191.618	✓
S1001	X yönü	253.311	954.939	1779.203	3043.615	1918.141	✓
	Y yönü	89.691	16.261	1231.043	3043.615	1689.072	✓
S1005	X yönü	180.539	5.539	67.315	108.308	483.106	✓
	Y yönü	32.490	4.782	58.107	108.308	275.837	✓
S1006	X yönü	195.161	5.324	67.315	108.308	503.576	✓
	Y yönü	111.571	4.794	58.107	108.308	386.549	✓
S1026	X yönü	922.173	62.937	842.748	1239.108	2880.462	✓
	Y yönü	916.703	275.157	890.104	1239.108	2872.803	✓
S1046	X yönü	206.911	5.483	67.315	108.308	376.057	✓
	Y yönü	178.715	5.016	58.107	108.308	336.582	✓
S1047	X yönü	219.093	5.448	67.315	108.308	393.111	✓
	Y yönü	181.083	4.981	58.107	108.308	339.898	✓
S1051	X yönü	252.412	942.727	1778.709	3042.769	1916.881	✓
	Y yönü	98.079	15.498	1230.702	3042.769	1700.815	✓
S1053	X yönü	630.682	6.370	278.806	588.923	1534.655	✓
	Y yönü	439.159	166.918	383.927	588.923	1266.523	✓
S1054	X yönü	621.597	6.651	278.806	588.923	1579.524	✓
	Y yönü	410.456	164.768	383.927	588.923	1283.926	✓
S1055	X yönü	198.410	16.842	386.388	605.846	761.510	✓
	Y yönü	547.370	13.679	285.871	605.846	1250.054	✓
S1056	X yönü	20.071	10.565	386.388	605.846	511.836	✓
	Y yönü	529.430	15.543	285.871	605.846	1224.938	✓
S1057	X yönü	-53.299	18.791	386.388	605.846	409.118	✓
	Y yönü	454.917	13.550	285.871	605.846	1120.620	✓
S1058	X yönü	55.626	10.435	386.388	605.846	561.613	✓
	Y yönü	474.500	15.755	285.871	605.846	1148.036	✓
S1059	X yönü	600.026	5.696	278.806	588.923	1602.593	✓
	Y yönü	304.576	174.196	383.927	588.923	1188.963	✓
S1060	X yönü	677.210	6.539	278.408	588.415	1599.795	✓
	Y yönü	462.746	164.281	383.682	588.415	1299.544	✓
S1063	X yönü	41.227	3.965	106.483	186.222	265.034	✓
	Y yönü	143.008	24.192	144.081	186.222	407.527	✓
S1064	X yönü	28.031	4.196	106.483	186.222	246.559	✓
	Y yönü	125.537	24.330	144.081	186.222	383.068	✓
S1065	X yönü	152.656	3.473	106.483	186.222	421.034	✓
	Y yönü	122.206	23.687	144.081	186.222	378.405	✓
S1066	X yönü	102.119	3.603	106.483	186.222	350.282	✓
	Y yönü	110.394	23.545	144.081	186.222	361.868	✓
S2001	X yönü	127.513	2187.008	2394.238	3043.615	1742.023	✓
	Y yönü	35.434	85.902	1480.638	3043.615	1613.112	✓
S2005	X yönü	169.346	11.301	67.315	108.308	390.651	✓
	Y yönü	22.385	13.670	58.107	108.308	184.906	✓

S2006	X yönü	188.613	10.706	67.315	108.308	350.439	✓
	Y yönü	113.133	14.596	58.107	108.308	244.767	✓
S2026	X yönü	829.569	646.404	842.748	1239.108	2886.147	✓
	Y yönü	847.114	145.533	890.104	1239.108	2910.710	✓
S2046	X yönü	200.245	11.219	67.315	108.308	366.724	✓
	Y yönü	181.694	15.650	58.107	108.308	340.754	✓
S2047	X yönü	212.305	10.879	67.315	108.308	383.609	✓
	Y yönü	184.283	15.549	58.107	108.308	344.378	✓
S2051	X yönü	127.178	2195.302	2393.574	3042.769	1741.554	✓
	Y yönü	41.281	84.558	1480.229	3042.769	1621.296	✓
S2053	X yönü	592.620	15.836	278.806	588.923	1372.912	✓
	Y yönü	400.709	160.483	383.927	588.923	1104.236	✓
S2054	X yönü	587.623	16.689	278.806	588.923	1416.785	✓
	Y yönü	370.492	145.508	383.927	588.923	1112.802	✓
S2055	X yönü	159.213	406.314	464.885	605.846	1059.359	✓
	Y yönü	502.199	26.196	327.817	605.846	1539.539	✓
S2056	X yönü	-19.792	385.079	419.598	605.846	969.518	✓
	Y yönü	488.478	27.573	303.618	605.846	1681.095	✓
S2057	X yönü	-89.732	406.710	464.885	605.846	948.385	✓
	Y yönü	422.589	23.982	327.817	605.846	1665.635	✓
S2058	X yönü	17.021	389.312	440.355	605.846	986.503	✓
	Y yönü	436.853	28.013	314.709	605.846	1574.268	✓
S2059	X yönü	567.157	15.277	278.806	588.923	1388.133	✓
	Y yönü	264.395	152.195	383.927	588.923	964.266	✓
S2060	X yönü	644.180	15.666	278.408	588.415	1394.226	✓
	Y yönü	424.505	141.017	383.682	588.415	1086.682	✓
S2063	X yönü	29.071	4.813	106.483	186.222	235.058	✓
	Y yönü	143.212	24.381	144.081	186.222	394.856	✓
S2064	X yönü	-9.981	9.869	106.483	186.222	180.385	✓
	Y yönü	124.334	24.266	144.081	186.222	368.425	✓
S2065	X yönü	141.465	3.747	106.483	186.222	392.409	✓
	Y yönü	122.393	22.295	144.081	186.222	365.709	✓
S2066	X yönü	83.841	4.029	106.483	186.222	311.736	✓
	Y yönü	111.160	22.303	144.081	186.222	349.982	✓
S3005	X yönü	160.812	22.143	67.315	108.308	378.704	✓
	Y yönü	15.676	10.946	58.107	108.308	175.514	✓
S3006	X yönü	188.111	22.312	67.315	108.308	349.737	✓
	Y yönü	126.168	9.963	58.107	108.308	265.817	✓
S3026	X yönü	709.286	417.600	842.748	1239.108	2901.551	✓
	Y yönü	778.719	257.886	890.104	1239.108	2998.758	✓
S3046	X yönü	199.185	20.098	67.315	108.308	365.240	✓
	Y yönü	198.208	9.702	58.107	108.308	363.872	✓
S3047	X yönü	210.569	20.265	67.315	108.308	381.178	✓
	Y yönü	201.146	9.651	58.107	108.308	367.986	✓
S3053	X yönü	558.470	28.038	270.833	578.769	1384.608	✓
	Y yönü	361.011	158.928	379.023	578.769	1108.167	✓
S3054	X yönü	550.695	28.173	270.833	578.769	1373.723	✓
	Y yönü	328.938	153.186	379.023	578.769	1063.265	✓
S3055	X yönü	124.822	243.332	380.020	592.308	1072.158	✓
	Y yönü	452.918	29.637	276.741	592.308	1531.493	✓
S3056	X yönü	-52.634	245.556	380.020	592.308	969.609	✓
	Y yönü	446.271	31.379	276.741	592.308	1668.075	✓
S3057	X yönü	-117.189	258.856	381.484	595.692	969.452	✓
	Y yönü	394.367	32.265	277.898	595.692	1685.631	✓
S3058	X yönü	-13.549	243.028	381.484	595.692	1008.971	✓
	Y yönü	400.867	31.946	277.898	595.692	1589.154	✓
S3059	X yönü	528.637	27.623	270.833	578.769	1400.430	✓
	Y yönü	221.547	176.461	379.023	578.769	970.505	✓

S3060	X yönü	608.675	31.066	270.833	578.769	1404.026	✓
	Y yönü	386.320	164.541	379.023	578.769	1092.729	✓
S3063	X yönü	22.710	28.102	102.591	181.483	301.496	✓
	Y yönü	141.579	30.544	141.724	181.483	467.912	✓
S3064	X yönü	-72.309	23.459	97.878	172.006	314.358	✓
	Y yönü	132.656	31.775	133.941	172.006	601.310	✓
S3065	X yönü	131.525	22.989	102.591	181.483	382.813	✓
	Y yönü	131.750	30.068	141.724	181.483	383.127	✓
S3066	X yönü	62.628	24.006	102.591	181.483	286.356	✓
	Y yönü	121.726	30.119	141.724	181.483	369.094	✓
S4005	X yönü	146.765	18.184	67.315	108.308	291.853	✓
	Y yönü	18.093	11.012	58.107	108.308	111.711	✓
S4006	X yönü	168.132	21.136	67.315	108.308	321.767	✓
	Y yönü	112.776	8.769	58.107	108.308	244.268	✓
S4026	X yönü	655.253	453.457	842.748	1239.108	2445.347	✓
	Y yönü	721.094	254.344	890.104	1239.108	2537.524	✓
S4046	X yönü	180.983	17.019	67.315	108.308	339.758	✓
	Y yönü	179.765	11.369	58.107	108.308	338.052	✓
S4047	X yönü	191.403	17.137	67.315	108.308	354.345	✓
	Y yönü	182.413	11.438	58.107	108.308	341.760	✓
S4053	X yönü	524.299	30.537	270.833	578.769	1315.175	✓
	Y yönü	331.837	126.869	379.023	578.769	1045.727	✓
S4054	X yönü	501.004	30.428	270.833	578.769	1282.562	✓
	Y yönü	300.391	131.534	379.023	578.769	1001.702	✓
S4055	X yönü	117.356	206.544	380.020	592.308	697.944	✓
	Y yönü	411.903	36.566	276.741	592.308	1110.310	✓
S4056	X yönü	-53.510	210.272	380.020	592.308	590.223	✓
	Y yönü	406.872	36.566	276.741	592.308	1234.758	✓
S4057	X yönü	-117.252	209.188	381.484	595.692	579.688	✓
	Y yönü	360.093	44.321	277.898	595.692	1247.970	✓
S4058	X yönü	-19.389	198.081	381.484	595.692	637.993	✓
	Y yönü	365.528	37.259	277.898	595.692	1176.877	✓
S4059	X yönü	476.025	26.760	270.833	578.769	1145.852	✓
	Y yönü	199.370	150.848	379.023	578.769	758.535	✓
S4060	X yönü	553.930	36.463	270.833	578.769	1254.919	✓
	Y yönü	353.606	134.840	379.023	578.769	974.466	✓
S4063	X yönü	19.040	57.897	102.591	181.483	494.076	✓
	Y yönü	126.060	47.516	141.724	181.483	643.905	✓
S4064	X yönü	-58.986	38.162	97.878	172.006	379.080	✓
	Y yönü	119.444	36.159	133.941	172.006	628.883	✓
S4065	X yönü	116.120	44.763	102.591	181.483	361.245	✓
	Y yönü	119.212	45.778	141.724	181.483	365.575	✓
S4066	X yönü	59.688	49.162	102.591	181.483	442.326	✓
	Y yönü	109.012	48.557	141.724	181.483	511.100	✓
S5005	X yönü	135.664	23.628	67.315	108.308	276.311	✓
	Y yönü	24.624	11.790	58.107	108.308	120.855	✓
S5006	X yönü	152.042	26.176	67.315	108.308	299.240	✓
	Y yönü	101.015	9.780	58.107	108.308	227.803	✓
S5026	X yönü	603.943	413.149	842.748	1239.108	2506.564	✓
	Y yönü	666.281	217.683	890.104	1239.108	2593.838	✓
S5046	X yönü	163.594	20.450	67.315	108.308	315.413	✓
	Y yönü	161.993	9.952	58.107	108.308	313.171	✓
S5047	X yönü	172.888	20.391	67.315	108.308	328.425	✓
	Y yönü	164.345	9.981	58.107	108.308	316.464	✓
S5053	X yönü	491.041	31.174	263.495	562.692	1204.787	✓
	Y yönü	305.790	104.269	364.779	562.692	945.436	✓
S5054	X yönü	452.674	31.174	263.495	562.692	1201.942	✓
	Y yönü	275.301	109.066	364.779	562.692	953.620	✓

S5055	X yönü	121.587	197.554	366.287	576.231	623.725	✓
	Y yönü	374.961	39.016	269.607	576.231	978.448	✓
S5056	X yönü	-38.368	193.214	366.287	576.231	454.016	✓
	Y yönü	371.725	40.932	269.607	576.231	1028.147	✓
S5057	X yönü	-102.352	195.144	366.287	576.231	407.630	✓
	Y yönü	330.916	48.439	269.607	576.231	1014.205	✓
S5058	X yönü	-12.602	178.462	366.287	576.231	435.860	✓
	Y yönü	335.160	42.402	269.607	576.231	922.726	✓
S5059	X yönü	425.421	30.337	263.495	562.692	1163.788	✓
	Y yönü	181.644	142.657	364.779	562.692	822.500	✓
S5060	X yönü	500.987	39.125	263.495	562.692	1167.842	✓
	Y yönü	325.206	124.218	364.779	562.692	921.748	✓
S5063	X yönü	19.676	57.958	93.164	162.529	467.611	✓
	Y yönü	110.667	42.698	126.158	162.529	595.280	✓
S5064	X yönü	-35.968	39.869	97.878	172.006	365.236	✓
	Y yönü	111.242	38.773	133.941	172.006	571.330	✓
S5065	X yönü	102.008	44.752	93.164	162.529	391.878	✓
	Y yönü	109.495	39.527	126.158	162.529	402.359	✓
S5066	X yönü	64.015	48.683	93.164	162.529	420.750	✓
	Y yönü	101.457	42.062	126.158	162.529	473.169	✓
S6005	X yönü	122.580	23.016	67.315	108.308	257.993	✓
	Y yönü	25.572	11.657	58.107	108.308	122.182	✓
S6006	X yönü	136.089	26.556	67.315	108.308	276.907	✓
	Y yönü	89.821	10.146	58.107	108.308	212.132	✓
S6026	X yönü	549.538	377.022	842.748	1239.108	1960.938	✓
	Y yönü	608.409	183.015	890.104	1239.108	2043.358	✓
S6046	X yönü	146.130	21.521	67.315	108.308	290.964	✓
	Y yönü	144.216	11.449	58.107	108.308	288.284	✓
S6047	X yönü	154.195	21.368	67.315	108.308	302.255	✓
	Y yönü	146.252	11.498	58.107	108.308	291.134	✓
S6053	X yönü	439.651	33.200	263.495	562.692	1081.971	✓
	Y yönü	277.580	91.661	364.779	562.692	855.073	✓
S6054	X yönü	403.448	33.288	263.495	562.692	1031.287	✓
	Y yönü	248.731	96.484	364.779	562.692	814.684	✓
S6055	X yönü	126.769	167.999	366.287	576.231	630.979	✓
	Y yönü	336.576	42.492	269.607	576.231	924.710	✓
S6056	X yönü	-20.519	177.773	366.287	576.231	424.777	✓
	Y yönü	334.906	43.889	269.607	576.231	922.372	✓
S6057	X yönü	-82.876	172.349	366.287	576.231	337.476	✓
	Y yönü	301.404	50.314	269.607	576.231	875.469	✓
S6058	X yönü	-2.354	154.540	366.287	576.231	450.208	✓
	Y yönü	303.896	43.727	269.607	576.231	878.957	✓
S6059	X yönü	378.536	29.740	263.495	562.692	1098.149	✓
	Y yönü	167.347	125.815	364.779	562.692	802.484	✓
S6060	X yönü	446.444	38.773	263.495	562.692	1091.482	✓
	Y yönü	294.050	105.156	364.779	562.692	878.130	✓
S6063	X yönü	23.717	66.561	93.164	162.529	550.533	✓
	Y yönü	99.262	40.447	126.158	162.529	656.296	✓
S6064	X yönü	-12.739	44.087	97.878	172.006	374.721	✓
	Y yönü	99.325	40.647	133.941	172.006	531.610	✓
S6065	X yönü	89.086	51.672	93.164	162.529	448.172	✓
	Y yönü	96.511	35.591	126.158	162.529	458.567	✓
S6066	X yönü	68.125	56.111	93.164	162.529	497.050	✓
	Y yönü	88.880	38.818	126.158	162.529	526.106	✓
S7005	X yönü	109.322	24.144	67.315	108.308	239.432	✓
	Y yönü	26.309	12.577	58.107	108.308	123.214	✓
S7006	X yönü	120.399	27.103	67.315	108.308	254.941	✓
	Y yönü	79.283	10.376	58.107	108.308	197.377	✓

S7026	X yönü	492.937	332.447	842.748	1239.108	1770.840	✓
	Y yönü	547.882	148.400	890.104	1239.108	1847.763	✓
S7046	X yönü	128.951	21.042	67.315	108.308	266.914	✓
	Y yönü	126.774	10.706	58.107	108.308	263.866	✓
S7047	X yönü	135.748	20.815	67.315	108.308	276.429	✓
	Y yönü	128.488	10.719	58.107	108.308	266.265	✓
S7053	X yönü	387.562	31.816	263.495	562.692	1009.047	✓
	Y yönü	249.212	73.386	364.779	562.692	815.356	✓
S7054	X yönü	354.186	32.017	263.495	562.692	962.321	✓
	Y yönü	222.359	76.218	364.779	562.692	777.763	✓
S7055	X yönü	132.404	145.298	366.287	576.231	638.869	✓
	Y yönü	299.340	42.739	269.607	576.231	872.579	✓
S7056	X yönü	-0.272	164.272	366.287	576.231	453.121	✓
	Y yönü	299.100	46.055	269.607	576.231	872.243	✓
S7057	X yönü	-60.228	161.889	366.287	576.231	369.184	✓
	Y yönü	272.115	54.425	269.607	576.231	834.463	✓
S7058	X yönü	9.959	143.167	366.287	576.231	467.446	✓
	Y yönü	273.174	48.444	269.607	576.231	835.947	✓
S7059	X yönü	331.975	30.990	263.495	562.692	931.225	✓
	Y yönü	153.265	116.549	364.779	562.692	681.031	✓
S7060	X yönü	392.226	40.592	263.495	562.692	1015.577	✓
	Y yönü	263.255	93.163	364.779	562.692	835.016	✓
S7063	X yönü	28.491	67.170	93.164	162.529	549.538	✓
	Y yönü	88.224	42.045	126.158	162.529	633.165	✓
S7064	X yönü	10.924	42.182	97.878	172.006	369.458	✓
	Y yönü	90.024	39.821	133.941	172.006	480.198	✓
S7065	X yönü	77.525	50.130	93.164	162.529	439.663	✓
	Y yönü	84.975	35.510	126.158	162.529	450.095	✓
S7066	X yönü	73.307	54.153	93.164	162.529	496.625	✓
	Y yönü	79.558	38.962	126.158	162.529	505.377	✓
S8005	X yönü	95.771	23.155	67.315	108.308	220.460	✓
	Y yönü	26.470	12.063	58.107	108.308	123.439	✓
S8006	X yönü	104.861	26.105	67.315	108.308	233.187	✓
	Y yönü	69.182	10.030	58.107	108.308	183.236	✓
S8026	X yönü	434.727	297.993	842.748	1239.108	1604.885	✓
	Y yönü	484.881	124.180	890.104	1239.108	1675.100	✓
S8046	X yönü	111.975	21.400	67.315	108.308	243.147	✓
	Y yönü	109.648	11.131	58.107	108.308	239.889	✓
S8047	X yönü	117.553	21.363	67.315	108.308	250.955	✓
	Y yönü	111.036	11.281	58.107	108.308	241.832	✓
S8053	X yönü	335.425	31.228	256.438	533.077	923.098	✓
	Y yönü	220.381	65.043	356.955	533.077	762.036	✓
S8054	X yönü	305.285	31.560	256.438	533.077	880.902	✓
	Y yönü	195.780	69.100	356.955	533.077	727.594	✓
S8055	X yönü	133.348	130.987	357.511	543.231	640.191	✓
	Y yönü	260.475	43.986	261.598	543.231	818.168	✓
S8056	X yönü	16.489	146.224	357.511	543.231	476.587	✓
	Y yönü	261.188	46.061	261.598	543.231	819.166	✓
S8057	X yönü	-38.644	147.182	357.511	543.231	399.401	✓
	Y yönü	241.421	52.972	261.598	543.231	791.492	✓
S8058	X yönü	20.973	124.008	357.511	543.231	482.865	✓
	Y yönü	241.290	45.942	261.598	543.231	791.308	✓
S8059	X yönü	285.939	27.973	256.438	533.077	853.817	✓
	Y yönü	138.603	100.593	356.955	533.077	647.547	✓
S8060	X yönü	338.467	36.933	256.438	533.077	927.357	✓
	Y yönü	232.118	77.778	356.955	533.077	778.467	✓
S8063	X yönü	31.921	67.072	93.164	162.529	546.662	✓
	Y yönü	76.904	42.694	126.158	162.529	609.638	✓

S8064	X yönü	28.742	42.550	97.878	172.006	379.046	✓
	Y yönü	78.850	41.644	133.941	172.006	449.197	✓
S8065	X yönü	65.168	52.366	93.164	162.529	469.874	✓
	Y yönü	73.219	37.249	126.158	162.529	481.146	✓
S8066	X yönü	74.583	56.182	93.164	162.529	498.412	✓
	Y yönü	69.103	41.190	126.158	162.529	490.739	✓
S9005	X yönü	82.055	23.511	67.315	108.308	201.259	✓
	Y yönü	25.808	12.485	58.107	108.308	122.513	✓
S9006	X yönü	89.368	26.235	67.315	108.308	211.497	✓
	Y yönü	59.339	10.431	58.107	108.308	169.456	✓
S9026	X yönü	375.568	256.291	842.748	1239.108	1523.502	✓
	Y yönü	420.150	97.611	890.104	1239.108	1585.917	✓
S9046	X yönü	95.119	20.767	67.315	108.308	219.548	✓
	Y yönü	92.761	11.124	58.107	108.308	216.247	✓
S9047	X yönü	99.566	20.085	67.315	108.308	225.774	✓
	Y yönü	93.819	10.889	58.107	108.308	217.728	✓
S9053	X yönü	284.116	28.526	256.438	533.077	851.265	✓
	Y yönü	191.387	53.419	356.955	533.077	721.444	✓
S9054	X yönü	257.529	28.960	256.438	533.077	814.044	✓
	Y yönü	169.134	57.173	356.955	533.077	690.290	✓
S9055	X yönü	132.048	111.558	357.511	543.231	638.371	✓
	Y yönü	223.354	42.346	261.598	543.231	766.196	✓
S9056	X yönü	31.713	127.539	357.511	543.231	497.901	✓
	Y yönü	225.025	45.084	261.598	543.231	768.538	✓
S9057	X yönü	-18.544	132.638	357.511	543.231	427.542	✓
	Y yönü	210.557	53.580	261.598	543.231	748.283	✓
S9058	X yönü	30.636	114.650	357.511	543.231	496.396	✓
	Y yönü	209.703	48.429	261.598	543.231	747.087	✓
S9059	X yönü	241.393	27.530	256.438	533.077	791.454	✓
	Y yönü	123.403	94.722	356.955	533.077	626.267	✓
S9060	X yönü	286.183	36.885	256.438	533.077	854.160	✓
	Y yönü	200.920	70.845	356.955	533.077	734.791	✓
S9063	X yönü	34.087	64.845	93.164	162.529	557.373	✓
	Y yönü	66.042	42.414	126.158	162.529	602.110	✓
S9064	X yönü	43.939	39.637	97.878	172.006	392.643	✓
	Y yönü	69.715	40.721	133.941	172.006	428.729	✓
S9065	X yönü	54.171	48.296	93.164	162.529	406.968	✓
	Y yönü	62.269	35.026	126.158	162.529	418.305	✓
S9066	X yönü	63.121	51.497	93.164	162.529	459.330	✓
	Y yönü	61.020	39.080	126.158	162.529	456.388	✓
S10005	X yönü	68.144	21.634	67.315	108.308	181.784	✓
	Y yönü	24.136	11.576	58.107	108.308	120.172	✓
S10006	X yönü	73.943	23.918	67.315	108.308	189.902	✓
	Y yönü	49.633	9.822	58.107	108.308	155.868	✓
S10026	X yönü	315.244	210.539	842.748	1239.108	1287.880	✓
	Y yönü	353.775	70.305	890.104	1239.108	1341.823	✓
S10046	X yönü	78.350	19.187	67.315	108.308	196.072	✓
	Y yönü	76.064	10.809	58.107	108.308	192.871	✓
S10047	X yönü	81.777	19.071	67.315	108.308	200.870	✓
	Y yönü	76.843	10.961	58.107	108.308	193.962	✓
S10053	X yönü	233.146	27.401	256.438	533.077	779.907	✓
	Y yönü	161.422	46.718	356.955	533.077	679.494	✓
S10054	X yönü	210.434	27.999	256.438	533.077	748.111	✓
	Y yönü	141.654	49.508	356.955	533.077	651.818	✓
S10055	X yönü	123.662	97.476	357.511	543.231	626.630	✓
	Y yönü	184.707	43.592	261.598	543.231	712.093	✓
S10056	X yönü	40.246	115.485	357.511	543.231	509.847	✓
	Y yönü	187.100	46.446	261.598	543.231	715.443	✓

S10057	X yönü	-3.028	117.961	357.511	543.231	449.264	✓
	Y yönü	177.810	53.200	261.598	543.231	702.436	✓
S10058	X yönü	36.021	98.833	357.511	543.231	503.933	✓
	Y yönü	176.571	47.818	261.598	543.231	700.702	✓
S10059	X yönü	197.655	25.190	256.438	533.077	730.220	✓
	Y yönü	106.679	84.431	356.955	533.077	602.853	✓
S10060	X yönü	234.754	34.416	256.438	533.077	782.158	✓
	Y yönü	168.935	60.431	356.955	533.077	690.012	✓
S10063	X yönü	32.773	61.534	93.164	162.529	540.176	✓
	Y yönü	54.102	41.637	126.158	162.529	570.036	✓
S10064	X yönü	50.927	36.654	97.878	172.006	324.684	✓
	Y yönü	58.056	39.850	133.941	172.006	334.664	✓
S10065	X yönü	43.531	47.575	93.164	162.529	392.072	✓
	Y yönü	51.308	35.260	126.158	162.529	402.960	✓
S10066	X yönü	45.216	50.332	93.164	162.529	457.298	✓
	Y yönü	50.931	39.669	126.158	162.529	465.299	✓
S11005	X yönü	54.146	21.230	67.315	108.308	162.185	✓
	Y yönü	21.351	11.572	58.107	108.308	116.273	✓
S11006	X yönü	58.479	23.355	67.315	108.308	168.253	✓
	Y yönü	39.925	9.995	58.107	108.308	142.277	✓
S11026	X yönü	255.220	180.071	842.748	1239.108	1203.846	✓
	Y yönü	286.498	51.337	890.104	1239.108	1247.635	✓
S11046	X yönü	61.637	18.920	67.315	108.308	172.674	✓
	Y yönü	59.537	11.114	58.107	108.308	169.733	✓
S11047	X yönü	64.145	18.530	67.315	108.308	176.185	✓
	Y yönü	60.038	11.134	58.107	108.308	170.435	✓
S11053	X yönü	182.508	23.994	249.381	503.462	709.015	✓
	Y yönü	130.263	36.789	349.131	503.462	635.871	✓
S11054	X yönü	164.011	24.706	249.381	503.462	683.119	✓
	Y yönü	113.098	38.803	349.131	503.462	611.840	✓
S11055	X yönü	110.350	75.363	348.734	510.231	607.993	✓
	Y yönü	146.949	40.816	253.589	510.231	659.232	✓
S11056	X yönü	44.701	92.541	348.734	510.231	516.084	✓
	Y yönü	150.067	43.633	253.589	510.231	663.597	✓
S11057	X yönü	7.822	98.498	348.734	510.231	464.453	✓
	Y yönü	143.919	50.433	253.589	510.231	654.990	✓
S11058	X yönü	37.555	80.480	348.734	510.231	506.080	✓
	Y yönü	142.640	45.832	253.589	510.231	653.198	✓
S11059	X yönü	154.744	22.411	249.381	503.462	670.144	✓
	Y yönü	88.021	72.368	349.131	503.462	576.733	✓
S11060	X yönü	184.138	31.232	249.381	503.462	711.296	✓
	Y yönü	135.681	49.624	349.131	503.462	643.456	✓
S11063	X yönü	29.849	57.167	93.164	162.529	520.725	✓
	Y yönü	42.688	40.601	126.158	162.529	538.701	✓
S11064	X yönü	53.832	33.054	97.878	172.006	261.085	✓
	Y yönü	48.109	38.840	133.941	172.006	253.073	✓
S11065	X yönü	34.054	43.554	93.164	162.529	386.483	✓
	Y yönü	40.877	33.641	126.158	162.529	396.035	✓
S11066	X yönü	30.729	45.789	93.164	162.529	381.828	✓
	Y yönü	42.028	38.106	126.158	162.529	397.647	✓
S12005	X yönü	40.019	19.556	67.315	108.308	142.408	✓
	Y yönü	17.446	10.976	58.107	108.308	110.806	✓
S12006	X yönü	42.881	21.265	67.315	108.308	146.414	✓
	Y yönü	30.107	9.740	58.107	108.308	128.531	✓
S12026	X yönü	194.789	122.810	842.748	1239.108	1119.243	✓
	Y yönü	218.382	15.587	890.104	1239.108	1152.274	✓
S12046	X yönü	44.903	17.510	67.315	108.308	149.246	✓
	Y yönü	43.128	11.089	58.107	108.308	146.761	✓

S12047	X yönü	46.573	17.274	67.315	108.308	151.584	✓
	Y yönü	43.312	11.110	58.107	108.308	147.018	✓
S12053	X yönü	132.992	22.091	249.381	503.462	639.691	✓
	Y yönü	98.401	23.985	349.131	503.462	591.264	✓
S12054	X yönü	118.981	22.494	249.381	503.462	620.077	✓
	Y yönü	83.954	25.670	349.131	503.462	571.038	✓
S12055	X yönü	89.716	52.988	348.734	510.231	579.105	✓
	Y yönü	108.175	40.575	253.589	510.231	604.948	✓
S12056	X yönü	42.061	70.564	348.734	510.231	512.388	✓
	Y yönü	111.902	43.705	253.589	510.231	610.166	✓
S12057	X yönü	13.346	78.590	348.734	510.231	472.188	✓
	Y yönü	108.704	50.216	253.589	510.231	605.688	✓
S12058	X yönü	34.358	61.035	348.734	510.231	501.605	✓
	Y yönü	107.710	45.998	253.589	510.231	604.297	✓
S12059	X yönü	113.421	20.399	249.381	503.462	612.293	✓
	Y yönü	67.923	58.888	349.131	503.462	548.595	✓
S12060	X yönü	135.138	29.038	249.381	503.462	642.696	✓
	Y yönü	101.749	36.497	349.131	503.462	595.951	✓
S12063	X yönü	24.698	53.528	93.164	162.529	466.964	✓
	Y yönü	31.079	39.219	126.158	162.529	475.898	✓
S12064	X yönü	42.874	29.777	97.878	172.006	245.743	✓
	Y yönü	35.465	37.095	133.941	172.006	235.372	✓
S12065	X yönü	24.778	40.832	93.164	162.529	365.818	✓
	Y yönü	29.864	32.024	126.158	162.529	372.938	✓
S12066	X yönü	17.754	42.424	93.164	162.529	355.984	✓
	Y yönü	30.953	37.006	126.158	162.529	374.464	✓
S13005	X yönü	25.816	16.844	67.315	108.308	122.524	✓
	Y yönü	12.356	10.013	58.107	108.308	103.679	✓
S13006	X yönü	27.176	19.223	67.315	108.308	124.428	✓
	Y yönü	20.132	9.032	58.107	108.308	114.566	✓
S13026	X yönü	134.228	59.851	842.748	1239.108	1034.458	✓
	Y yönü	149.702	26.690	890.104	1239.108	1056.121	✓
S13046	X yönü	28.140	14.823	67.315	108.308	125.778	✓
	Y yönü	26.760	10.610	58.107	108.308	123.845	✓
S13047	X yönü	29.046	14.517	67.315	108.308	127.046	✓
	Y yönü	26.645	10.802	58.107	108.308	123.685	✓
S13053	X yönü	83.769	17.757	249.381	503.462	570.779	✓
	Y yönü	65.085	12.584	349.131	503.462	544.622	✓
S13054	X yönü	74.643	20.086	249.381	503.462	558.003	✓
	Y yönü	53.566	13.837	349.131	503.462	528.495	✓
S13055	X yönü	63.332	32.583	348.734	510.231	542.168	✓
	Y yönü	70.012	36.050	253.589	510.231	551.519	✓
S13056	X yönü	34.031	49.460	348.734	510.231	501.146	✓
	Y yönü	74.490	38.320	253.589	510.231	557.788	✓
S13057	X yönü	13.277	59.955	348.734	510.231	472.091	✓
	Y yönü	72.393	43.747	253.589	510.231	554.853	✓
S13058	X yönü	26.356	42.011	348.734	510.231	490.401	✓
	Y yönü	71.928	40.259	253.589	510.231	554.203	✓
S13059	X yönü	72.959	16.740	249.381	503.462	555.645	✓
	Y yönü	45.732	45.272	349.131	503.462	517.528	✓
S13060	X yönü	86.964	25.348	249.381	503.462	575.252	✓
	Y yönü	66.465	23.836	349.131	503.462	546.554	✓
S13063	X yönü	- 18.034	44.944	93.164	162.529	371.734	✓
	Y yönü	20.192	35.258	126.158	162.529	374.754	✓
S13064	X yönü	23.864	23.783	97.878	172.006	219.130	✓
	Y yönü	23.953	34.892	133.941	172.006	219.254	✓
S13065	X yönü	16.456	34.105	93.164	162.529	272.105	✓
	Y yönü	19.231	29.609	126.158	162.529	275.990	✓

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ

S13066	X yönü	10.530	35.244	93.164	162.529	345.872	✓
	Y yönü	22.299	32.430	126.158	162.529	362.348	✓
S14005	X yönü	11.572	23.591	67.315	108.308	182.245	✓
	Y yönü	6.562	12.169	58.107	108.308	175.232	✓
S14006	X yönü	11.390	22.637	67.315	108.308	189.669	✓
	Y yönü	9.955	11.379	58.107	108.308	187.660	✓
S14026	X yönü	73.912	92.247	842.748	1239.108	950.016	✓
	Y yönü	80.186	160.159	890.104	1239.108	958.799	✓
S14046	X yönü	11.453	23.553	67.315	108.308	189.757	✓
	Y yönü	10.653	12.971	58.107	108.308	188.637	✓
S14047	X yönü	11.638	22.303	67.315	108.308	182.338	✓
	Y yönü	10.103	11.972	58.107	108.308	180.189	✓
S14053	X yönü	35.298	28.710	249.381	503.462	502.920	✓
	Y yönü	30.804	59.037	349.131	503.462	496.629	✓
S14054	X yönü	31.220	18.476	249.381	503.462	497.210	✓
	Y yönü	22.733	57.536	349.131	503.462	485.329	✓
S14055	X yönü	31.653	62.483	348.734	510.231	497.817	✓
	Y yönü	30.110	50.024	253.589	510.231	495.657	✓
S14056	X yönü	21.177	21.722	348.734	510.231	483.150	✓
	Y yönü	35.440	56.078	253.589	510.231	503.119	✓
S14057	X yönü	9.694	18.708	348.734	510.231	531.381	✓
	Y yönü	34.529	64.349	253.589	510.231	566.150	✓
S14058	X yönü	14.750	21.721	348.734	510.231	538.459	✓
	Y yönü	35.050	60.018	253.589	510.231	566.879	✓
S14059	X yönü	33.260	21.396	249.381	503.462	500.067	✓
	Y yönü	22.031	40.305	349.131	503.462	484.346	✓
S14060	X yönü	39.637	28.933	249.381	503.462	508.995	✓
	Y yönü	30.409	35.685	349.131	503.462	496.076	✓
S14063	X yönü	10.246	60.736	93.164	162.529	577.744	✓
	Y yönü	9.228	51.048	126.158	162.529	576.318	✓
S14064	X yönü	7.042	31.274	97.878	172.006	263.244	✓
	Y yönü	9.788	43.029	133.941	172.006	267.089	✓
S14065	X yönü	7.553	45.941	93.164	162.529	442.961	✓
	Y yönü	7.570	37.558	126.158	162.529	442.986	✓
S14066	X yönü	4.295	47.275	93.164	162.529	446.079	✓
	Y yönü	12.101	52.390	126.158	162.529	457.007	✓

RADYE MAT TEMELLERIN SONLU ELEMANLARLA ANALİZİ
ZEMİN YATAK KATSAYISI (t/m³) : 4500.0
ZEMİN EMNİYET GERİMESİ (t/m²) : 30.0
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETON ve ÇELİK MALZEME BİLGİLERİ
Beton dayanım gerilmesi (kg/cm²).:250
Çelik akma gerilmesi (kg/cm²).:4200
BETONARME HESAP YÜK KOMBİNASYON PARAMETRESİ

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD
ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

STATİK ANALİZ YÜK KOMBİNASYON NOTASYONLARI:

1. G+G+G+G+G	GENEL ÖLÜ YÜK
2. Q+Q+Q+Q+Q	1. GENEL HAREKETLİ YÜK
3. Q+o+Q+o+Q	2. HAREKETLİ YÜK
4. o+Q+o+Q+o	3. HAREKETLİ YÜK
5. Q+Q+o+Q+Q	4. HAREKETLİ YÜK
6. o+Q+Q+o+Q	5. HAREKETLİ YÜK
7. Q+o+Q+Q+o	6. HAREKETLİ YÜK
8. Gz	Yatay zemin itkisi
9. Ex + %5 x ey	X yönü deprem + %5 eksantrisite
10. Ex - %5 x ey	X yönü deprem - %5 eksantrisite
11. Ey + %5 x ex	Y yönü deprem + %5 eksantrisite
12. Ey - %5 x ex	Y yönü deprem - %5 eksantrisite
13. Wx + %5 x ey	X yönü rüzgar + %5 eksantrisite
14. Wx - %5 x ey	X yönü rüzgar - %5 eksantrisite
15. Wy + %5 x ex	Y yönü rüzgar + %5 eksantrisite
16. Wy - %5 x ex	Y yönü rüzgar - %5 eksantrisite

ZEMİN GERİLMESİ t/m²

Nok no	1 g	2 q	3 q	4 q	5 q	6 q	7 q	8 z	9 e	10 e	11 e	12 e	13 w	14 w	15 w	16 w	max. σ
593	18.44	1.378	1.378	1.38	1.378	1.378	1.379	0.00	4.121	3.674	-4.41	-4.1	0.192	0.216	-0.35	-0.33	19.82

max ZEMİN GERİLMESİ=19.829 t/m²

P2 - Z1

PROJE İSMİ.....:soyak gokyuzu evleri b-blok
KAT ADEDİ.....: 14
Bir kattaki KOLON SAYISI.....: 62
X yönü aks sayısı.....: 32
Y yönü aks sayısı.....: 23
DEPREM KATSAYISI.....(Ao).: .4
YAPI TİPİ KATSAYISI.....(R)..: 4
YAPI ÖNEM KATSAYISI.....(I)..: 1
ZEMİN HAKİM TİTREŞİM PERYODU..(Ta/Tb).: .1 / .3
HAREKETLİ YÜK KATSAYISI.....(n)..: .3
SIFIR RÖLATİF HAREKET YÜKSEKLİĞİ (m)..:.00
ZEMİN EMNİYET GERİLMESİ..... (t/m²)..:30.0
ZEMİN YATAK KATSAYISI..... (t/m³)..:4500.0
BETON YOĞUNLUĞU.....(t/m³)..:2.5
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETONARME KESİT DONATI HESAP YÖNTEMİ .....:BRÜT KESİTE GÖRE
DEPREM HESABI YÖNTEMİ .....:MOD SÜPERPOZİSYONU İLE DİNAMİK ANALİZ
TEMEL ANALİZ OPSİYONU.....:TEMELLER DİKKATE ALINMADAN, YAPI ANALİZİ
Zemin gerilmesi hareketli yük azaltma degeri..:.60
Zemin gerilmesi deprem azaltması.....:.50
Zemin gerilmesi rüzgar azaltması.....:.25
Kolonun oturduğu kiriş tesir çarpanı.....: 1.5
Kiriş & Kolon rijitlik bölgesi opsiyonu.....: Rijit davranış
Kiriş uçlarında elastik ankastrelik opsiyonu : Elastik ankastre

BETON ve ÇELİK MALZEME BİLGİLERİ	Kiriş\Kolon	Döşeme	Temel
Beton dayanım gerilmesi (kg/cm²)	250\300	250	250
Çelik akma gerilmesi (kg/cm²)	4200	4200	4200
Çelik akma gerilmesi (kg/cm²) (Etriye)	4200		4200

TAŞIMA GÜCÜ MALZEME KATSAYILARI	BETON 1.30	ÇELİK 1.10
TAŞIMA GÜCÜ YÜK KATSAYILARI	SABİT YÜK 1.40	HAREKETLİ YÜK 1.60

ELASTİSİTE MODÜLÜ (kg/cm²)

BS30	E1=	318000	G1=	127200
BS25	E2=	302500	G2=	121000

BETONARME HESAP YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

ZEMİN GERİLMESİ HAREKETLİ YÜK AZALTMA DEĞERLERİ

Kat	1	2	- 3	4	5	6	7	8	9	10
Eksiltme %				20	40	60	80	80	80	40

DEPREM RAPORU

Deprem yükü eksantirisitesi : 0.050
Dinamik Analiz min. deprem yükü oranı ß : 1.0

DİNAMİK ANALİZ BİLGİLERİ
TASARIM SPECTURUM BİLGİSİ

T (s)	Sa (m/s²) Ao.I.S(t)
0.00	4.000
0.10	10.000
0.30	10.000
0.40	7.944
0.50	6.644
0.60	5.744
0.70	5.076
0.80	4.564
0.90	4.152
1.00	3.816
1.10	3.536
1.20	3.300
1.30	3.096
1.40	2.916
1.50	2.800
5.00	2.800

MODAL ANALIZ - YAPI PERYOD ve VEKTORLERI

Mod	1.mod	2.mod	3.mod	4.mod	5.mod	6.mod	7.mod	8.mod	9.mod
w	7.70	7.87	9.50	36.77	37.50	40.41	89.59	94.00	94.33
T	0.8163	0.7983	0.6613	0.1709	0.1675	0.1555	0.0701	0.0668	0.0666
yon	y	b	x	y	b	x	y	b	x
1x	0.00000	-0.00001	0.00021	0.00000	-0.00004	0.00162	0.00000	-0.00125	0.00503
2x	-0.00002	-0.00007	0.00235	-0.00001	-0.00036	0.01279	0.00003	-0.00809	0.03249
3x	-0.00011	-0.00034	0.01089	-0.00005	-0.00140	0.04769	0.00008	-0.02405	0.09622
4x	-0.00021	-0.00067	0.02113	-0.00009	-0.00237	0.08033	0.00010	-0.03283	0.13138
5x	-0.00035	-0.00108	0.03349	-0.00012	-0.00324	0.10882	0.00011	-0.03286	0.13141
6x	-0.00050	-0.00155	0.04741	-0.00014	-0.00384	0.12767	0.00009	-0.02337	0.09337
7x	-0.00067	-0.00206	0.06237	-0.00014	-0.00404	0.13301	0.00004	-0.00709	0.02815
8x	-0.00085	-0.00261	0.07793	-0.00013	-0.00378	0.12292	-0.00001	0.01091	-0.04389
9x	-0.00103	-0.00318	0.09371	-0.00009	-0.00307	0.09748	-0.00005	0.02481	-0.09944
10x	-0.00122	-0.00377	0.10942	-0.00005	-0.00193	0.05853	-0.00008	0.02994	-0.11986
11x	-0.00141	-0.00436	0.12484	0.00000	-0.00047	0.00932	-0.00008	0.02429	-0.09718
12x	-0.00159	-0.00494	0.13981	0.00005	0.00120	-0.04611	-0.00005	0.00902	-0.03594
13x	-0.00177	-0.00551	0.15431	0.00009	0.00295	-0.10377	0.00001	-0.01214	0.04891
14x	-0.00193	-0.00608	0.16833	0.00011	0.00468	-0.16016	0.00011	-0.03452	0.13819
1y	0.00019	-0.00005	0.00000	0.00175	-0.00016	0.00000	0.00585	-0.00007	-0.00003
2y	0.00337	-0.00092	0.00000	0.02057	-0.00189	-0.00004	0.05390	-0.00067	-0.00021
3y	0.01095	-0.00297	0.00002	0.05399	-0.00492	-0.00011	0.11230	-0.00134	-0.00042
4y	0.02008	-0.00543	0.00003	0.08433	-0.00764	-0.00016	0.13838	-0.00158	-0.00050
5y	0.03125	-0.00842	0.00005	0.11036	-0.00995	-0.00021	0.12933	-0.00140	-0.00044
6y	0.04405	-0.01184	0.00008	0.12722	-0.01141	-0.00023	0.08532	-0.00084	-0.00026
7y	0.05807	-0.01557	0.00011	0.13150	-0.01174	-0.00023	0.01852	-0.00006	0.00000
8y	0.07296	-0.01952	0.00014	0.12142	-0.01078	-0.00020	-0.05138	0.00071	0.00025
9y	0.08840	-0.02361	0.00017	0.09693	-0.00853	-0.00015	-0.10304	0.00124	0.00041
10y	0.10413	-0.02776	0.00020	0.05951	-0.00514	-0.00008	-0.11998	0.00136	0.00043
11y	0.11993	-0.03192	0.00023	0.01190	-0.00087	0.00000	-0.09560	0.00102	0.00031
12y	0.13564	-0.03605	0.00027	-0.04238	0.00397	0.00009	-0.03445	0.00030	0.00007
13y	0.15118	-0.04012	0.00030	-0.09971	0.00905	0.00017	0.04956	-0.00064	-0.00023
14y	0.16648	-0.04411	0.00034	-0.15691	0.01409	0.00024	0.13903	-0.00159	-0.00052
1b	0.00000	0.00001	0.00000	0.00001	0.00008	0.00000	0.00000	0.00028	0.00007
2b	0.00003	0.00012	0.00001	0.00007	0.00075	0.00002	0.00003	0.00214	0.00054
3b	0.00019	0.00074	0.00003	0.00032	0.00362	0.00011	0.00009	0.00787	0.00196
4b	0.00041	0.00157	0.00007	0.00059	0.00661	0.00020	0.00014	0.01167	0.00291
5b	0.00068	0.00260	0.00011	0.00084	0.00939	0.00028	0.00016	0.01245	0.00311
6b	0.00100	0.00381	0.00016	0.00102	0.01141	0.00034	0.00013	0.00961	0.00240
7b	0.00136	0.00515	0.00021	0.00110	0.01225	0.00036	0.00006	0.00390	0.00097
8b	0.00174	0.00657	0.00026	0.00105	0.01165	0.00034	-0.00002	-0.00286	-0.00072
9b	0.00213	0.00804	0.00032	0.00087	0.00957	0.00028	-0.00009	-0.00844	-0.00211
10b	0.00253	0.00954	0.00037	0.00057	0.00613	0.00017	-0.00013	-0.01092	-0.00273
11b	0.00293	0.01104	0.00042	0.00016	0.00159	0.00003	-0.00012	-0.00933	-0.00233
12b	0.00333	0.01253	0.00047	-0.00031	-0.00367	-0.00012	-0.00005	-0.00390	-0.00097
13b	0.00373	0.01400	0.00052	-0.00082	-0.00930	-0.00029	0.00004	0.00410	0.00103
14b	0.00412	0.01544	0.00057	-0.00134	-0.01497	-0.00046	0.00015	0.01295	0.00324
Mxr%	0.008	0.073	60.920	0.000	0.016	15.329	0.000	0.361	5.780
Myr%	56.404	4.008	0.000	17.385	0.136	0.000	6.866	0.001	0.000
Mbr%	3.516	49.911	0.075	0.122	14.762	0.012	0.001	5.996	0.373

Mod w T yon	10.mod 155.07 0.0405 y	11.mod 161.66 0.0389 x	12.mod 167.98 0.0374 b	13.mod 226.11 0.0278 y	14.mod 235.56 0.0267 x	15.mod 249.54 0.0252 b	16.mod 296.56 0.0212 y	17.mod 308.07 0.0204 x	18.mod 326.29 0.0193 b	
1x	-0.00001	0.01125	0.00025	-0.00003	0.02039	0.00042	-0.00006	0.03323	0.00083	
2x	-0.00004	0.06136	0.00130	-0.00013	0.09546	0.00175	-0.00022	0.13390	0.00293	
3x	-0.00009	0.13447	0.00270	-0.00020	0.13504	0.00234	-0.00016	0.08557	0.00184	
4x	-0.00008	0.12498	0.00251	-0.00007	0.04475	0.00068	0.00011	-0.06652	-0.00166	
5x	-0.00002	0.04539	0.00088	0.00011	-0.08328	-0.00156	0.00021	-0.12133	-0.00269	
6x	0.00005	-0.05898	-0.00122	0.00017	-0.12752	-0.00219	0.00002	-0.00713	0.00011	
7x	0.00009	-0.12582	-0.00253	0.00006	-0.04651	-0.00065	-0.00019	0.11785	0.00279	
8x	0.00007	-0.11506	-0.00227	-0.00011	0.08084	0.00153	-0.00013	0.08120	0.00155	
9x	0.00000	-0.03450	-0.00063	-0.00017	0.13074	0.00220	0.00011	-0.06647	-0.00185	
10x	-0.00007	0.06561	0.00136	-0.00006	0.05461	0.00072	0.00019	-0.12371	-0.00265	
11x	-0.00009	0.12215	0.00244	0.00011	-0.07157	-0.00140	0.00001	-0.01429	0.00018	
12x	-0.00005	0.09686	0.00185	0.00016	-0.12183	-0.00197	-0.00018	0.10978	0.00254	
13x	0.00003	-0.00120	-0.00020	0.00004	-0.04068	-0.00026	-0.00011	0.07230	0.00092	
14x	0.00009	-0.12565	-0.00234	-0.00015	0.11035	0.00156	0.00016	-0.09469	-0.00175	
1y	0.01222	0.00001	-0.00004	0.02003	0.00003	-0.00002	0.02710	0.00005	-0.00002	
2y	0.09236	0.00008	-0.00043	0.12660	0.00020	-0.00039	0.14351	0.00027	-0.00044	
3y	0.13676	0.00011	-0.00056	0.11123	0.00016	-0.00027	0.03154	0.00003	-0.00003	
4y	0.10529	0.00008	-0.00035	-0.00135	-0.00001	0.00010	-0.10426	-0.00019	0.00033	
5y	0.01673	0.00001	0.00006	-0.10813	-0.00016	0.00034	-0.10093	-0.00017	0.00021	
6y	-0.07872	-0.00006	0.00040	-0.11384	-0.00016	0.00025	0.03489	0.00007	-0.00016	
7y	-0.12766	-0.00010	0.00050	-0.01478	-0.00002	-0.00006	0.12648	0.00021	-0.00031	
8y	-0.10278	-0.00009	0.00032	0.09869	0.00014	-0.00029	0.05443	0.00008	-0.00006	
9y	-0.01958	-0.00003	-0.00004	0.12349	0.00017	-0.00025	-0.08798	-0.00015	0.00025	
10y	0.07308	0.00004	-0.00035	0.03707	0.00006	0.00001	-0.11755	-0.00019	0.00022	
11y	0.12009	0.00008	-0.00045	-0.07987	-0.00009	0.00023	0.00158	-0.00001	-0.00007	
12y	0.09079	0.00008	-0.00028	-0.11739	-0.00016	0.00023	0.11321	0.00017	-0.00025	
13y	-0.00412	0.00002	0.00009	-0.03498	-0.00006	0.00001	0.06713	0.00011	-0.00009	
14y	-0.12311	-0.00008	0.00046	0.10882	0.00013	-0.00024	-0.09606	-0.00014	0.00020	
1b	0.00000	-0.00001	0.00004	0.00001	-0.00002	0.00162	0.00001	-0.00005	0.00280	
2b	0.00002	-0.00009	0.00464	0.00002	-0.00013	0.00841	0.00003	-0.00026	0.01230	
3b	0.00005	-0.00024	0.01186	0.00004	-0.00021	0.01231	0.00002	-0.00015	0.00551	
4b	0.00005	-0.00024	0.01214	0.00002	-0.00009	0.00472	-0.00001	0.00013	-0.00712	
5b	0.00003	-0.00011	0.00565	-0.00001	0.00010	-0.00679	-0.00003	0.00023	-0.00979	
6b	-0.00001	0.00008	-0.00397	-0.00003	0.00019	-0.01140	-0.00001	0.00002	0.00070	
7b	-0.00004	0.00022	-0.01093	-0.00002	0.00009	-0.00475	0.00002	-0.00021	0.01033	
8b	-0.00005	0.00022	-0.01101	0.00001	-0.00010	0.00660	0.00002	-0.00017	0.00628	
9b	-0.00002	0.00009	-0.00423	0.00003	-0.00019	0.01158	-0.00001	0.00010	-0.00614	
10b	0.00001	-0.00010	0.00505	0.00002	-0.00010	0.00541	-0.00002	0.00023	-0.01048	
11b	0.00004	-0.00021	0.01084	-0.00001	0.00008	-0.00578	-0.00001	0.00006	-0.00105	
12b	0.00004	-0.00018	0.00917	-0.00002	0.00018	-0.01078	0.00002	-0.00019	0.00933	
13b	0.00001	-0.00002	0.00034	-0.00001	0.00009	-0.00392	0.00002	-0.00017	0.00614	
14b	-0.00004	0.00024	-0.01168	0.00002	-0.00018	0.00999	-0.00001	0.00019	-0.00831	
Mxr%	0.000	3.655	0.002	0.000	2.815	0.001	0.000	2.651	0.001	∑= 91.6
Myr%	3.784	0.000	0.000	2.433	0.000	0.000	1.585	0.000	0.000	∑= 92.6
Mbr%	0.000	0.002	4.594	0.000	0.001	4.769	0.000	0.002	5.086	

Mxr=∑[(∑m.Φ)²/Mr]= %91.61 > %90.00 Dinamik kütle oranı yeterli. ✓

Myr=∑[(∑m.Φ)²/Mr]= %92.60 > %90.00 Dinamik kütle oranı yeterli. ✓

EŞDEĞER DEPREM HESABI 1. DOĞAL TİTREŞİM PERYODUNUN KONTROLU

Hn= m ∑Atx= >> Ctx= ∑Aty= >> Cty=

$T1x = Ctx \cdot Hn^{3/4}$ = s. < 1.0 Tx= s. ✓

$T1y = Cty \cdot Hn^{3/4}$ = s. < 1.0 Ty= s. ✓

KAT KÜTLESİ ve RİJİTLİK MERKEZİ (t)

Kat no	H (m)	Wg	Wq	Xg (m)	Xr (m)	Yg (m)	Yr (m)	∑Wk
1	3.50	999.34	206.74	18.20	18.98	14.72	14.69	1061.366
2	6.71	1103.07	206.74	18.28	18.98	14.71	14.69	1165.090
3	10.21	835.75	205.04	18.93	18.98	14.64	14.71	897.257
4	13.15	791.06	205.04	18.93	18.98	14.64	14.71	852.576
5	16.09	784.03	200.88	18.93	18.98	14.70	14.71	844.294
6	19.03	775.20	196.01	18.93	18.98	14.68	14.71	834.007
7	21.97	784.03	200.88	18.93	18.98	14.70	14.71	844.294
8	24.91	775.20	196.01	18.93	18.98	14.68	14.71	834.007
9	27.85	784.03	200.88	18.93	18.98	14.70	14.71	844.294
10	30.79	775.20	196.01	18.93	18.98	14.68	14.71	834.007
11	33.73	784.03	200.88	18.93	18.98	14.70	14.71	844.294
12	36.67	775.20	196.01	18.93	18.98	14.68	14.71	834.007
13	39.61	784.03	200.88	18.93	18.98	14.70	14.71	844.294
14	42.55	706.81	142.38	18.98	18.98	14.66	14.71	749.525

∑Wt = 12283.311

DEPREM KUVVETİ (t)

Deprem tepe yükü Ftx= 75.53 Fty= 78.78 (t)

Kat no	X YÖNÜ Modal Analiz	X YÖNÜ Eşdeğer dep.yön.	X YÖNÜ Deprem yükü	Y YÖNÜ Modal Analiz	Y YÖNÜ Eşdeğer dep.yön.	Y YÖNÜ Deprem yükü	Kat tipi
1	16.598	21.077	23.554	22.188	17.607	29.205	NORMAL
2	26.028	44.357	36.937	36.534	37.054	48.088	NORMAL
3	38.549	51.978	54.704	47.453	43.420	62.460	NORMAL
4	49.161	63.612	69.764	55.812	53.138	73.462	NORMAL
5	57.664	77.078	81.831	61.004	64.387	80.296	NORMAL
6	62.304	90.051	88.415	61.010	75.224	80.305	NORMAL
7	66.832	105.245	93.705	58.709	87.917	77.275	NORMAL
8	67.533	117.875	95.836	53.854	98.467	70.886	NORMAL
9	72.856	133.413	103.389	52.993	111.447	69.752	NORMAL
10	80.987	145.700	114.929	57.469	121.711	75.644	NORMAL
11	98.856	161.580	140.286	74.179	134.977	97.638	NORMAL
12	125.305	173.524	177.820	102.424	144.954	134.816	NORMAL
13	168.262	189.748	238.779	153.991	158.507	202.691	NORMAL
14	219.697	256.484	311.771	209.862	229.940	276.231	UST KAT
Σ	1149.833	1631.722	1631.722	1047.481	1378.749	1378.749	GENEL

Vt=W.A(t) / Ra(t)> 0,10. Ao.I.W 1631.72 , 1378.75 > 491.33

X Deprem kontrol: 1.00 x 1631.722 = 1631.722 > 1149.833 >>> 1631.722 Y Deprem kontrol: 1.00 x 1378.749 = 1378.749 > 1047.481 >>> 1378.749

Rüzgar kuvvetleri (t)

Kat no	X-yönü F	X-yönü ey m	Y-yönü F	Y-yönü ex m
1	6.174	17.975	7.550	14.700
2	5.662	17.975	6.924	14.700
3	8.870	18.950	8.938	14.700
4	7.451	18.950	7.508	14.700
5	7.451	18.950	7.508	14.700
6	7.451	18.950	7.508	14.700
7	10.245	18.950	10.323	14.700
8	10.245	18.950	10.323	14.700
9	10.245	18.950	10.323	14.700
10	10.245	18.950	10.323	14.700
11	10.245	18.950	10.323	14.700
12	10.245	18.950	10.323	14.700
13	10.245	18.950	10.323	14.700
14	10.245	18.950	10.323	14.700

Kat Deprem deplasmanları

Kat	9. yükleme		10. yükleme		11. yükleme		12. yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δy (m)	θz (rad)	δy (m)	θz (rad)
1	0.0000430	0.0000003	0.0000430	-0.000000	-0.000050	-0.000000	-0.000050	0.0000003
2	0.0004595	0.0000040	0.0004604	-0.000004	-0.000851	-0.000003	-0.000850	0.0000036
3	0.0021075	0.0000241	0.0021084	-0.000028	-0.002728	-0.000022	-0.002724	0.0000212
4	0.0040597	0.0000502	0.0040716	-0.000060	-0.004967	-0.000046	-0.004959	0.0000439
5	0.0064101	0.0000829	0.0064300	-0.000100	-0.007689	-0.000077	-0.007674	0.0000721
6	0.0090479	0.0001205	0.0090776	-0.000147	-0.010794	-0.000113	-0.010772	0.0001045
7	0.0118807	0.0001617	0.0119218	-0.000199	-0.014193	-0.000153	-0.014161	0.0001400
8	0.0148344	0.0002055	0.0148882	-0.000254	-0.017810	-0.000197	-0.017768	0.0001777
9	0.0178480	0.0002508	0.0179156	-0.000312	-0.021580	-0.000242	-0.021528	0.0002167
10	0.0208718	0.0002969	0.0209541	-0.000372	-0.025448	-0.000289	-0.025384	0.0002564
11	0.0238666	0.0003431	0.0239644	-0.000433	-0.029366	-0.000336	-0.029289	0.0002964
12	0.0268033	0.0003890	0.0269170	-0.000493	-0.033293	-0.000384	-0.033203	0.0003361
13	0.0296685	0.0004343	0.0297983	-0.000553	-0.037199	-0.000432	-0.037095	0.0003752
14	0.0324477	0.0004790	0.0325934	-0.000613	-0.041055	-0.000479	-0.040937	0.0004136

Deprem yapı salınımı: x= 0.00076 y= 0.00096

DEPREM PERDELERİ TABAN MOMENT KONTROLU

Kat deprem momenti (tm)

Kat	H (m)	Fx	Fx . H	Fy	Fy . H
1	3.50	23.55	82.44	29.20	102.22
2	6.71	36.94	247.85	48.09	322.67
3	10.21	54.70	558.53	62.46	637.71
4	13.15	69.76	917.40	73.46	966.03
5	16.09	81.83	1316.66	80.30	1291.97
6	19.03	88.41	1682.53	80.31	1528.21
7	21.97	93.71	2058.71	77.28	1697.74
8	24.91	95.84	2387.28	70.89	1765.77
9	27.85	103.39	2879.40	69.75	1942.60
10	30.79	114.93	3538.66	75.64	2329.07
11	33.73	140.29	4731.85	97.64	3293.33
12	36.67	177.82	6520.65	134.82	4943.69
13	39.61	238.78	9458.04	202.69	8028.58
14	42.55	311.77	13265.87	276.23	11753.63
		Mdx=	49645.87	Mdy=	40603.22

Perde taban momenti (tm)

M : Perde ve Panel deprem momenti

∑Mk : Perdelerde; bağlı olduğu kirişlerin deprem momentlerinin toplamı

Panellerde ise; başlık kolonlarından oluşan deprem momentlerinin toplamıdır.

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1001	4066.63	0.00	4066.63	8.28	171.78	163.50
S1026	831.00	2939.87	3770.87	897.17	93.75	990.93
S1051	5262.22	0.00	5262.22	8.60	172.31	163.71
S1053	2871.96	414.79	3286.74	4852.02	1554.31	6406.33
S1054	2864.94	386.32	3251.26	5143.13	1711.28	6854.41
S1055	3288.23	542.26	3830.49	4827.31	797.77	5625.08
S1056	3289.08	552.67	3841.75	5153.53	984.95	6138.48
S1059	0.22	1062.97	1063.19	7.85	774.53	766.68
S1060	0.05	771.17	771.22	7.84	720.89	713.06
S1061	0.65	661.15	661.80	8.11	696.86	688.75
S1062	0.18	906.84	907.02	7.84	735.06	727.22
TOPLAM	22075.15		34333.18	20824.64		29238.14

X yönü αm =34333.18 / 49645.87 = 0.71

Y yönü αm =29238.14 / 40603.22 = 0.72

Perde taban kesme kuvveti oranı :

X yönü Vm =261.94 / 1631.72 = 0.16

Y yönü Vm =-80.73 / 1378.75 = -0.06

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU

A1,B2 düzensizliklerinin kontrolu

max(di/hi)=0.0035, 0.02/R =.005

1. kat X dust = -.000043 + -.0000003 x (.12 - 14.69=-.000047 (S1001)

1. kat X dalt = -.000043 + -.0000003 x (29.28 - 14.69)=-.0000389 (S1051)

2. kat X dust = -.0004595 + -.000004 x (.12 - 14.69) - -.000047 = -.0004714 (S2002)

2. kat X dalt = -.0004595 + -.000004 x (29.28 - 14.69) - -.0000389 = -.0003614 (S2009)

X YÖNÜ (+%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0000470	0.0000389	0.0000430	1.09	0.10	0.00001	0.00009	Normal kat
2	0.0004714	0.0003614	0.0004164	1.13	0.25	0.00015	0.00091	Normal kat
3	0.0018747	0.0014120	0.0016433	1.14	0.84	0.00054	0.00301	Normal kat
4	0.0022589	0.0016560	0.0019575	1.15	0.83	0.00077	0.00402	Normal kat
5	0.0027272	0.0019743	0.0023507	1.16	0.89	0.00093	0.00459	Normal kat
6	0.0030721	0.0022043	0.0026382	1.16	0.93	0.00104	0.00491	Normal kat
7	0.0033091	0.0023574	0.0028332	1.17	0.96	0.00113	0.00500	Normal kat
8	0.0034589	0.0024494	0.0029542	1.17	0.98	0.00118	0.00491	Normal kat
9	0.0035368	0.0024913	0.0030141	1.17	1.00	0.00120	0.00467	Normal kat
10	0.0035558	0.0024927	0.0030242	1.18	1.01	0.00121	0.00429	Normal kat
11	0.0035285	0.0024622	0.0029954	1.18	1.02	0.00120	0.00384	Normal kat
12	0.0034665	0.0024079	0.0029372	1.18	1.02	0.00118	0.00333	Normal kat
13	0.0033883	0.0023430	0.0028657	1.18	1.03	0.00115	0.00282	Normal kat
14	0.0032949	0.0022644	0.0027797	1.19	0.00	0.00112	0.00227	Normal kat

X YÖNÜ (-%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0000387	0.0000474	0.0000430	1.10	0.10	0.00001	0.00009	Normal kat
2	0.0003547	0.0004801	0.0004174	1.15	0.25	0.00015	0.00091	Normal kat
3	0.0013697	0.0019256	0.0016477	1.17	0.84	0.00055	0.00301	Normal kat
4	0.0015976	0.0023283	0.0019629	1.19	0.83	0.00079	0.00403	Normal kat
5	0.0018957	0.0028202	0.0023580	1.20	0.89	0.00096	0.00461	Normal kat
6	0.0021080	0.0031862	0.0026471	1.20	0.93	0.00108	0.00492	Normal kat
7	0.0022456	0.0034416	0.0028436	1.21	0.96	0.00117	0.00502	Normal kat
8	0.0023246	0.0036071	0.0029658	1.22	0.98	0.00123	0.00493	Normal kat
9	0.0023558	0.0036978	0.0030268	1.22	1.00	0.00126	0.00469	Normal kat
10	0.0023486	0.0037271	0.0030379	1.23	1.01	0.00127	0.00431	Normal kat
11	0.0023119	0.0037075	0.0030097	1.23	1.02	0.00126	0.00386	Normal kat
12	0.0022533	0.0036506	0.0029520	1.24	1.02	0.00124	0.00335	Normal kat
13	0.0021862	0.0035750	0.0028806	1.24	1.03	0.00122	0.00284	Normal kat
14	0.0021089	0.0034801	0.0027945	1.25	0.00	0.00118	0.00229	Normal kat

Y YÖNÜ (+%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0000458	0.0000542	0.0000500	1.08	0.06	0.00002	0.00013	Normal kat
2	0.0007379	0.0008582	0.0007980	1.08	0.43	0.00027	0.00207	Normal kat
3	0.0016689	0.0020840	0.0018765	1.11	0.84	0.00060	0.00414	Normal kat
4	0.0019634	0.0025127	0.0022381	1.12	0.82	0.00085	0.00563	Normal kat
5	0.0023734	0.0030687	0.0027210	1.13	0.88	0.00104	0.00660	Normal kat
6	0.0026980	0.0035094	0.0031037	1.13	0.91	0.00119	0.00726	Normal kat
7	0.0029467	0.0038479	0.0033973	1.13	0.94	0.00131	0.00762	Normal kat
8	0.0031313	0.0040996	0.0036155	1.13	0.96	0.00139	0.00767	Normal kat
9	0.0032608	0.0042771	0.0037690	1.13	0.97	0.00145	0.00741	Normal kat
10	0.0033427	0.0043905	0.0038666	1.14	0.99	0.00149	0.00686	Normal kat
11	0.0033837	0.0044491	0.0039164	1.14	1.00	0.00151	0.00613	Normal kat
12	0.0033895	0.0044608	0.0039251	1.14	1.01	0.00152	0.00528	Normal kat
13	0.0033698	0.0044387	0.0039043	1.14	1.01	0.00151	0.00442	Normal kat
14	0.0033236	0.0043852	0.0038544	1.14	0.00	0.00149	0.00356	Normal kat

Y YÖNÜ (-%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	ηbi	ηki	ΔY/h	θi	kat tipi
1	0.0000550	0.0000460	0.0000505	1.09	0.06	0.00002	0.00013	Normal kat
2	0.0008629	0.0007448	0.0008039	1.07	0.43	0.00027	0.00208	Normal kat
3	0.0020725	0.0016767	0.0018746	1.11	0.84	0.00059	0.00414	Normal kat
4	0.0024896	0.0019807	0.0022352	1.11	0.82	0.00085	0.00562	Normal kat
5	0.0030330	0.0024003	0.0027167	1.12	0.88	0.00103	0.00659	Normal kat
6	0.0034620	0.0027348	0.0030984	1.12	0.91	0.00118	0.00725	Normal kat
7	0.0037891	0.0029927	0.0033909	1.12	0.94	0.00129	0.00761	Normal kat
8	0.0040304	0.0031857	0.0036081	1.12	0.96	0.00137	0.00765	Normal kat
9	0.0041984	0.0033229	0.0037607	1.12	0.97	0.00143	0.00739	Normal kat
10	0.0043034	0.0034117	0.0038576	1.12	0.99	0.00146	0.00685	Normal kat
11	0.0043547	0.0034587	0.0039067	1.11	1.00	0.00148	0.00611	Normal kat
12	0.0043600	0.0034697	0.0039149	1.11	1.01	0.00148	0.00527	Normal kat
13	0.0043331	0.0034542	0.0038937	1.11	1.01	0.00147	0.00441	Normal kat
14	0.0042742	0.0034127	0.0038434	1.11	0.00	0.00145	0.00355	Normal kat

TDY 6.3.2.1 A1 burulma düzensizliği:
1.2< ηbi=1.245 <2 , dinamik analizle çözülmüştür ✓
TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓
TDY 6.20 kosulu sağlanmaktadır. .0015 < .0035 ✓
TDY 6.21 koşulu sağlanmaktadır. max θi=.008 < 0.12 ✓

B1-Düşey doğrultudaki düzensizliklerinin kontrolu

Kat	Aw	Agx	Agy	ΣAex	ΣAey	ncix	nciy	AÇIKLAMA
1	10.69	40.65	24.87	51.34	35.56	1.00	1.00	Düzenli ✓
2	10.69	40.65	24.87	51.34	35.56	1.80	1.25	Düzenli ✓
3	2.49	26.03	26.06	28.52	28.56	1.00	1.00	Düzenli ✓
4	2.49	26.03	26.06	28.52	28.56	0.98	0.93	Düzenli ✓
5	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
6	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
7	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
8	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
9	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
10	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
11	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
12	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
13	6.41	22.67	24.62	29.08	31.03	1.00	1.00	Düzenli ✓
14	6.41	22.67	24.62	29.08	31.03	1.00	1.00	üst kat ✓

A4 düzensizliği bulunmamıştır. ✓

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU
No = 0,85 . fcd . b . d +fyd . As
Nmax = 0,5 . fck . Ac
Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü
Md,x/y = x/y yönünde en büyük kombinasyonun momenti
Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti
Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti
Vr,max = 2 . fck½ . Ac
Ac = Kolon kesit alanı
As,g = Gerekli donatı alanı
As,m = Mevcut donatı alanı Mevcut kolon min. boyuna donatı oranı : 0 01
rm = Mevcut donatı oranı Mevcut kolon donatı korozyon oranı % : 0

1. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S1002	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	36.4	2.4
S1009	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	31.9	2.2
S1010	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	41.3	3.3
S1011	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	255.6	8.9
S1013	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	407.9	13.3
S1014	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	252.5	12.7
S1016	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	254.6	5.5
S1017	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	36.4	3.0
S1018	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	51.1	3.4
S1019	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	385.8	5.6
S1020	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	279.3	2.6
S1023	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	281.3	2.9
S1024	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	368.3	4.1
S1025	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	44.7	3.2
S1027	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	54.3	3.6
S1028	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	340.9	6.3
S1029	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	294.1	4.0
S1032	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	269.0	2.9
S1033	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	335.4	3.8
S1034	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	45.7	3.3
S1035	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	41.1	3.2

S1036	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	241.6	8.6
S1038	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	364.5	12.9
S1039	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	350.1	12.9
S1041	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	241.9	5.4
S1042	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.3	3.0
S1043	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.6	2.3
S1050	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	31.8	2.1

1. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S1002	36.4	1.6	9.5	22.1	6.6	54.3	0.146	0.169	0.122	✓
S1009	31.9	0.9	9.3	18.1	5.8	53.0	0.128	0.096	0.110	✓
S1010	41.3	2.1	9.7	30.3	8.8	56.8	0.165	0.213	0.155	✓
S1011	255.6	33.0	166.7	216.0	4.9	26.4	0.584	0.198	0.184	✓
S1013	407.9	9.2	28.3	283.6	34.6	209.6	0.816	0.325	0.165	✓
S1014	252.5	5.7	29.7	42.9	31.5	137.7	0.505	0.192	0.229	✓
S1016	254.6	31.1	166.7	254.6	5.7	27.0	0.582	0.187	0.213	✓
S1017	36.4	1.3	9.5	27.3	7.8	55.9	0.145	0.141	0.139	✓
S1018	51.1	2.1	10.1	37.2	9.4	58.9	0.204	0.204	0.159	✓
S1019	385.8	35.5	153.2	297.7	6.7	26.8	0.882	0.232	0.250	✓
S1020	127.5	41.7	145.7	279.3	6.3	27.0	0.638	0.286	0.233	✓
S1023	146.6	39.7	150.8	281.3	6.3	27.1	0.643	0.263	0.234	✓
S1024	368.3	33.9	157.7	290.1	6.5	27.0	0.842	0.215	0.242	✓
S1025	44.7	1.4	9.9	33.2	8.7	57.7	0.179	0.143	0.150	✓
S1027	54.3	1.9	10.3	39.3	9.9	59.4	0.217	0.188	0.166	✓
S1028	340.9	35.3	162.8	301.3	6.8	26.8	0.779	0.217	0.254	✓
S1029	188.3	39.0	159.7	294.1	6.6	26.9	0.672	0.244	0.246	✓
S1032	150.9	40.7	151.9	269.0	6.1	27.0	0.615	0.268	0.224	✓
S1033	335.4	34.5	163.5	272.4	6.1	27.0	0.767	0.211	0.227	✓
S1034	45.7	1.3	9.9	33.8	8.8	57.9	0.183	0.136	0.153	✓
S1035	41.1	2.1	9.7	30.2	8.7	56.8	0.165	0.212	0.154	✓
S1036	241.6	32.9	165.9	241.6	5.4	26.9	0.552	0.198	0.202	✓
S1038	364.5	8.2	29.6	108.1	31.9	168.5	0.729	0.278	0.190	✓
S1039	350.1	7.9	29.9	101.2	31.8	165.6	0.700	0.264	0.192	✓
S1041	241.9	30.6	165.9	241.9	5.4	26.9	0.553	0.184	0.203	✓
S1042	36.3	1.3	9.5	27.2	7.9	55.9	0.145	0.133	0.141	✓
S1043	36.6	1.6	9.5	22.1	6.4	54.3	0.146	0.168	0.118	✓
S1050	31.8	0.7	9.3	18.2	5.8	53.0	0.127	0.072	0.110	✓

Kat Kapasite Kontrolu:
Nmax= 10250.0> Nd,max= 5410.4
Mr,x= 2144.2> Md,x= 477.1
Mr,y= 1678.1> Md,y= 297.5

2. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S2002	20x100	2000	2x4ø16 +	2x5ø12	27.38	28.13	0.014	431.5	250.0	18.4	7.1
S2009	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	16.4	7.7
S2010	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	20.4	9.7
S2011	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	244.4	24.1
S2013	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	375.2	10.8
S2014	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	211.2	15.6
S2016	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	247.1	12.7
S2017	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	18.0	10.5
S2018	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	25.5	8.5
S2019	140x25	3500	2x5ø16 +	2x8ø12	38.18	88.42	0.011	717.9	437.5	372.4	14.7
S2020	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	261.7	6.5
S2023	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	256.3	7.9
S2024	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	359.4	10.8
S2025	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	22.3	9.8
S2027	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	27.1	9.8
S2028	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	330.1	14.3
S2029	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	277.0	10.5
S2032	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	243.8	7.5
S2033	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	326.5	10.1
S2034	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	22.8	10.3
S2035	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	20.3	10.0
S2036	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	232.6	23.4
S2038	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	328.3	15.1
S2039	25x160	4000	2x5ø16 +	2x9ø12	40.44	48.23	0.010	808.3	500.0	312.0	17.1
S2041	140x25	3500	2x5ø16 +	2x8ø12	38.18	44.21	0.011	717.9	437.5	233.9	12.2
S2042	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	17.9	10.8
S2043	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	18.6	6.9
S2050	20x100	2000	2x3ø16 +	2x4ø16	28.13	28.13	0.014	434.3	250.0	16.6	7.6

2. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S2002	13.8	3.6	8.4	9.2	14.0	50.0	0.074	0.427	0.280	✓
S2009	12.2	2.5	8.5	4.0	14.7	47.0	0.066	0.293	0.312	✓
S2010	15.4	4.8	8.7	13.1	16.5	49.7	0.082	0.555	0.331	✓
S2011	244.4	44.5	166.1	99.5	3.7	21.4	0.559	0.268	0.171	✓
S2013	375.2	8.5	29.3	170.0	37.7	190.0	0.750	0.289	0.198	✓
S2014	211.2	4.8	28.4	20.2	43.2	125.0	0.422	0.168	0.345	✓
S2016	247.1	33.0	166.3	101.3	5.9	21.5	0.565	0.198	0.273	✓
S2017	13.9	3.8	8.6	11.1	17.5	49.2	0.072	0.440	0.357	✓
S2018	19.3	5.2	8.9	16.7	15.4	50.8	0.102	0.589	0.303	✓
S2019	372.4	37.4	156.7	268.0	6.0	27.0	0.851	0.239	0.223	✓
S2020	240.9	37.6	165.8	261.7	5.9	27.0	0.598	0.226	0.218	✓
S2023	220.1	35.7	164.1	160.0	5.2	24.5	0.586	0.218	0.214	✓
S2024	-45.6	20.3	66.1	266.3	6.0	27.0	0.821	0.307	0.222	✓
S2025	17.3	4.3	8.8	14.5	17.3	50.2	0.089	0.490	0.345	✓
S2027	20.2	4.8	8.9	18.0	17.3	51.2	0.108	0.540	0.338	✓
S2028	330.1	35.7	164.0	272.7	6.1	27.0	0.754	0.218	0.227	✓
S2029	183.8	35.2	159.0	277.0	6.2	27.0	0.633	0.221	0.231	✓
S2032	199.6	36.6	161.5	173.7	5.7	25.0	0.557	0.227	0.230	✓
S2033	-31.0	19.9	75.2	249.7	5.6	26.9	0.746	0.265	0.209	✓
S2034	17.5	4.1	8.8	14.9	18.0	50.3	0.091	0.465	0.358	✓
S2035	15.3	4.7	8.7	13.0	17.0	49.7	0.081	0.545	0.343	✓
S2036	232.6	42.1	165.3	100.3	5.3	21.4	0.532	0.255	0.245	✓
S2038	328.3	7.4	30.3	86.3	41.6	159.1	0.657	0.244	0.261	✓
S2039	312.0	7.0	30.3	79.4	43.8	155.9	0.624	0.232	0.281	✓
S2041	233.9	32.0	165.4	96.6	6.0	21.2	0.535	0.193	0.282	✓
S2042	13.8	3.6	8.6	11.0	17.9	49.1	0.072	0.423	0.365	✓
S2043	13.8	3.6	8.6	9.2	13.7	48.6	0.074	0.418	0.282	✓
S2050	13.5	2.3	8.5	16.3	14.9	50.7	0.067	0.268	0.293	✓

Kat Kapasite Kontrolu:
Nmax= 10250.0> Nd,max= 4856.0
Mr,x= 1997.5> Md,x= 485.0
Mr,y= 1523.8> Md,y= 428.2

3. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S3011	140x20	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	171.3	16.5
S3013	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	344.3	9.4
S3014	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	165.5	7.8
S3016	140x20	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	188.8	14.4
S3019	140x20	2800	2x4ø16 +	2x7ø12	31.90	49.24	0.011	579.5	350.0	238.1	16.4
S3020	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	246.8	19.0
S3023	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	233.7	17.4
S3024	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	242.9	14.6
S3028	140x20	2800	2x4ø16 +	2x7ø12	31.90	33.16	0.011	579.5	350.0	243.2	15.4
S3029	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	261.9	19.2
S3032	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	220.6	19.1
S3033	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	226.9	14.9
S3036	140x20	2800	2x4ø16 +	2x7ø12	31.90	33.16	0.011	579.5	350.0	173.3	16.6
S3038	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	292.2	8.1
S3039	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	273.3	8.2
S3041	140x20	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	174.2	13.8

3. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S3011	-24.3	41.3	59.8	44.1	3.2	11.8	0.489	0.691	0.276	✓
S3013	344.3	7.3	18.1	232.9	33.1	154.3	0.861	0.402	0.214	✓
S3014	165.5	3.5	18.1	-9.3	35.6	78.3	0.414	0.192	0.455	✓
S3016	-14.5	36.5	64.6	49.6	3.9	12.1	0.539	0.565	0.324	✓
S3019	-74.5	40.4	31.3	238.1	5.0	18.2	0.680	1.292	0.276	Mr
S3020	63.0	41.8	96.0	246.8	5.2	18.0	0.705	0.435	0.289	✓
S3023	73.7	39.9	99.4	98.1	4.1	14.7	0.668	0.401	0.278	✓
S3024	-60.5	36.8	40.1	242.9	5.1	18.1	0.694	0.917	0.283	✓
S3028	-23.9	39.4	60.0	243.2	5.1	18.1	0.695	0.658	0.283	✓
S3029	188.4	41.6	120.8	261.9	5.5	17.7	0.748	0.344	0.311	✓
S3032	78.0	37.0	100.7	220.6	4.6	18.3	0.630	0.367	0.253	✓
S3033	-43.6	36.9	49.9	146.8	4.6	16.8	0.648	0.740	0.273	✓
S3036	-12.5	41.2	65.6	48.6	3.9	12.0	0.495	0.629	0.320	✓
S3038	292.2	6.2	19.5	58.5	30.8	112.5	0.731	0.316	0.273	✓
S3039	273.3	5.8	19.8	52.4	32.5	109.9	0.683	0.291	0.296	✓
S3041	-16.0	35.5	63.9	48.9	4.1	12.0	0.498	0.555	0.339	✓

Kat Kapasite Kontrolu:
Nmax= 5800.0> Nd,max= 3697.0
Mr,x= 927.6> Md,x= 490.9
Mr,y= 642.8> Md,y= 186.3

4. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S4011	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	152.0	8.6
S4013	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	302.7	25.5
S4014	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	185.0	10.5
S4016	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	166.6	9.6
S4019	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	212.7	20.0
S4020	140x20	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	214.6	43.8
S4023	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	205.7	40.3
S4024	140x20	2800	2x4ø16 +	2x7ø12	31.90	41.20	0.011	579.5	350.0	214.9	18.6
S4028	140x20	2800	2x4ø16 +	2x7ø12	31.90	29.14	0.011	579.5	350.0	273.2	20.3
S4029	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	229.3	35.2
S4032	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	193.5	43.9
S4033	140x20	2800	2x4ø16 +	2x7ø12	31.90	37.18	0.011	579.5	350.0	198.8	22.0
S4036	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	154.0	9.0
S4038	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	262.7	16.5
S4039	20x160	3200	2x4ø16 +	2x7ø12	31.90	27.38	0.010	644.9	400.0	244.8	15.6
S4041	140x20	2800	2x4ø16 +	2x7ø12	31.90	25.12	0.011	579.5	350.0	154.2	9.3

4. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S4011	-23.7	19.5	60.1	38.0	5.1	11.4	0.434	0.325	0.444	✓
S4013	302.7	6.4	19.2	206.8	41.1	152.7	0.757	0.331	0.269	✓
S4014	185.0	3.9	18.7	-11.4	16.0	77.1	0.462	0.207	0.208	✓
S4016	-15.2	21.5	64.3	42.0	5.0	11.6	0.476	0.334	0.432	✓
S4019	-66.0	34.6	36.8	86.9	5.7	14.1	0.608	0.941	0.401	✓
S4020	44.1	66.6	89.4	83.7	7.6	14.0	0.613	0.744	0.542	✓
S4023	56.1	61.1	93.8	84.7	6.9	14.0	0.588	0.651	0.492	✓
S4024	-54.2	35.1	43.9	161.8	7.2	17.3	0.614	0.800	0.419	✓
S4028	-18.6	31.2	62.6	135.3	6.8	16.3	0.781	0.499	0.420	✓
S4029	95.7	52.2	105.8	171.0	5.0	17.5	0.655	0.493	0.288	✓
S4032	61.5	61.5	95.5	87.3	4.3	14.1	0.553	0.644	0.306	✓
S4033	-39.0	37.5	52.3	127.6	7.4	16.0	0.568	0.717	0.459	✓
S4036	-12.0	20.0	65.9	42.3	5.5	11.7	0.440	0.303	0.473	✓
S4038	87.2	4.9	14.5	262.7	33.3	154.3	0.657	0.336	0.216	✓
S4039	96.5	5.1	15.0	244.8	32.1	154.6	0.612	0.338	0.208	✓
S4041	-15.7	20.7	64.0	42.1	5.4	11.6	0.441	0.323	0.466	✓

Kat Kapasite Kontrolu:
Nmax= 5800.0> Nd,max= 3364.5
Mr,x= 901.8> Md,x= 481.6
Mr,y= 708.5> Md,y= 194.5

5. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S5011	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	136.2	10.7
S5013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	263.0	23.8
S5014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	168.5	10.5
S5016	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	148.8	10.8
S5019	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	273.8	20.8
S5020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	185.3	46.0
S5023	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	177.9	42.4
S5024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	265.8	19.2
S5028	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	233.6	21.2
S5029	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	197.7	36.1
S5032	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	166.2	46.0
S5033	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	233.9	22.6
S5036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.5	11.1
S5038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	234.8	15.5
S5039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	218.0	14.5
S5041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.1	10.4

5. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S5011	-19.6	17.9	52.0	33.9	5.4	10.3	0.454	0.344	0.523	✓
S5013	178.8	6.2	15.3	182.5	46.4	116.7	0.809	0.406	0.398	✓
S5014	168.5	3.5	15.2	168.5	24.3	115.8	0.518	0.233	0.210	✓
S5016	-11.9	17.7	55.8	37.0	5.5	10.5	0.496	0.318	0.522	✓
S5019	-53.2	29.7	33.7	142.9	7.3	14.2	0.913	0.881	0.516	✓
S5020	27.2	70.7	72.4	70.3	8.3	12.0	0.618	0.976	0.691	✓
S5023	38.9	65.1	76.6	71.4	7.6	12.0	0.593	0.849	0.632	✓
S5024	-42.7	28.9	39.5	141.8	7.7	14.2	0.886	0.731	0.545	✓
S5028	-10.0	26.3	56.7	117.4	7.3	13.6	0.779	0.463	0.535	✓
S5029	119.9	60.0	97.4	146.9	5.7	14.3	0.659	0.615	0.398	✓
S5032	44.2	71.1	78.4	120.0	5.2	13.7	0.554	0.907	0.378	✓

S5033	-28.4	31.7	47.3	110.3	7.8	13.5	0.780	0.671	0.582	✓
S5036	-7.9	18.3	57.6	38.1	6.0	10.5	0.462	0.319	0.571	✓
S5038	77.4	5.1	12.5	231.0	33.7	116.2	0.722	0.406	0.290	✓
S5039	86.1	5.3	12.9	217.5	32.4	117.0	0.671	0.413	0.276	✓
S5041	-11.9	17.3	55.8	37.5	5.9	10.5	0.460	0.310	0.560	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 3180.0
Mr,x= 779.3> Md,x= 474.9
Mr,y= 614.9> Md,y= 216.4

6. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S6011	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	118.4	13.1
S6013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	228.1	16.1
S6014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	152.3	6.5
S6016	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	128.8	14.0
S6019	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	164.1	20.3
S6020	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	160.6	43.2
S6023	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	155.1	39.2
S6024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	165.1	20.5
S6028	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	166.0	17.0
S6029	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	170.7	35.8
S6032	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	143.9	43.4
S6033	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	150.6	22.1
S6036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	121.0	13.7
S6038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	208.8	8.0
S6039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	194.3	6.6
S6041	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	119.9	13.0

6. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S6011	-16.9	19.0	53.4	29.9	6.3	10.1	0.395	0.356	0.619	✓
S6013	155.5	7.1	15.0	156.1	30.0	114.4	0.702	0.474	0.262	✓
S6014	152.3	3.2	14.9	-11.0	12.3	61.4	0.469	0.215	0.201	✓
S6016	-10.3	19.8	56.5	32.1	6.4	10.2	0.429	0.351	0.624	✓
S6019	-43.3	32.7	39.2	125.8	8.4	13.9	0.547	0.833	0.606	✓
S6020	17.8	63.9	68.7	61.2	9.6	11.6	0.535	0.930	0.830	✓
S6023	28.8	57.7	73.1	62.5	8.8	11.6	0.517	0.790	0.761	✓
S6024	-33.9	32.8	44.4	124.3	8.9	13.8	0.550	0.738	0.643	✓
S6028	-3.8	29.0	59.5	103.1	8.4	13.7	0.553	0.488	0.633	✓
S6029	135.9	57.3	99.7	127.5	6.7	13.9	0.569	0.575	0.483	✓
S6032	34.6	64.4	75.1	104.2	6.1	13.3	0.480	0.857	0.462	✓
S6033	-21.5	35.5	51.0	96.3	9.0	13.0	0.502	0.696	0.692	✓
S6036	-5.6	19.6	58.6	33.8	7.0	10.3	0.403	0.334	0.676	✓
S6038	69.0	5.9	12.2	36.5	10.9	83.3	0.642	0.484	0.131	✓
S6039	76.9	6.2	12.5	31.1	11.6	81.0	0.598	0.494	0.143	✓
S6041	-9.8	18.8	56.7	33.0	6.9	10.3	0.400	0.332	0.670	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 2547.7
Mr,x= 790.6> Md,x= 473.0
Mr,y= 485.2> Md,y= 157.2

7. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S7011	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	102.3	13.2
S7013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	195.7	19.0
S7014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	135.7	8.0
S7016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	110.8	13.9
S7019	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	141.9	19.8
S7020	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	138.8	47.3
S7023	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	134.3	42.6
S7024	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	142.5	19.8
S7028	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	167.9	17.4
S7029	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	149.0	35.1
S7032	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	125.3	46.8
S7033	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	129.5	21.7
S7036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	105.3	13.8
S7038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	183.7	10.2
S7039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	171.4	8.7
S7041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	103.4	13.0

7. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S7011	8.0	21.3	64.6	26.6	6.8	9.9	0.341	0.330	0.688	✓
S7013	134.0	7.7	14.5	137.9	32.2	111.8	0.602	0.527	0.288	✓
S7014	135.7	3.2	14.6	-9.3	11.1	62.2	0.418	0.221	0.179	✓
S7016	16.0	22.2	68.0	28.1	7.0	10.0	0.369	0.327	0.698	✓
S7019	-33.7	31.0	44.5	109.4	9.2	13.4	0.473	0.697	0.684	✓
S7020	11.5	68.9	66.1	53.3	10.6	11.2	0.463	1.043	0.940	Mr
S7023	21.4	61.8	70.1	54.6	9.8	11.3	0.448	0.881	0.864	✓
S7024	-25.3	30.7	49.0	107.7	9.7	13.4	0.475	0.627	0.727	✓
S7028	1.8	26.6	62.0	89.6	9.1	12.7	0.560	0.429	0.717	✓
S7029	53.6	48.7	81.5	111.7	7.5	13.5	0.497	0.598	0.554	✓
S7032	27.9	68.9	72.7	91.0	6.8	12.8	0.418	0.947	0.533	✓
S7033	-14.8	33.9	54.5	83.4	9.8	12.5	0.432	0.622	0.785	✓
S7036	19.7	22.2	69.5	30.2	7.7	10.1	0.351	0.319	0.756	✓
S7038	61.1	6.5	11.8	182.2	18.8	116.6	0.565	0.549	0.161	✓
S7039	68.2	6.8	12.1	171.4	16.8	116.0	0.527	0.563	0.145	✓
S7041	14.3	20.8	67.3	29.2	7.6	10.1	0.345	0.310	0.751	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 2237.5
Mr,x= 822.7> Md,x= 481.3
Mr,y= 547.7> Md,y= 180.4

8. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S8011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	87.1	13.5
S8013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	165.5	19.0
S8014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	118.8	7.7
S8016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	94.1	14.3
S8019	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	121.0	20.1
S8020	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	117.6	48.1
S8023	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	114.1	42.9
S8024	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	121.3	20.0
S8028	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	138.5	16.6
S8029	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	125.6	34.6
S8032	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	105.6	47.0
S8033	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	110.3	21.9
S8036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	90.8	14.3
S8038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	159.2	9.9
S8039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	148.6	8.2
S8041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	88.0	13.3

8. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S8011	8.4	21.0	64.8	23.5	7.2	9.7	0.290	0.325	0.744	✓
S8013	113.9	8.0	13.9	76.3	28.6	97.3	0.509	0.576	0.294	✓
S8014	118.8	3.3	14.1	-7.2	10.6	63.3	0.366	0.235	0.167	✓
S8016	15.1	22.2	67.6	24.5	7.4	9.8	0.314	0.328	0.760	✓
S8019	-24.3	30.6	49.5	93.6	9.8	12.9	0.403	0.618	0.759	✓
S8020	6.5	68.9	64.0	45.6	11.3	10.9	0.392	1.077	1.037	Mr
S8023	15.1	61.0	67.6	46.8	10.4	10.9	0.380	0.903	0.955	✓
S8024	-16.9	30.1	53.4	92.0	10.4	12.8	0.404	0.564	0.810	✓
S8028	6.9	25.4	64.1	77.1	9.7	12.2	0.462	0.397	0.792	✓
S8029	43.6	46.5	78.2	94.6	8.1	12.9	0.419	0.594	0.627	✓
S8032	21.2	68.1	70.1	76.9	7.3	12.2	0.352	0.971	0.600	✓
S8033	-8.0	33.5	57.5	71.6	10.4	12.0	0.368	0.582	0.867	✓
S8036	20.1	22.1	69.6	26.9	8.2	9.9	0.303	0.317	0.824	✓
S8038	53.6	6.9	11.5	158.0	16.9	114.6	0.490	0.601	0.148	✓
S8039	59.6	7.3	11.8	148.6	14.8	113.4	0.457	0.622	0.131	✓
S8041	14.1	20.6	67.2	25.6	8.1	9.9	0.293	0.307	0.819	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 1906.2
Mr,x= 824.9> Md,x= 475.5
Mr,y= 524.8> Md,y= 179.3

9. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S9011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	72.9	13.4
S9013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	137.0	19.5
S9014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	101.8	7.8
S9016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	78.4	14.2
S9019	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	101.1	19.7
S9020	120x20	2400	2x4ø16 +	2x6ø12	29.64	60.29	0.012	505.5	300.0	98.7	48.4
S9023	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	95.7	42.8
S9024	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	101.3	19.4

S9028	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	111.0	16.0
S9029	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	107.0	33.0
S9032	120x20	2400	2x4ø16 + 2x6ø12	29.64	52.25	0.012	505.5	300.0	89.6	46.7
S9033	120x20	2400	2x4ø16 + 2x6ø12	29.64	40.19	0.012	505.5	300.0	92.0	21.3
S9036	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	77.5	14.3
S9038	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	135.2	10.1
S9039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	126.2	8.3
S9041	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	73.5	13.2

9. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S9011	8.8	20.2	64.9	20.4	7.5	9.6	0.243	0.311	0.788	✓
S9013	94.8	8.3	13.2	62.2	28.5	92.6	0.422	0.624	0.308	✓
S9014	101.8	3.3	13.5	-4.9	9.8	64.4	0.313	0.248	0.152	✓
S9016	14.4	21.4	67.3	21.1	7.8	9.6	0.261	0.318	0.810	✓
S9019	-15.8	29.1	54.0	78.3	10.2	12.3	0.337	0.540	0.831	✓
S9020	3.2	68.5	62.6	38.8	11.8	10.5	0.329	1.095	1.116	Mr
S9023	10.5	60.1	65.6	39.8	10.9	10.6	0.319	0.916	1.031	Mr
S9024	-9.5	28.5	56.9	76.8	10.9	12.2	0.338	0.500	0.888	✓
S9028	10.8	23.3	65.8	64.7	10.1	11.7	0.370	0.354	0.860	✓
S9029	35.8	44.6	75.6	80.7	8.6	12.4	0.357	0.590	0.692	✓
S9032	16.8	67.3	68.3	65.4	7.7	11.8	0.299	0.985	0.659	✓
S9033	-2.2	31.9	60.2	60.1	10.9	11.5	0.307	0.530	0.942	✓
S9036	20.6	21.5	69.8	39.6	9.3	10.6	0.258	0.308	0.882	✓
S9038	46.3	7.2	11.1	134.1	16.5	111.2	0.416	0.644	0.149	✓
S9039	51.1	7.6	11.4	126.2	14.3	109.7	0.388	0.670	0.130	✓
S9041	13.8	19.8	67.0	22.2	8.4	9.7	0.245	0.295	0.874	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 1598.9
Mr,x= 827.3> Md,x= 462.7
Mr,y= 510.4> Md,y= 183.2

10. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI başlık	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S10011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	59.3	13.1
S10013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	109.9	19.6
S10014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	84.8	7.7
S10016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	63.6	14.0
S10019	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	82.1	19.1
S10020	120x20	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	79.6	47.7
S10023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	77.4	41.9
S10024	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	82.3	18.7
S10028	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	86.2	14.9
S10029	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	85.7	31.1
S10032	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	71.9	45.5
S10033	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	74.9	20.5
S10036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	65.1	14.2
S10038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	111.7	10.0
S10039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	104.1	8.2
S10041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	59.7	13.0

10. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S10011	8.9	19.3	65.0	17.3	7.7	9.4	0.198	0.298	0.822	✓
S10013	76.5	8.4	12.5	48.8	28.3	87.9	0.338	0.671	0.322	✓
S10014	84.8	3.3	12.8	-2.5	9.1	65.6	0.261	0.260	0.138	✓
S10016	13.4	20.6	66.9	17.6	8.0	9.4	0.212	0.308	0.849	✓
S10019	-8.3	27.7	57.4	63.6	10.5	11.7	0.274	0.482	0.898	✓
S10020	0.5	66.8	61.4	31.8	12.1	10.2	0.265	1.088	1.184	Mr
S10023	6.4	58.0	63.9	32.6	11.2	10.2	0.258	0.907	1.097	Mr
S10024	-3.2	26.8	59.7	62.3	11.2	11.6	0.274	0.449	0.963	✓
S10028	13.6	21.3	67.0	53.0	10.3	11.2	0.287	0.318	0.921	✓
S10029	27.6	41.3	72.6	65.1	8.9	11.7	0.286	0.569	0.758	✓
S10032	11.9	64.6	66.2	52.6	8.0	11.2	0.240	0.975	0.716	✓
S10033	2.7	30.3	62.3	49.3	11.1	11.1	0.250	0.486	1.008	Mr
S10036	21.0	20.9	70.0	33.6	9.6	10.3	0.217	0.298	0.936	✓
S10038	39.0	7.3	10.8	110.5	15.7	106.4	0.344	0.676	0.148	✓
S10039	42.6	7.8	10.9	104.1	13.4	105.0	0.320	0.710	0.127	✓
S10041	13.1	19.2	66.8	30.5	9.4	10.1	0.199	0.287	0.926	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 1298.2
Mr,x= 826.2> Md,x= 443.5
Mr,y= 493.0> Md,y= 184.6

11. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	46.2	12.7
S11013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	83.7	19.4
S11014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	67.9	7.5
S11016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	49.4	13.6
S11019	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	63.8	18.3
S11020	120x20	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	62.3	46.5
S11023	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	60.5	40.5
S11024	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	63.9	17.8
S11028	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	65.4	13.7
S11029	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	68.7	28.8
S11032	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	57.5	43.8
S11033	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	58.0	19.4
S11036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	53.6	14.2
S11038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	88.5	9.9
S11039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	82.4	7.9
S11041	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	46.5	12.5

11. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S11011	8.3	18.9	64.7	23.1	8.4	9.7	0.154	0.292	0.862	✓
S11013	58.6	8.4	11.7	36.0	27.7	83.1	0.257	0.717	0.334	✓
S11014	67.9	3.3	12.1	67.9	12.4	94.6	0.209	0.273	0.131	✓
S11016	11.8	20.3	66.2	24.1	8.6	9.8	0.165	0.307	0.882	✓
S11019	-2.4	26.7	60.1	49.3	10.6	11.1	0.213	0.445	0.964	✓
S11020	-1.1	64.9	60.7	25.5	12.2	9.9	0.208	1.070	1.241	Mr
S11023	3.5	55.8	62.7	26.1	11.4	9.9	0.202	0.890	1.153	Mr
S11024	1.6	25.7	61.9	48.3	11.4	11.0	0.213	0.416	1.035	Mr
S11028	14.6	19.8	67.4	41.2	10.5	10.7	0.218	0.293	0.982	✓
S11029	21.2	38.2	70.1	52.3	9.1	11.2	0.229	0.545	0.816	✓
S11032	8.9	62.1	65.0	42.1	8.2	10.7	0.192	0.956	0.766	✓
S11033	6.1	29.1	63.8	38.5	11.3	10.5	0.193	0.456	1.073	Mr
S11036	21.1	21.4	70.0	27.8	9.8	10.0	0.179	0.305	0.982	✓
S11038	31.6	7.3	10.3	87.1	15.0	100.6	0.272	0.704	0.150	✓
S11039	34.1	7.8	10.5	82.4	12.5	99.2	0.254	0.744	0.126	✓
S11041	11.7	18.8	66.2	24.1	9.6	9.8	0.155	0.284	0.978	✓

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 1016.2
Mr,x= 823.3> Md,x= 428.5
Mr,y= 501.6> Md,y= 188.7

12. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S12011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	33.4	13.0
S12013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	58.2	19.4
S12014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	51.2	7.6
S12016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	35.7	13.5
S12019	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	46.2	17.1
S12020	120x20	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	44.2	45.2
S12023	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	43.2	38.8
S12024	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	46.2	16.5
S12028	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	47.7	12.3
S12029	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	48.4	26.2
S12032	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	40.9	41.6
S12033	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	41.9	18.1
S12036	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	42.9	13.2
S12038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	65.7	10.1
S12039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	61.1	8.3
S12041	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	33.7	12.3

12. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S12011	25.5	19.4	71.8	16.7	8.4	9.3	0.111	0.271	0.898	✓
S12013	41.1	8.3	10.9	23.7	28.3	77.8	0.179	0.768	0.363	✓
S12014	51.2	3.2	11.4	51.2	12.5	88.8	0.158	0.285	0.140	✓
S12016	9.4	20.7	65.2	17.4	8.6	9.4	0.119	0.317	0.921	✓
S12019	2.1	25.2	62.1	35.6	10.7	10.4	0.154	0.406	1.031	Mr
S12020	-2.5	63.3	60.0	18.7	12.3	9.5	0.147	1.054	1.297	Mr
S12023	9.2	57.8	65.1	19.3	11.5	9.5	0.144	0.887	1.210	Mr
S12024	4.7	24.1	63.2	34.7	11.5	10.3	0.154	0.382	1.108	Mr
S12028	14.1	17.7	67.2	29.8	10.5	10.1	0.159	0.263	1.037	Mr
S12029	23.9	39.8	71.1	37.4	9.3	10.5	0.161	0.559	0.883	✓
S12032	5.2	59.5	63.4	30.3	8.3	10.1	0.136	0.939	0.818	✓
S12033	8.1	27.5	64.6	28.1	11.3	10.0	0.140	0.425	1.132	Mr

S12036	20.7	19.6	69.8	21.9	9.9	9.6	0.143	0.280	1.027	Mr	
S12038	24.1	7.2	9.9	64.2	15.0	93.4	0.202	0.727	0.161		✓
S12039	25.3	7.7	10.0	61.1	13.2	92.3	0.188	0.774	0.143		✓
S12041	9.5	19.0	65.2	17.5	9.6	9.4	0.112	0.292	1.024	Mr	

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 740.7
Mr,x= 830.9> Md,x= 420.1
Mr,y= 470.4> Md,y= 190.8

13. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S13011	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	20.8	11.3
S13013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	32.9	17.4
S13014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	34.8	6.1
S13016	120x20	2400	2x4ø16 +	2x6ø12	29.64	32.15	0.012	505.5	300.0	22.2	11.6
S13019	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	28.9	16.3
S13020	120x20	2400	2x4ø16 +	2x6ø12	29.64	64.31	0.012	505.5	300.0	27.4	41.5
S13023	120x20	2400	2x4ø16 +	2x6ø12	29.64	56.27	0.012	505.5	300.0	26.9	35.5
S13024	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	28.7	15.4
S13028	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	29.7	10.8
S13029	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	32.0	23.3
S13032	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	27.2	38.4
S13033	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	25.5	16.5
S13036	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	33.2	15.8
S13038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	43.0	8.6
S13039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	39.0	6.0
S13041	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	21.1	10.5

13. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S13011	16.3	17.6	68.1	10.0	8.3	9.0	0.069	0.259	0.929	✓
S13013	23.6	8.2	9.9	11.8	25.0	72.4	0.101	0.833	0.345	✓
S13014	34.8	3.2	10.5	34.8	10.2	82.6	0.107	0.308	0.124	✓
S13016	17.8	18.1	68.7	10.3	8.6	9.0	0.074	0.263	0.957	✓
S13019	4.7	24.3	63.2	22.0	10.6	9.7	0.096	0.384	1.102	Mr
S13020	1.7	61.3	61.9	17.4	12.6	9.4	0.091	0.990	1.341	Mr
S13023	3.9	52.2	62.8	17.8	11.7	9.4	0.090	0.830	1.248	Mr
S13024	11.2	23.5	66.0	21.3	11.4	9.6	0.096	0.356	1.186	Mr
S13028	11.6	16.5	66.1	18.1	10.4	9.4	0.099	0.250	1.107	Mr
S13029	29.4	35.9	73.3	25.1	9.2	9.8	0.107	0.490	0.935	✓
S13032	7.8	56.5	64.5	20.5	8.2	9.6	0.091	0.876	0.859	✓
S13033	8.2	25.1	64.7	17.3	11.3	9.4	0.085	0.388	1.201	Mr
S13036	20.1	25.6	69.6	16.0	9.8	9.3	0.111	0.368	1.051	Mr
S13038	16.4	7.1	9.5	41.6	13.1	85.2	0.132	0.748	0.154	✓
S13039	24.3	9.0	9.9	13.8	10.4	73.3	0.120	0.905	0.142	✓
S13041	16.2	15.7	68.1	10.7	9.6	9.0	0.070	0.231	1.064	Mr

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 473.6
Mr,x= 836.9> Md,x= 399.9
Mr,y= 426.0> Md,y= 180.4

14. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S14011	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	8.8	18.9
S14013	20x130	2600	2x4ø16 +	2x6ø12	29.64	44.21	0.011	538.2	325.0	7.9	25.4
S14014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	20.7	10.3
S14016	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	9.3	19.4
S14019	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	12.8	16.9
S14020	120x20	2400	2x4ø16 +	2x6ø12	29.64	88.42	0.012	505.5	300.0	9.8	51.6
S14023	120x20	2400	2x4ø16 +	2x6ø12	29.64	76.36	0.012	505.5	300.0	10.4	42.5
S14024	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	12.0	15.9
S14028	120x20	2400	2x4ø16 +	2x6ø12	29.64	44.21	0.012	505.5	300.0	12.3	11.4
S14029	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	12.6	25.4
S14032	120x20	2400	2x4ø16 +	2x6ø12	29.64	60.29	0.012	505.5	300.0	12.8	43.7
S14033	120x20	2400	2x4ø16 +	2x6ø12	29.64	48.23	0.012	505.5	300.0	9.4	17.7
S14036	120x20	2400	2x4ø16 +	2x6ø12	29.64	52.25	0.012	505.5	300.0	23.8	8.7
S14038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	19.5	14.2
S14039	20x130	2600	2x4ø16 +	2x6ø12	29.64	52.25	0.011	538.2	325.0	19.0	16.9
S14041	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	8.9	16.7

14. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S14011	7.9	32.1	64.5	3.0	8.9	8.5	0.029	0.498	1.045	Mr
S14013	6.3	7.7	8.9	0.5	45.1	67.0	0.024	0.864	0.674	✓
S14014	10.3	5.6	9.1	18.6	19.6	75.5	0.064	0.616	0.260	✓
S14016	8.5	33.0	64.8	3.1	9.3	8.5	0.031	0.509	1.086	Mr
S14019	9.2	26.6	65.1	9.1	11.8	8.9	0.043	0.409	1.327	Mr
S14020	2.6	81.8	62.3	6.7	14.8	8.8	0.033	1.313	1.689	Mr
S14023	1.1	67.3	61.7	7.6	13.9	8.8	0.035	1.092	1.573	Mr
S14024	8.4	25.1	64.7	8.2	12.7	8.8	0.040	0.387	1.434	Mr
S14026	7.8	18.7	64.5	6.4	11.1	8.7	0.041	0.291	1.270	Mr
S14029	5.4	42.0	63.5	11.0	10.9	9.0	0.042	0.662	1.214	Mr
S14032	2.6	68.3	62.3	10.3	9.8	9.0	0.043	1.097	1.097	Mr
S14033	9.4	28.7	65.2	6.1	12.2	8.7	0.031	0.441	1.394	Mr
S14036	23.1	13.3	70.8	10.0	13.9	9.0	0.079	0.187	1.546	Mr
S14038	11.7	8.4	9.2	18.3	25.5	75.4	0.060	0.913	0.339	✓
S14039	17.7	13.5	9.5	19.0	33.9	75.7	0.058	1.418	0.448	Mr
S14041	7.6	28.5	64.4	3.7	10.4	8.6	0.030	0.442	1.213	Mr

Kat Kapasite Kontrolu:
Nmax= 4900.0> Nd,max= 209.9
Mr,x= 810.5> Md,x= 500.7
Mr,y= 399.0> Md,y= 263.8

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU

BS25
fcd =192.3 fctd=13.38(kg/cm²)
fyd =3818.2(kg/cm²)
Rot kesme kuvvet kapasitesi:
Vr=2.12 (t) ø20 l=423 mm

PERDELERİN KESME GÜVENLİK KONTROLU

Vr = Ach (0.65 fctd + rsh fyd) Perde Kesme Dayanımı
Vrh = 0.22 fcd Ach Max. Beton Kesme Dayanımı
rshx = Asws.(∑ Letrx/s)/Ach rshy = Asws.(∑ Letry/s)/Ach
Vfr = μ N + fyd Asd = İş Derzi Sürtünme Kesme Dayanımı
N = Ng - Ne Min. Düşey Yük
μ = 1.4 (özel pürüzlendirme)

Kolon		N	Vd	Vr	Vrh	Vfr	ACIKLAMA
S3011	X yönü	-15.264	16.508	77.827	94.769	120.681	✓
	Y yönü	53.183	1.988	49.181	94.769	216.505	✓
S3013	X yönü	177.503	1.616	55.038	108.308	353.122	✓
	Y yönü	171.572	9.565	86.753	108.308	344.818	✓
S3014	X yönü	64.998	0.927	55.038	108.308	195.615	✓
	Y yönü	-0.666	7.922	86.753	108.308	103.686	✓
S3016	X yönü	-4.638	14.377	77.827	94.769	104.843	✓
	Y yönü	59.465	2.285	49.181	94.769	194.587	✓
S3019	X yönü	-61.761	16.400	77.827	94.769	101.655	✓
	Y yönü	109.962	2.546	49.181	94.769	342.067	✓
S3020	X yönü	76.197	18.990	77.827	94.769	202.656	✓
	Y yönü	111.801	2.601	49.181	94.769	252.500	✓
S3023	X yönü	86.226	17.446	77.827	94.769	216.695	✓
	Y yönü	110.609	2.285	49.181	94.769	250.832	✓
S3024	X yönü	-47.432	14.647	77.827	94.769	91.002	✓
	Y yönü	116.096	2.617	49.181	94.769	319.940	✓
S3028	X yönü	-10.830	15.354	77.827	94.769	111.531	✓
	Y yönü	109.749	2.436	49.181	94.769	280.341	✓
S3029	X yönü	129.125	19.180	77.827	94.769	276.754	✓
	Y yönü	125.389	1.822	49.181	94.769	271.525	✓
S3032	X yönü	89.911	19.056	77.827	94.769	221.855	✓
	Y yönü	110.291	1.875	49.181	94.769	250.387	✓
S3033	X yönü	-31.232	14.934	77.827	94.769	113.682	✓
	Y yönü	105.185	2.577	49.181	94.769	304.665	✓
S3036	X yönü	-3.360	16.599	77.827	94.769	121.989	✓
	Y yönü	57.791	2.348	49.181	94.769	207.601	✓
S3038	X yönü	113.939	2.076	55.038	108.308	264.133	✓
	Y yönü	73.804	8.143	86.753	108.308	207.943	✓

(t)

S3039	X yönü	122.749	3.031	55.038	108.308	276.466	✓
	Y yönü	66.737	8.239	86.753	108.308	198.050	✓
S3041	X yönü	-6.658	13.781	77.827	94.769	102.015	✓
	Y yönü	58.166	2.430	49.181	94.769	192.769	✓
S4011	X yönü	-15.630	8.634	77.827	94.769	74.098	✓
	Y yönü	46.047	3.652	49.181	94.769	160.445	✓
S4013	X yönü	156.379	4.213	55.038	108.308	323.549	✓
	Y yönü	152.702	25.542	86.753	108.308	318.400	✓
S4014	X yönü	58.632	1.810	55.038	108.308	186.702	✓
	Y yönü	-3.603	10.547	86.753	108.308	99.574	✓
S4016	X yönü	-6.460	9.611	77.827	94.769	86.936	✓
	Y yönü	50.753	3.568	49.181	94.769	167.034	✓
S4019	X yönü	-54.550	20.007	77.827	94.769	81.036	✓
	Y yönü	98.328	4.663	49.181	94.769	295.065	✓
S4020	X yönü	55.542	43.816	77.827	94.769	189.095	✓
	Y yönü	95.157	5.126	49.181	94.769	244.556	✓
S4023	X yönü	67.194	40.297	77.827	94.769	190.051	✓
	Y yönü	95.736	4.704	49.181	94.769	230.010	✓
S4024	X yönü	-42.628	18.608	77.827	94.769	97.727	✓
	Y yönü	102.622	4.904	49.181	94.769	301.077	✓
S4028	X yönü	-6.918	20.303	77.827	94.769	101.652	✓
	Y yönü	96.581	4.635	49.181	94.769	246.550	✓
S4029	X yönü	107.985	35.213	77.827	94.769	247.159	✓
	Y yönü	110.177	3.338	49.181	94.769	250.227	✓
S4032	X yönü	71.998	43.890	77.827	94.769	196.777	✓
	Y yönü	97.762	3.107	49.181	94.769	232.846	✓
S4033	X yönü	-28.171	21.984	77.827	94.769	102.610	✓
	Y yönü	90.999	4.981	49.181	94.769	269.448	✓
S4036	X yönü	-3.821	9.048	77.827	94.769	90.630	✓
	Y yönü	50.434	4.024	49.181	94.769	166.587	✓
S4038	X yönü	100.953	3.790	55.038	108.308	245.952	✓
	Y yönü	63.079	16.545	86.753	108.308	192.928	✓
S4039	X yönü	109.403	3.554	55.038	108.308	257.782	✓
	Y yönü	56.301	15.556	86.753	108.308	183.439	✓
S4041	X yönü	-7.463	9.290	77.827	94.769	85.531	✓
	Y yönü	50.322	3.945	49.181	94.769	166.430	✓
S1001	X yönü	248.572	113.575	1779.203	3043.615	1911.505	✓
	Y yönü	51.629	8.168	1231.043	3043.615	1635.785	✓
S1005	X yönü	170.533	1.396	67.315	108.308	469.096	✓
	Y yönü	87.401	1.113	58.107	108.308	352.711	✓
S1006	X yönü	185.750	1.302	67.315	108.308	490.400	✓
	Y yönü	139.753	0.460	58.107	108.308	426.005	✓
S1026	X yönü	1035.176	180.297	842.748	1239.108	3038.666	✓
	Y yönü	1026.190	263.888	890.104	1239.108	3026.085	✓
S1046	X yönü	189.834	1.635	67.315	108.308	496.119	✓
	Y yönü	182.033	0.771	58.107	108.308	485.196	✓
S1047	X yönü	192.060	1.658	67.315	108.308	499.234	✓
	Y yönü	181.254	0.702	58.107	108.308	484.106	✓
S1051	X yönü	252.497	113.165	1778.709	3042.769	1917.001	✓
	Y yönü	55.124	8.624	1230.702	3042.769	1640.678	✓
S1053	X yönü	1153.743	433.998	895.404	1609.215	3342.870	✓
	Y yönü	1089.354	473.231	1072.363	1609.215	3252.726	✓
S1054	X yönü	1207.815	436.049	894.272	1608.031	3418.571	✓
	Y yönü	1191.396	471.358	1070.032	1608.031	3395.584	✓
S1055	X yönü	1207.038	432.938	894.193	1607.185	3432.840	✓
	Y yönü	1173.610	474.820	1070.193	1607.185	3386.040	✓
S1056	X yönü	1173.506	435.977	894.799	1608.200	3378.216	✓
	Y yönü	1170.994	473.071	1071.278	1608.200	3374.700	✓

S2001	X yönü	134.383	1546.246	1779.203	3043.615	2036.700	✓
	Y yönü	-16.946	69.350	1231.043	3043.615	1824.839	✓
S2005	X yönü	159.929	4.864	67.315	108.308	454.252	✓
	Y yönü	73.277	5.508	58.107	108.308	332.939	✓
S2006	X yönü	179.394	4.725	67.315	108.308	481.502	✓
	Y yönü	134.778	5.131	58.107	108.308	419.039	✓
S2026	X yönü	969.858	317.567	842.748	1239.108	2947.220	✓
	Y yönü	951.941	108.109	890.104	1239.108	2922.137	✓
S2046	X yönü	182.956	5.387	67.315	108.308	486.489	✓
	Y yönü	177.781	6.589	58.107	108.308	479.245	✓
S2047	X yönü	184.999	5.211	67.315	108.308	489.350	✓
	Y yönü	177.154	6.384	58.107	108.308	478.366	✓
S2051	X yönü	137.372	1517.426	1778.709	3042.769	2040.884	✓
	Y yönü	-15.074	71.347	1230.702	3042.769	1827.460	✓
S2053	X yönü	1104.023	223.218	895.404	1609.215	3273.262	✓
	Y yönü	1019.078	323.496	1072.363	1609.215	3154.339	✓
S2054	X yönü	1161.482	227.962	894.272	1608.031	3353.704	✓
	Y yönü	1122.564	321.094	1070.032	1608.031	3299.219	✓
S2055	X yönü	1154.867	212.277	894.193	1607.185	3359.800	✓
	Y yönü	1100.949	322.762	1070.193	1607.185	3284.315	✓
S2056	X yönü	1126.360	217.876	894.799	1608.200	3312.213	✓
	Y yönü	1102.216	322.615	1071.278	1608.200	3278.411	✓
S3005	X yönü	152.315	12.895	67.315	108.308	443.592	✓
	Y yönü	65.621	5.301	58.107	108.308	322.220	✓
S3006	X yönü	179.478	12.555	67.315	108.308	481.620	✓
	Y yönü	144.382	5.495	58.107	108.308	432.486	✓
S3026	X yönü	876.002	203.946	842.748	1239.108	2815.822	✓
	Y yönü	874.757	82.544	890.104	1239.108	2814.080	✓
S3046	X yönü	181.636	11.877	67.315	108.308	484.642	✓
	Y yönü	187.883	6.478	58.107	108.308	493.387	✓
S3047	X yönü	183.405	11.911	67.315	108.308	487.118	✓
	Y yönü	187.467	6.408	58.107	108.308	492.805	✓
S3053	X yönü	1017.746	292.723	895.404	1609.215	3106.405	✓
	Y yönü	871.716	320.490	1072.363	1609.215	2901.962	✓
S3054	X yönü	1085.895	291.774	894.272	1608.031	3217.169	✓
	Y yönü	970.864	320.316	1070.032	1608.031	3056.126	✓
S3055	X yönü	1066.779	291.269	894.193	1607.185	2946.139	✓
	Y yönü	949.516	317.255	1070.193	1607.185	2781.971	✓
S3056	X yönü	1046.683	288.344	894.799	1608.200	3144.996	✓
	Y yönü	951.267	314.812	1071.278	1608.200	3011.414	✓
S4005	X yönü	138.459	11.412	67.315	108.308	424.193	✓
	Y yönü	58.056	6.335	58.107	108.308	311.629	✓
S4006	X yönü	159.689	11.892	67.315	108.308	453.915	✓
	Y yönü	126.859	7.889	58.107	108.308	407.953	✓
S4026	X yönü	816.471	225.297	842.748	1239.108	2732.479	✓
	Y yönü	814.686	113.829	890.104	1239.108	2729.980	✓
S4046	X yönü	164.077	9.317	67.315	108.308	460.059	✓
	Y yönü	169.963	11.127	58.107	108.308	468.299	✓
S4047	X yönü	165.923	9.605	67.315	108.308	462.644	✓
	Y yönü	169.606	11.133	58.107	108.308	467.799	✓
S4053	X yönü	924.470	233.579	895.404	1609.215	2663.405	✓
	Y yönü	790.800	297.757	1072.363	1609.215	2476.267	✓
S4054	X yönü	988.762	235.254	894.272	1608.031	2472.193	✓
	Y yönü	883.931	294.403	1070.032	1608.031	2325.430	✓
S4055	X yönü	972.479	236.370	894.193	1607.185	2311.668	✓
	Y yönü	865.305	278.090	1070.193	1607.185	2161.624	✓
S4056	X yönü	952.143	236.863	894.799	1608.200	2287.515	✓
	Y yönü	865.738	277.844	1071.278	1608.200	2166.549	✓

S5005	X yönü	125.860	14.658	67.315	108.308	406.555	✓
	Y yönü	53.110	7.142	58.107	108.308	304.705	✓
S5006	X yönü	141.072	14.953	67.315	108.308	427.852	✓
	Y yönü	110.841	7.248	58.107	108.308	385.528	✓
S5026	X yönü	756.915	222.872	842.748	1239.108	2649.100	✓
	Y yönü	755.322	110.807	890.104	1239.108	2646.870	✓
S5046	X yönü	147.552	13.600	67.315	108.308	436.924	✓
	Y yönü	152.848	10.266	58.107	108.308	444.337	✓
S5047	X yönü	149.492	13.642	67.315	108.308	439.640	✓
	Y yönü	152.560	10.255	58.107	108.308	443.934	✓
S5053	X yönü	836.544	204.896	895.404	1609.215	2420.335	✓
	Y yönü	717.475	278.540	1072.363	1609.215	2253.638	✓
S5054	X yönü	896.293	206.216	894.272	1608.031	2209.325	✓
	Y yönü	803.684	274.178	1070.032	1608.031	2079.673	✓
S5055	X yönü	882.803	207.869	894.193	1607.185	2186.121	✓
	Y yönü	787.416	256.024	1070.193	1607.185	2052.578	✓
S5056	X yönü	862.621	207.335	894.799	1608.200	2162.185	✓
	Y yönü	786.673	255.930	1071.278	1608.200	2055.858	✓
S6005	X yönü	113.276	15.066	67.315	108.308	388.936	✓
	Y yönü	47.684	7.892	58.107	108.308	297.109	✓
S6006	X yönü	125.294	16.168	67.315	108.308	405.763	✓
	Y yönü	97.638	7.508	58.107	108.308	367.043	✓
S6026	X yönü	693.041	214.693	842.748	1239.108	2559.677	✓
	Y yönü	692.186	101.629	890.104	1239.108	2558.480	✓
S6046	X yönü	131.105	13.539	67.315	108.308	413.898	✓
	Y yönü	135.765	11.246	58.107	108.308	420.422	✓
S6047	X yönü	133.148	13.630	67.315	108.308	416.758	✓
	Y yönü	135.555	11.245	58.107	108.308	420.128	✓
S6053	X yönü	751.346	180.879	895.404	1609.215	2251.148	✓
	Y yönü	647.196	259.203	1072.363	1609.215	2105.337	✓
S6054	X yönü	806.022	182.238	894.272	1608.031	2082.946	✓
	Y yönü	725.595	254.211	1070.032	1608.031	1970.348	✓
S6055	X yönü	795.060	184.531	894.193	1607.185	2063.280	✓
	Y yönü	711.414	236.442	1070.193	1607.185	1946.175	✓
S6056	X yönü	775.460	183.933	894.799	1608.200	2040.160	✓
	Y yönü	709.727	236.519	1071.278	1608.200	1948.133	✓
S7005	X yönü	100.618	16.516	67.315	108.308	371.216	✓
	Y yönü	42.661	8.484	58.107	108.308	290.076	✓
S7006	X yönü	109.978	16.787	67.315	108.308	384.320	✓
	Y yönü	85.211	7.678	58.107	108.308	349.646	✓
S7026	X yönü	624.695	200.264	842.748	1239.108	2463.992	✓
	Y yönü	624.538	88.578	890.104	1239.108	2463.772	✓
S7046	X yönü	115.077	14.732	67.315	108.308	391.459	✓
	Y yönü	119.065	10.994	58.107	108.308	397.041	✓
S7047	X yönü	117.233	14.881	67.315	108.308	394.477	✓
	Y yönü	118.942	10.996	58.107	108.308	396.869	✓
S7053	X yönü	666.047	155.114	895.404	1609.215	1878.344	✓
	Y yönü	576.998	238.943	1072.363	1609.215	1753.675	✓
S7054	X yönü	715.219	156.132	894.272	1608.031	1955.822	✓
	Y yönü	646.994	233.364	1070.032	1608.031	1860.307	✓
S7055	X yönü	706.350	159.057	894.193	1607.185	1939.086	✓
	Y yönü	634.671	214.402	1070.193	1607.185	1838.736	✓
S7056	X yönü	687.830	158.037	894.799	1608.200	1917.478	✓
	Y yönü	632.252	214.337	1071.278	1608.200	1839.669	✓
S8005	X yönü	87.784	17.351	67.315	108.308	353.248	✓
	Y yönü	37.777	8.917	58.107	108.308	283.238	✓
S8006	X yönü	95.040	17.503	67.315	108.308	363.407	✓
	Y yönü	73.430	7.774	58.107	108.308	333.153	✓

S8026	X yönü	553.330	185.611	842.748	1239.108	2364.082	✓
	Y yönü	553.802	76.802	890.104	1239.108	2364.742	✓
S8046	X yönü	99.389	15.406	67.315	108.308	369.495	✓
	Y yönü	102.707	11.068	58.107	108.308	374.140	✓
S8047	X yönü	101.670	15.605	67.315	108.308	372.689	✓
	Y yönü	102.681	11.073	58.107	108.308	374.104	✓
S8053	X yönü	580.927	132.957	895.404	1609.215	1759.175	✓
	Y yönü	506.700	220.458	1072.363	1609.215	1655.257	✓
S8054	X yönü	624.286	133.712	894.272	1608.031	1828.516	✓
	Y yönü	567.880	214.376	1070.032	1608.031	1749.548	✓
S8055	X yönü	616.983	137.076	894.193	1607.185	1813.972	✓
	Y yönü	557.180	194.773	1070.193	1607.185	1730.248	✓
S8056	X yönü	600.027	135.634	894.799	1608.200	1794.554	✓
	Y yönü	554.260	194.592	1071.278	1608.200	1730.480	✓
S9005	X yönü	74.678	17.969	67.315	108.308	335.181	✓
	Y yönü	32.898	9.153	58.107	108.308	276.408	✓
S9006	X yönü	80.397	18.001	67.315	108.308	342.906	✓
	Y yönü	62.150	7.818	58.107	108.308	317.360	✓
S9026	X yönü	479.303	170.558	842.748	1239.108	2260.444	✓
	Y yönü	480.231	66.494	890.104	1239.108	2261.743	✓
S9046	X yönü	83.962	15.793	67.315	108.308	347.897	✓
	Y yönü	86.636	11.051	58.107	108.308	351.642	✓
S9047	X yönü	86.380	16.038	67.315	108.308	351.282	✓
	Y yönü	86.716	11.060	58.107	108.308	351.753	✓
S9053	X yönü	496.093	112.885	895.404	1609.215	1640.407	✓
	Y yönü	436.017	203.758	1072.363	1609.215	1556.301	✓
S9054	X yönü	533.369	113.385	894.272	1608.031	1701.232	✓
	Y yönü	488.075	197.269	1070.032	1608.031	1637.821	✓
S9055	X yönü	527.111	117.208	894.193	1607.185	1688.152	✓
	Y yönü	478.794	177.306	1070.193	1607.185	1620.508	✓
S9056	X yönü	512.182	115.342	894.799	1608.200	1671.570	✓
	Y yönü	475.618	176.948	1071.278	1608.200	1620.380	✓
S10005	X yönü	61.935	18.294	67.315	108.308	317.060	✓
	Y yönü	27.901	9.267	58.107	108.308	269.412	✓
S10006	X yönü	65.977	18.317	67.315	108.308	322.719	✓
	Y yönü	51.247	7.827	58.107	108.308	302.097	✓
S10026	X yönü	403.418	154.534	842.748	1239.108	2154.204	✓
	Y yönü	404.602	57.036	890.104	1239.108	2155.862	✓
S10046	X yönü	68.727	15.982	67.315	108.308	326.569	✓
	Y yönü	70.802	11.071	58.107	108.308	329.473	✓
S10047	X yönü	71.297	16.305	67.315	108.308	330.166	✓
	Y yönü	70.998	11.079	58.107	108.308	329.748	✓
S10053	X yönü	411.630	93.453	895.404	1609.215	1522.160	✓
	Y yönü	364.781	187.795	1072.363	1609.215	1456.570	✓
S10054	X yönü	442.607	93.708	894.272	1608.031	1574.165	✓
	Y yönü	407.511	180.994	1070.032	1608.031	1525.031	✓
S10055	X yönü	436.851	97.954	894.193	1607.185	1561.788	✓
	Y yönü	399.438	160.833	1070.193	1607.185	1509.409	✓
S10056	X yönü	424.392	95.643	894.799	1608.200	1548.664	✓
	Y yönü	396.260	160.240	1071.278	1608.200	1509.279	✓
S11005	X yönü	48.983	18.116	67.315	108.308	298.927	✓
	Y yönü	22.692	9.248	58.107	108.308	262.120	✓
S11006	X yönü	51.721	18.154	67.315	108.308	302.760	✓
	Y yönü	40.617	7.763	58.107	108.308	287.214	✓
S11026	X yönü	325.982	136.926	842.748	1239.108	2045.794	✓
	Y yönü	327.197	47.543	890.104	1239.108	2047.495	✓
S11046	X yönü	53.628	15.674	67.315	108.308	305.430	✓
	Y yönü	55.155	11.028	58.107	108.308	307.567	✓

S11047	X yönü	56.363	16.098	67.315	108.308	309.259	✓
	Y yönü	55.477	11.056	58.107	108.308	308.018	✓
S11053	X yönü	327.576	73.251	895.404	1609.215	1404.484	✓
	Y yönü	292.856	171.146	1072.363	1609.215	1355.876	✓
S11054	X yönü	352.092	73.240	894.272	1608.031	1447.445	✓
	Y yönü	326.149	164.084	1070.032	1608.031	1411.123	✓
S11055	X yönü	346.267	78.159	894.193	1607.185	1434.970	✓
	Y yönü	319.034	143.853	1070.193	1607.185	1396.844	✓
S11056	X yönü	336.732	75.076	894.799	1608.200	1425.940	✓
	Y yönü	316.160	142.954	1071.278	1608.200	1397.139	✓
S12005	X yönü	36.056	18.676	67.315	108.308	280.829	✓
	Y yönü	17.229	9.243	58.107	108.308	254.471	✓
S12006	X yönü	37.568	18.635	67.315	108.308	282.946	✓
	Y yönü	30.159	7.833	58.107	108.308	272.573	✓
S12026	X yönü	247.587	115.334	842.748	1239.108	1936.041	✓
	Y yönü	248.578	34.793	890.104	1239.108	1937.429	✓
S12046	X yönü	38.611	16.495	67.315	108.308	284.407	✓
	Y yönü	39.648	11.182	58.107	108.308	285.858	✓
S12047	X yönü	41.527	16.848	67.315	108.308	288.469	✓
	Y yönü	40.110	11.155	58.107	108.308	286.505	✓
S12053	X yönü	243.952	47.287	895.404	1609.215	1287.410	✓
	Y yönü	220.141	149.147	1072.363	1609.215	1254.075	✓
S12054	X yönü	261.868	47.060	894.272	1608.031	1321.131	✓
	Y yönü	243.929	142.545	1070.032	1608.031	1296.016	✓
S12055	X yönü	255.444	52.555	894.193	1607.185	1307.818	✓
	Y yönü	237.554	121.595	1070.193	1607.185	1282.772	✓
S12056	X yönü	249.256	48.841	894.799	1608.200	1303.474	✓
	Y yönü	235.294	120.181	1071.278	1608.200	1283.927	✓
S13005	X yönü	23.124	15.431	67.315	108.308	262.725	✓
	Y yönü	11.379	8.610	58.107	108.308	246.281	✓
S13006	X yönü	23.495	15.539	67.315	108.308	263.244	✓
	Y yönü	19.806	7.192	58.107	108.308	258.079	✓
S13026	X yönü	168.693	93.934	842.748	1239.108	1825.590	✓
	Y yönü	169.229	19.653	890.104	1239.108	1826.340	✓
S13046	X yönü	23.640	12.510	67.315	108.308	263.447	✓
	Y yönü	24.224	10.664	58.107	108.308	264.264	✓
S13047	X yönü	26.559	13.214	67.315	108.308	267.533	✓
	Y yönü	24.827	10.818	58.107	108.308	265.108	✓
S13053	X yönü	160.819	26.833	895.404	1609.215	1171.023	✓
	Y yönü	146.716	125.044	1072.363	1609.215	1151.279	✓
S13054	X yönü	172.043	19.827	894.272	1608.031	1195.375	✓
	Y yönü	161.024	118.434	1070.032	1608.031	1179.949	✓
S13055	X yönü	164.223	34.363	894.193	1607.185	1180.109	✓
	Y yönü	154.863	96.246	1070.193	1607.185	1167.005	✓
S13056	X yönü	162.053	26.427	894.799	1608.200	1181.389	✓
	Y yönü	153.788	94.455	1071.278	1608.200	1169.819	✓
S14005	X yönü	10.331	26.282	67.315	108.308	244.814	✓
	Y yönü	5.666	11.107	58.107	108.308	238.283	✓
S14006	X yönü	9.402	25.886	67.315	108.308	243.514	✓
	Y yönü	9.426	9.483	58.107	108.308	243.546	✓
S14026	X yönü	88.724	50.427	842.748	1239.108	1713.633	✓
	Y yönü	88.369	32.352	890.104	1239.108	1713.136	✓
S14046	X yönü	8.662	27.072	67.315	108.308	242.478	✓
	Y yönü	8.883	12.428	58.107	108.308	242.787	✓
S14047	X yönü	10.783	25.214	67.315	108.308	245.447	✓
	Y yönü	9.678	12.055	58.107	108.308	243.900	✓
S14053	X yönü	78.047	71.093	895.404	1609.215	1055.144	✓
	Y yönü	72.489	64.920	1072.363	1609.215	1047.362	✓

S14054	X yönü	82.449	75.446	894.272	1608.031	1069.945	✓
	Y yönü	77.163	72.925	1070.032	1608.031	1062.544	✓
S14055	X yönü	72.270	88.260	894.193	1607.185	1051.374	✓
	Y yönü	70.598	68.423	1070.193	1607.185	1049.034	✓
S14056	X yönü	75.214	86.441	894.799	1608.200	1059.815	✓
	Y yönü	71.723	84.340	1071.278	1608.200	1054.928	✓
S1059	X yönü	71.528	0.756	106.483	186.222	307.454	✓
	Y yönü	205.044	16.910	144.081	186.222	494.378	✓
S1060	X yönü	152.478	0.793	106.483	186.222	420.785	✓
	Y yönü	186.293	16.373	144.081	186.222	468.126	✓
S1061	X yönü	193.813	0.815	106.483	186.222	478.654	✓
	Y yönü	211.202	17.595	144.081	186.222	502.998	✓
S1062	X yönü	190.839	0.666	106.483	186.222	474.490	✓
	Y yönü	176.437	16.003	144.081	186.222	454.328	✓
S2059	X yönü	57.761	4.999	106.483	186.222	275.223	✓
	Y yönü	194.344	11.372	144.081	186.222	466.440	✓
S2060	X yönü	141.138	4.319	106.483	186.222	391.952	✓
	Y yönü	176.076	9.757	144.081	186.222	440.865	✓
S2061	X yönü	168.421	11.364	106.483	186.222	430.148	✓
	Y yönü	202.323	9.805	144.081	186.222	477.610	✓
S2062	X yönü	182.363	4.332	106.483	186.222	449.667	✓
	Y yönü	166.712	9.729	144.081	186.222	427.755	✓
S3059	X yönü	50.382	16.915	102.591	181.483	269.212	✓
	Y yönü	175.825	15.132	141.724	181.483	444.833	✓
S3061	X yönü	126.421	15.294	97.878	172.006	362.710	✓
	Y yönü	203.879	17.008	133.941	172.006	471.151	✓
S3062	X yönü	179.443	14.193	102.591	181.483	449.898	✓
	Y yönü	165.208	14.591	141.724	181.483	429.968	✓
S3060	X yönü	132.746	13.733	102.591	181.483	384.522	✓
	Y yönü	173.040	14.901	141.724	181.483	440.933	✓
S4059	X yönü	41.876	32.735	102.591	181.483	257.304	✓
	Y yönü	158.102	28.766	141.724	181.483	420.020	✓
S4061	X yönü	117.081	17.125	97.878	172.006	349.634	✓
	Y yönü	185.093	19.877	133.941	172.006	444.850	✓
S4062	X yönü	159.584	26.766	102.591	181.483	422.095	✓
	Y yönü	148.575	28.789	141.724	181.483	406.683	✓
S4060	X yönü	117.307	25.720	102.591	181.483	362.907	✓
	Y yönü	156.724	27.471	141.724	181.483	418.091	✓
S5059	X yönü	38.432	35.676	93.164	162.529	302.871	✓
	Y yönü	141.540	27.393	126.158	162.529	447.223	✓
S5061	X yönü	112.493	20.269	97.878	172.006	343.211	✓
	Y yönü	169.654	23.367	133.941	172.006	423.235	✓
S5062	X yönü	140.952	28.903	93.164	162.529	378.734	✓
	Y yönü	135.368	26.404	126.158	162.529	370.917	✓
S5060	X yönü	104.689	27.905	93.164	162.529	327.966	✓
	Y yönü	140.887	25.138	126.158	162.529	378.643	✓
S6059	X yönü	37.088	41.329	93.164	162.529	375.373	✓
	Y yönü	126.097	24.700	126.158	162.529	499.987	✓
S6061	X yönü	106.572	22.327	97.878	172.006	334.921	✓
	Y yönü	151.095	24.810	133.941	172.006	397.253	✓
S6062	X yönü	121.756	33.204	93.164	162.529	351.860	✓
	Y yönü	119.011	22.648	126.158	162.529	348.016	✓
S6060	X yönü	92.374	32.276	93.164	162.529	310.724	✓
	Y yönü	125.528	21.114	126.158	162.529	357.140	✓
S7059	X yönü	37.318	43.704	93.164	162.529	383.375	✓
	Y yönü	111.628	27.522	126.158	162.529	487.408	✓
S7061	X yönü	102.354	23.377	97.878	172.006	329.016	✓
	Y yönü	135.066	26.653	133.941	172.006	374.813	✓

S7060	X yönü	81.862	34.109	93.164	162.529	296.008	✓
	Y yönü	111.309	23.495	126.158	162.529	337.234	✓
S7062	X yönü	106.340	34.974	93.164	162.529	330.277	✓
	Y yönü	105.987	25.242	126.158	162.529	329.783	✓
S8059	X yönü	36.583	45.357	93.164	162.529	382.346	✓
	Y yönü	96.645	28.808	126.158	162.529	466.433	✓
S8061	X yönü	94.573	23.912	97.878	172.006	318.123	✓
	Y yönü	116.689	27.846	133.941	172.006	349.085	✓
S8062	X yönü	89.339	36.231	93.164	162.529	306.476	✓
	Y yönü	91.007	26.249	126.158	162.529	308.811	✓
S8060	X yönü	71.149	35.408	93.164	162.529	281.009	✓
	Y yönü	96.601	24.356	126.158	162.529	316.642	✓
S9059	X yönü	35.632	45.843	93.164	162.529	381.014	✓
	Y yönü	82.413	29.787	126.158	162.529	446.507	✓
S9061	X yönü	87.648	23.788	97.878	172.006	308.428	✓
	Y yönü	100.717	26.668	133.941	172.006	326.724	✓
S9062	X yönü	75.622	36.555	93.164	162.529	287.271	✓
	Y yönü	78.863	27.050	126.158	162.529	291.810	✓
S9060	X yönü	61.256	35.791	93.164	162.529	267.159	✓
	Y yönü	82.538	25.024	126.158	162.529	296.955	✓
S10059	X yönü	32.967	45.625	93.164	162.529	377.283	✓
	Y yönü	67.833	30.332	126.158	162.529	426.095	✓
S10061	X yönü	76.702	23.298	97.878	172.006	293.103	✓
	Y yönü	82.456	29.126	133.941	172.006	301.158	✓
S10062	X yönü	60.276	36.332	93.164	162.529	265.787	✓
	Y yönü	64.630	27.490	126.158	162.529	271.883	✓
S10060	X yönü	50.882	35.627	93.164	162.529	252.636	✓
	Y yönü	67.953	25.346	126.158	162.529	276.535	✓
S11059	X yönü	29.349	44.635	93.164	162.529	372.218	✓
	Y yönü	53.921	30.494	126.158	162.529	406.619	✓
S11061	X yönü	66.292	22.401	97.878	172.006	278.530	✓
	Y yönü	66.554	29.277	133.941	172.006	278.896	✓
S11060	X yönü	40.989	34.857	93.164	162.529	306.451	✓
	Y yönü	54.031	25.396	126.158	162.529	324.709	✓
S11062	X yönü	46.041	35.502	93.164	162.529	316.324	✓
	Y yönü	53.052	27.571	126.158	162.529	323.340	✓
S12059	X yönü	23.578	44.057	93.164	162.529	364.138	✓
	Y yönü	39.630	30.664	126.158	162.529	386.610	✓
S12061	X yönü	51.754	21.755	97.878	172.006	258.176	✓
	Y yönü	48.299	29.257	133.941	172.006	253.338	✓
S12060	X yönü	30.405	34.391	93.164	162.529	291.634	✓
	Y yönü	39.583	25.327	126.158	162.529	304.482	✓
S12062	X yönü	34.043	35.004	93.164	162.529	296.727	✓
	Y yönü	39.276	27.886	126.158	162.529	304.054	✓
S13059	X yönü	16.623	39.346	93.164	162.529	354.401	✓
	Y yönü	25.918	27.912	126.158	162.529	367.414	✓
S13061	X yönü	37.652	19.038	97.878	172.006	238.433	✓
	Y yönü	32.346	27.564	133.941	172.006	231.005	✓
S13060	X yönü	20.076	30.716	93.164	162.529	277.173	✓
	Y yönü	25.673	23.653	126.158	162.529	285.008	✓
S13062	X yönü	23.044	31.113	93.164	162.529	281.328	✓
	Y yönü	28.035	24.495	126.158	162.529	288.315	✓
S14059	X yönü	7.716	53.992	93.164	162.529	466.225	✓
	Y yönü	11.876	43.630	126.158	162.529	472.049	✓
S14060	X yönü	9.165	41.989	93.164	162.529	351.638	✓
	Y yönü	10.788	33.409	126.158	162.529	353.911	✓
S14061	X yönü	15.374	25.787	97.878	172.006	207.244	✓
	Y yönü	13.885	38.256	133.941	172.006	205.159	✓
S14062	X yönü	9.590	43.452	93.164	162.529	407.422	✓
	Y yönü	14.664	43.234	126.158	162.529	414.525	✓

RADYE MAT TEMELLERIN SONLU ELEMANLARLA ANALİZİ

ZEMİN YATAK KATSAYISI (t/m³) : 4500.0
ZEMİN EMNİYET GERİMESİ (t/m²) : 30.0
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETON ve ÇELİK MALZEME BİLGİLERİ
Beton dayanım gerilmesi (kg/cm²).:250
Çelik akma gerilmesi (kg/cm²).:4200

BETONARME HESAP YÜK KOMBİNASYON PARAMETRESİ

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

STATİK ANALİZ YÜK KOMBİNASYON NOTASYONLARI:

1. G+G+G+G+G	GENEL ÖLÜ YÜK
2. Q+Q+Q+Q+Q	1. GENEL HAREKETLİ YÜK
3. Q+o+Q+o+Q	2. HAREKETLİ YÜK
4. o+Q+o+Q+o	3. HAREKETLİ YÜK
5. Q+Q+o+Q+Q	4. HAREKETLİ YÜK
6. o+Q+Q+o+Q	5. HAREKETLİ YÜK
7. Q+o+Q+Q+o	6. HAREKETLİ YÜK
8. Gz	Yatay zemin itkisi
9. Ex + %5 x ey	X yönü deprem + %5 eksantrisite
10. Ex - %5 x ey	X yönü deprem - %5 eksantrisite
11. Ey + %5 x ex	Y yönü deprem + %5 eksantrisite
12. Ey - %5 x ex	Y yönü deprem - %5 eksantrisite
13. Wx + %5 x ey	X yönü rüzgar + %5 eksantrisite
14. Wx - %5 x ey	X yönü rüzgar - %5 eksantrisite
15. Wy + %5 x ex	Y yönü rüzgar + %5 eksantrisite
16. Wy - %5 x ex	Y yönü rüzgar - %5 eksantrisite

ZEMİN GERİLMESİ t/m²

Nok no	1 g	2 q	3 q	4 q	5 q	6 q	7 q	8 z	9 e	10 e	11 e	12 e	13 w	14 w	15 w	16 w	max. σ
498	18.68	1.442	1.446	1.445	1.445	1.444	1.443	0.0	0.848	0.757	-3.03	-2.96	0.04	0.046	-0.22	-0.21	20.13

max ZEMİN GERİLMESİ=20.134 t/m²

P2 – Z2

PROJE İSMİ.....:soyak gokyuzu evleri b-blok
KAT ADEDİ.....: 14
Bir kattaki KOLON SAYISI.....: 70
X yönü aks sayısı.....: 32
Y yönü aks sayısı.....: 23
DEPREM KATSAYISI.....(Ao).: .4
YAPI TİPİ KATSAYISI.....(R)..: 4
YAPI ÖNEM KATSAYISI.....(I)..: 1
ZEMİN HAKİM TİTREŞİM PERYODU..(Ta/Tb).: .15 / .4
HAREKETLİ YÜK KATSAYISI.....(n)..: .3
SIFIR RÖLATİF HAREKET YÜKSEKLİĞİ (m)..:.00
ZEMİN EMNİYET GERİLMESİ..... (t/m²)..:30.0
ZEMİN YATAK KATSAYISI..... (t/m³)..:4500.0
BETON YOĞUNLUĞU.....(t/m³)..:2.5
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETONARME KESİT DONATI HESAP YÖNTEMİ .....:BRÜT KESİTE GÖRE
DEPREM HESABI YÖNTEMİ .....:MOD SÜPERPOZİSYONU İLE DİNAMİK ANALİZ
TEMEL ANALİZ OPSİYONU.....:TEMELLER DİKKATE ALINMADAN, YAPI ANALİZİ
Zemin gerilmesi hareketli yük azaltma degeri..:.60
Zemin gerilmesi deprem azaltması.....:.50
Zemin gerilmesi rüzgar azaltması.....:.25
Kolonun oturduğu kiriş tesir çarpanı.....: 1.5
Kiriş & Kolon rijitlik bölgesi opsiyonu.....: Rijit davranış
Kiriş uçlarında elastik ankastrelik opsiyonu : Elastik ankastre

BETON ve ÇELİK MALZEME BİLGİLERİ	Kiriş\Kolon	Döşeme	Temel
Beton dayanım gerilmesi (kg/cm²)	250\300	250	250
Çelik akma gerilmesi (kg/cm²)	4200	4200	4200
Çelik akma gerilmesi (kg/cm²) (Etriye)	4200		4200

TAŞIMA GÜCÜ MALZEME KATSAYILARI	BETON 1.30	ÇELİK 1.10
TAŞIMA GÜCÜ YÜK KATSAYILARI	SABİT YÜK 1.40	HAREKETLi YÜK 1.60

ELASTİSİTE MODÜLÜ (kg/cm²)

BS30	E1=	318000	G1=	127200
BS25	E2=	302500	G2=	121000

BETONARME HESAP YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	0.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ± Ce	Rüzgar ± Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

ZEMİN GERİLMESİ HAREKETLİ YÜK AZALTMA DEĞERLERİ

Kat	1	2	3	4	5	6	7	8	9	10
Eksiltme %				20	40	60	80	80	80	40

DEPREM RAPORU

Deprem yükü eksantirisitesi : 0.050

Dinamik Analiz min. deprem yükü oranı ß : 1.0

DİNAMİK ANALİZ BİLGİLERİ

TASARIM SPECTURUM BİLGİSİ

T (s)	Sa (m/s²) Ao.I.S(t)
0.00	4.000
0.15	10.000
0.40	10.000
0.50	8.364
0.60	7.228
0.70	6.392
0.80	5.744
0.90	5.228
1.00	4.804
1.10	4.452
1.20	4.152
1.30	3.896
1.40	3.672
1.50	3.472
1.60	3.300
1.70	3.144
1.80	3.004
1.90	2.876
2.00	2.800
5.00	2.800

MODAL ANALİZ - YAPI PERYOD ve VEKTORLERI

Mod w T yon	1.mod 8.09 0.7767 y	2.mod 8.38 0.7500 b	3.mod 9.83 0.6392 x	4.mod 37.38 0.1681 y	5.mod 38.31 0.1640 b	6.mod 41.40 0.1518 x	7.mod 90.11 0.0697 y	8.mod 94.68 0.0664 b	9.mod 95.82 0.0656 x
1x	0.00000	-0.00001	0.00023	-0.00001	-0.00005	0.00169	-0.00001	-0.00040	0.00536
2x	-0.00002	-0.00009	0.00246	-0.00005	-0.00038	0.01321	-0.00005	-0.00258	0.03422
3x	-0.00012	-0.00041	0.01108	-0.00019	-0.00146	0.04804	-0.00017	-0.00756	0.09905
4x	-0.00024	-0.00081	0.02138	-0.00033	-0.00246	0.08043	-0.00024	-0.01030	0.13464
5x	-0.00039	-0.00129	0.03380	-0.00045	-0.00335	0.10879	-0.00024	-0.01031	0.13441
6x	-0.00056	-0.00184	0.04774	-0.00054	-0.00396	0.12748	-0.00017	-0.00733	0.09513
7x	-0.00074	-0.00245	0.06268	-0.00056	-0.00417	0.13260	-0.00005	-0.00222	0.02809
8x	-0.00094	-0.00309	0.07817	-0.00052	-0.00390	0.12228	0.00009	0.00342	-0.04573
9x	-0.00114	-0.00375	0.09384	-0.00042	-0.00315	0.09665	0.00019	0.00778	-0.10244
10x	-0.00134	-0.00441	0.10938	-0.00026	-0.00197	0.05760	0.00023	0.00939	-0.12297
11x	-0.00154	-0.00508	0.12458	-0.00005	-0.00045	0.00844	0.00018	0.00761	-0.09932
12x	-0.00174	-0.00573	0.13929	0.00017	0.00127	-0.04675	0.00006	0.00282	-0.03630
13x	-0.00193	-0.00638	0.15349	0.00040	0.00307	-0.10395	-0.00009	-0.00378	0.05060
14x	-0.00211	-0.00700	0.16717	0.00062	0.00484	-0.15963	-0.00025	-0.01080	0.14155
1y	0.00021	-0.00004	0.00000	0.00179	-0.00016	0.00000	0.00592	-0.00009	0.00001
2y	0.00358	-0.00070	0.00002	0.02074	-0.00192	0.00003	0.05393	-0.00086	0.00004
3y	0.01150	-0.00223	0.00005	0.05426	-0.00497	0.00007	0.11213	-0.00171	0.00008
4y	0.02097	-0.00403	0.00010	0.08456	-0.00768	0.00011	0.13792	-0.00199	0.00010
5y	0.03248	-0.00622	0.00016	0.11042	-0.00996	0.00014	0.12859	-0.00175	0.00010
6y	0.04558	-0.00869	0.00022	0.12699	-0.01139	0.00016	0.08439	-0.00104	0.00007
7y	0.05985	-0.01136	0.00029	0.13091	-0.01167	0.00017	0.01760	-0.00005	0.00003
8y	0.07492	-0.01418	0.00036	0.12045	-0.01066	0.00016	-0.05207	0.00092	-0.00002
9y	0.09045	-0.01706	0.00043	0.09564	-0.00837	0.00013	-0.10334	0.00157	-0.00006
10y	0.10617	-0.01997	0.00051	0.05802	-0.00496	0.00008	-0.11982	0.00171	-0.00008
11y	0.12186	-0.02285	0.00058	0.01042	-0.00070	0.00001	-0.09506	0.00127	-0.00008
12y	0.13736	-0.02569	0.00065	-0.04360	0.00411	-0.00006	-0.03378	0.00036	-0.00004
13y	0.15261	-0.02847	0.00072	-0.10044	0.00913	-0.00015	0.05006	-0.00082	0.00002
14y	0.16755	-0.03119	0.00079	-0.15685	0.01406	-0.00024	0.13889	-0.00200	0.00009
1b	0.00000	0.00001	0.00000	0.00001	0.00008	0.00000	0.00000	0.00029	0.00002
2b	0.00002	0.00013	0.00001	0.00007	0.00077	0.00003	0.00003	0.00222	0.00017
3b	0.00014	0.00079	0.00004	0.00032	0.00365	0.00012	0.00011	0.00809	0.00062
4b	0.00030	0.00165	0.00008	0.00059	0.00663	0.00021	0.00017	0.01196	0.00091
5b	0.00050	0.00272	0.00013	0.00084	0.00941	0.00030	0.00019	0.01273	0.00097
6b	0.00073	0.00397	0.00018	0.00102	0.01140	0.00036	0.00015	0.00978	0.00074
7b	0.00098	0.00533	0.00024	0.00109	0.01219	0.00038	0.00007	0.00391	0.00029
8b	0.00125	0.00677	0.00031	0.00104	0.01155	0.00036	-0.00003	-0.00302	-0.00024
9b	0.00153	0.00825	0.00037	0.00086	0.00943	0.00028	-0.00011	-0.00872	-0.00067
10b	0.00182	0.00974	0.00043	0.00055	0.00596	0.00017	-0.00016	-0.01122	-0.00086
11b	0.00210	0.01123	0.00049	0.00015	0.00142	0.00003	-0.00014	-0.00954	-0.00073
12b	0.00238	0.01268	0.00054	-0.00032	-0.00382	-0.00013	-0.00007	-0.00393	-0.00030
13b	0.00265	0.01411	0.00060	-0.00083	-0.00940	-0.00031	0.00005	0.00428	0.00033
14b	0.00292	0.01550	0.00065	-0.00133	-0.01498	-0.00048	0.00018	0.01331	0.00102
Mxr%	0.009	0.100	61.092	0.000	0.016	15.182	0.000	0.036	6.117
Myr%	58.767	2.077	0.001	16.986	0.132	0.000	6.820	0.001	0.000
Mbr%	1.812	52.060	0.100	0.119	14.317	0.013	0.001	6.297	0.036

Mod w T yon	10.mod 155.52 0.0404 y	11.mod 163.69 0.0384 x	12.mod 168.53 0.0373 b	13.mod 226.54 0.0277 y	14.mod 238.37 0.0264 x	15.mod 249.94 0.0251 b	16.mod 297.11 0.0211 y	17.mod 311.84 0.0201 x	18.mod 326.58 0.0192 b	
1x	-0.00003	0.01161	0.00033	-0.00005	0.02104	0.00050	-0.00009	0.03419	0.00103	
2x	-0.00015	0.06258	0.00175	-0.00026	0.09696	0.00212	-0.00039	0.13489	0.00364	
3x	-0.00033	0.13392	0.00360	-0.00038	0.13326	0.00277	-0.00027	0.08215	0.00217	
4x	-0.00031	0.12398	0.00330	-0.00013	0.04334	0.00079	0.00018	-0.06774	-0.00203	
5x	-0.00012	0.04448	0.00113	0.00021	-0.08375	-0.00187	0.00035	-0.12049	-0.00328	
6x	0.00014	-0.05949	-0.00165	0.00034	-0.12696	-0.00263	0.00004	-0.00575	0.00010	
7x	0.00030	-0.12566	-0.00338	0.00013	-0.04556	-0.00079	-0.00031	0.11779	0.00338	
8x	0.00028	-0.11435	-0.00302	-0.00020	0.08121	0.00183	-0.00023	0.08002	0.00194	
9x	0.00008	-0.03366	-0.00083	-0.00033	0.13019	0.00266	0.00016	-0.06702	-0.00219	
10x	-0.00016	0.06608	0.00182	-0.00014	0.05375	0.00089	0.00032	-0.12301	-0.00328	
11x	-0.00029	0.12200	0.00326	0.00018	-0.07193	-0.00167	0.00004	-0.01346	0.00010	
12x	-0.00023	0.09630	0.00248	0.00031	-0.12147	-0.00240	-0.00028	0.10965	0.00311	
13x	0.00001	-0.00165	-0.00022	0.00010	-0.04019	-0.00042	-0.00019	0.07178	0.00134	
14x	0.00030	-0.12529	-0.00319	-0.00028	0.11010	0.00198	0.00025	-0.09442	-0.00227	
1y	0.01234	0.00003	-0.00004	0.02021	0.00006	-0.00003	0.02733	0.00009	-0.00002	
2y	0.09225	0.00026	-0.00049	0.12621	0.00037	-0.00042	0.14274	0.00045	-0.00046	
3y	0.13833	0.00036	-0.00065	0.11055	0.00029	-0.00027	0.03088	0.00005	0.00000	
4y	0.10463	0.00025	-0.00037	-0.00192	-0.00004	0.00015	-0.10432	-0.00033	0.00036	
5y	0.01616	0.00001	0.00010	-0.10814	-0.00031	0.00038	-0.10050	-0.00027	0.00021	
6y	-0.07891	-0.00022	0.00047	-0.11334	-0.00029	0.00025	0.03518	0.00013	-0.00019	
7y	-0.12737	-0.00033	0.00056	-0.01426	-0.00001	-0.00010	0.12624	0.00035	-0.00032	
8y	-0.10216	-0.00025	0.00034	0.09874	0.00027	-0.00032	0.05399	0.00012	-0.00004	
9y	-0.01895	-0.00004	-0.00006	0.12301	0.00031	-0.00024	-0.08805	-0.00026	0.00027	
10y	0.07339	0.00019	-0.00040	0.03649	0.00008	0.00003	-0.11717	-0.00030	0.00022	
11y	0.11994	0.00029	-0.00050	-0.08006	-0.00021	0.00025	0.00195	0.00002	-0.00009	
12y	0.09033	0.00022	-0.00030	-0.11711	-0.00029	0.00023	0.11316	0.00030	-0.00025	
13y	-0.00452	-0.00001	0.00010	-0.03459	-0.00009	0.00000	0.06682	0.00016	-0.00009	
14y	-0.12287	-0.00030	0.00051	0.10860	0.00026	-0.00024	-0.09589	-0.00024	0.00021	
1b	0.00000	-0.00002	0.00075	0.00001	-0.00003	0.00163	0.00001	-0.00007	0.00281	
2b	0.00002	-0.00012	0.00467	0.00003	-0.00016	0.00845	0.00004	-0.00032	0.01227	
3b	0.00005	-0.00032	0.01184	0.00004	-0.00025	0.01223	0.00003	-0.00017	0.00533	
4b	0.00006	-0.00032	0.01208	0.00003	-0.00011	0.00461	-0.00001	0.00017	-0.00720	
5b	0.00004	-0.00015	0.00558	-0.00001	0.00013	-0.00684	-0.00003	0.00027	-0.00972	
6b	-0.00001	0.00010	-0.00402	-0.00003	0.00023	-0.01135	-0.00001	0.00001	0.00081	
7b	-0.00004	0.00029	-0.01092	-0.00002	0.00011	-0.00466	0.00002	-0.00027	0.01032	
8b	-0.00005	0.00029	-0.01094	0.00001	-0.00012	0.00663	0.00002	-0.00020	0.00618	
9b	-0.00003	0.00011	-0.00415	0.00003	-0.00023	0.01153	-0.00001	0.00013	-0.00619	
10b	0.00001	-0.00013	0.00509	0.00002	-0.00012	0.00533	-0.00003	0.00029	-0.01043	
11b	0.00004	-0.00028	0.01083	-0.00001	0.00010	-0.00581	-0.00001	0.00006	-0.00098	
12b	0.00004	-0.00024	0.00912	-0.00002	0.00022	-0.01074	0.00002	-0.00023	0.00933	
13b	0.00001	-0.00002	0.00029	-0.00001	0.00010	-0.00387	0.00002	-0.00020	0.00610	
14b	-0.00004	0.00031	-0.01166	0.00002	-0.00021	0.00996	-0.00001	0.00024	-0.00829	
Mxr%	0.000	3.687	0.003	0.000	2.846	0.001	0.000	2.666	0.002	∑= 91.8
Myr%	3.783	0.000	0.000	2.439	0.000	0.000	1.589	0.000	0.000	∑= 92.6
Mbr%	0.000	0.003	4.610	0.000	0.002	4.809	0.000	0.004	5.079	

Mxr=∑[(∑m.Φ)²/Mr]= %91.76 > %90.00 Dinamik kütle oranı yeterli. ✓
Myr=∑[(∑m.Φ)²/Mr]= %92.60 > %90.00 Dinamik kütle oranı yeterli. ✓

EŞDEĞER DEPREM HESABI 1. DOĞAL TİTREŞİM PERYODUNUN KONTROLU

Hn= m ∑Atx= >> Ctx= ∑Aty= >> Cty=

$T1x=Ctx \cdot Hn^{3/4}$ = s. < 1.0 Tx= s. ✓

$T1y=Cty \cdot Hn^{3/4}$ = s. < 1.0 Ty= s. ✓

KAT KÜTLESİ ve RİJİTLİK MERKEZİ (t)

Kat no	H (m)	Wg	Wq	Xg (m)	Xr (m)	Yg (m)	Yr (m)	∑Wk
1	3.50	1010.78	204.57	18.22	18.98	14.72	14.69	1072.148
2	6.71	1113.34	204.57	18.29	18.98	14.72	14.69	1174.710
3	10.21	844.83	192.73	18.88	18.98	14.64	14.71	902.651
4	13.15	797.28	192.73	18.88	18.98	14.64	14.71	855.101
5	16.09	790.90	190.36	18.88	18.98	14.70	14.71	848.011
6	19.03	782.26	185.49	18.88	18.98	14.68	14.71	837.905
7	21.97	790.90	190.36	18.88	18.98	14.70	14.71	848.011
8	24.91	782.26	185.49	18.88	18.98	14.68	14.71	837.905
9	27.85	790.90	190.36	18.88	18.98	14.70	14.71	848.011
10	30.79	782.26	185.49	18.88	18.98	14.68	14.71	837.905
11	33.73	790.90	190.36	18.88	18.98	14.70	14.71	848.011
12	36.67	782.26	185.49	18.88	18.98	14.68	14.71	837.905
13	39.61	790.90	190.36	18.88	18.98	14.70	14.71	848.011
14	42.55	713.80	136.26	18.93	18.98	14.66	14.71	754.682

∑Wt = 12350.964

DEPREM KUVVETİ (t)

Deprem tepe yükü Ftx= 94.95 Fty= 98.73 (t)

Kat no	X YÖNÜ Modal Analiz	X YÖNÜ Eşdeğer dep.yön.	X YÖNÜ Deprem yükü	Y YÖNÜ Modal Analiz	Y YÖNÜ Eşdeğer dep.yön.	Y YÖNÜ Deprem yükü	Kat tipi
1	13.733	27.599	20.518	18.686	23.379	26.715	NORMAL
2	23.356	57.973	34.895	32.332	49.108	46.225	NORMAL
3	37.020	67.782	55.310	43.512	57.417	62.209	NORMAL
4	49.709	82.702	74.267	53.178	70.055	76.029	NORMAL
5	62.253	100.353	93.008	61.706	85.007	88.222	NORMAL
6	72.490	117.275	108.303	67.054	99.341	95.868	NORMAL
7	83.298	137.026	124.450	72.109	116.072	103.094	NORMAL
8	92.010	153.511	137.467	75.228	130.036	107.553	NORMAL
9	104.558	173.699	156.213	82.199	147.138	117.520	NORMAL
10	117.715	189.747	175.871	91.736	160.732	131.155	NORMAL
11	139.255	210.372	208.051	111.222	178.203	159.014	NORMAL
12	165.887	225.983	247.841	138.483	191.427	197.990	NORMAL
13	207.887	247.046	310.591	187.254	209.268	267.718	NORMAL
14	251.274	331.129	375.411	235.474	298.786	336.657	UST KAT
Σ	1420.447	2122.197	2122.197	1270.174	1815.968	1815.968	GENEL

Vt=W.A(t) / Ra(t)> 0,10. Ao.I.W 2122.20 , 1815.97 > 494.04

X Deprem kontrol: 1.00 x 2122.197 = 2122.197 > 1420.447 >>> 2122.197 Y Deprem kontrol: 1.00 x 1815.968 = 1815.968 > 1270.174 >>> 1815.968

Rüzgar kuvvetleri (t)

Kat no	X-yönü F	X-yönü ey m	Y-yönü F	Y-yönü ex m
1	6.174	17.975	7.550	14.700
2	5.662	17.975	6.924	14.700
3	8.870	18.950	8.938	14.700
4	7.451	18.950	7.508	14.700
5	7.451	18.950	7.508	14.700
6	7.451	18.950	7.508	14.700
7	10.245	18.950	10.323	14.700
8	10.245	18.950	10.323	14.700
9	10.245	18.950	10.323	14.700
10	10.245	18.950	10.323	14.700
11	10.245	18.950	10.323	14.700
12	10.245	18.950	10.323	14.700
13	10.245	18.950	10.323	14.700
14	10.245	18.950	10.323	14.700

Kat Deprem deplasmanları

Kat	9. yükleme		10. yükleme		11. yükleme		12. yükleme	
no	δx (m)	θz (rad)	δx (m)	θz (rad)	δy (m)	θz (rad)	δy (m)	θz (rad)
1	0.0000561	0.0000004	0.0000562	-0.000000	-0.000065	-0.000000	-0.000065	0.0000003
2	0.0005919	0.0000050	0.0005932	-0.000005	-0.001084	-0.000004	-0.001083	0.0000047
3	0.0026462	0.0000293	0.0026534	-0.000034	-0.003456	-0.000026	-0.003451	0.0000273
4	0.0050863	0.0000608	0.0051009	-0.000072	-0.006273	-0.000056	-0.006261	0.0000562
5	0.0080205	0.0000998	0.0080448	-0.000120	-0.009684	-0.000093	-0.009664	0.0000918
6	0.0113093	0.0001444	0.0113453	-0.000176	-0.013558	-0.000136	-0.013526	0.0001325
7	0.0148315	0.0001930	0.0148809	-0.000237	-0.017774	-0.000184	-0.017731	0.0001767
8	0.0184897	0.0002441	0.0185541	-0.000302	-0.022233	-0.000234	-0.022175	0.0002232
9	0.0222034	0.0002965	0.0222840	-0.000369	-0.026846	-0.000287	-0.026773	0.0002708
10	0.0259075	0.0003492	0.0260052	-0.000437	-0.031540	-0.000341	-0.031450	0.0003187
11	0.0295524	0.0004014	0.0296678	-0.000506	-0.036253	-0.000396	-0.036147	0.0003663
12	0.0331037	0.0004527	0.0332373	-0.000574	-0.040939	-0.000450	-0.040815	0.0004130
13	0.0365497	0.0005030	0.0367015	-0.000641	-0.045570	-0.000503	-0.045427	0.0004586
14	0.0398782	0.0005520	0.0400477	-0.000707	-0.050113	-0.000556	-0.049951	0.0005031

Deprem yapı salınımı: x= 0.00094 y= 0.00118

DEPREM PERDELERİ TABAN MOMENT KONTROLU

Kat deprem momenti (tm)

Kat	H (m)	Fx	Fx . H	Fy	Fy . H
1	3.50	20.52	71.81	26.72	93.50
2	6.71	34.89	234.14	46.23	310.17
3	10.21	55.31	564.71	62.21	635.15
4	13.15	74.27	976.62	76.03	999.78
5	16.09	93.01	1496.51	88.22	1419.49
6	19.03	108.30	2061.01	95.87	1824.36
7	21.97	124.45	2734.17	103.09	2264.98
8	24.91	137.47	3424.30	107.55	2679.15
9	27.85	156.21	4350.52	117.52	3272.94
10	30.79	175.87	5415.07	131.16	4038.26
11	33.73	208.05	7017.58	159.01	5363.55
12	36.67	247.84	9088.34	197.99	7260.29
13	39.61	310.59	12302.52	267.72	10604.29
14	42.55	375.41	15973.76	336.66	14324.75
		Mdx=	65711.05	Mdy=	55090.66

Perde taban momenti (tm)
M : Perde ve Panel deprem momenti
∑Mk : Perdelerde; bağlı olduğu kirişlerin deprem momentlerinin toplamı
Panellerde ise; başlık kolonlarından oluşan deprem momentlerinin toplamıdır.

Perde	Mx	∑Mxk =	∑Mxr	My	∑Myk =	∑Myr
S1001	5269.46	0.00	5269.46	10.43	218.85	208.42
S1026	1049.50	4022.40	5071.90	1141.22	119.36	1260.59
S1051	6749.51	0.00	6749.51	10.81	219.19	208.38
S1053	3523.03	524.14	4047.17	6153.69	2356.94	8510.63
S1054	3511.65	488.01	3999.65	6501.46	2515.70	9017.16
S1055	4030.49	683.66	4714.14	6120.92	1019.97	7140.89
S1056	4034.97	701.91	4736.88	6517.80	1253.62	7771.42
S1059	0.51	1543.93	1544.44	9.69	953.71	944.02
S1060	0.22	1111.23	1111.45	9.71	882.51	872.80
S1061	1.02	896.97	897.99	10.03	860.16	850.12
S1062	0.39	1281.26	1281.65	9.71	899.92	890.21
S1063	0.74	744.59	743.85	2.77	470.95	468.18
S1064	1.72	755.36	753.64	2.90	466.37	463.48
S1065	0.93	638.78	637.85	2.55	655.66	653.11
S1066	0.41	912.93	912.52	2.83	645.55	642.72
S1067	0.66	1897.16	1896.50	3.18	555.20	552.02
S1068	2.09	1571.09	1569.00	3.12	343.44	340.32
S1069	0.62	2052.07	2051.45	3.22	414.16	410.94
S1070	1.04	1569.14	1568.10	3.09	624.76	621.67
TOPLAM	28162.53		49557.16	26351.07		41827.09

X yönü αm =49557.16 / 65711.05 = 0.75
Y yönü αm =41827.09 / 55090.66 = 0.76

Perde taban kesme kuvveti oranı :
X yönü Vm =294.8 / 2122.2 = 0.14
Y yönü Vm =-113.26 / 1815.97 = -0.06

DEPREMDE YAPI DÜZENSİZLİKLERİNİN KONTROLU
A1,B2 düzensizliklerinin kontrolu
max(di/hi)=0.0035, 0.02/R =.005
1. kat X dust = -.0000561 + -.0000004 x (.12 - 14.69=-.0000613 (S1001)
1. kat X dalt = -.0000561 + -.0000004 x (29.28 - 14.69)=-.000051 (S1051)
2. kat X dust = -.0005919 + -.000005 x (.12 - 14.69) - -.0000613 = -.0006037 (S2002)
2. kat X dalt = -.0005919 + -.000005 x (29.28 - 14.69) - -.000051 = -.0004679 (S2009)

X YÖNÜ (+%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0000613	0.0000510	0.0000561	1.09	0.10	0.00002	0.00009	Normal kat
2	0.0006037	0.0004679	0.0005358	1.13	0.26	0.00019	0.00090	Normal kat
3	0.0023350	0.0017741	0.0020546	1.14	0.84	0.00067	0.00287	Normal kat
4	0.0028029	0.0020779	0.0024404	1.15	0.83	0.00095	0.00380	Normal kat
5	0.0033845	0.0024847	0.0029346	1.15	0.89	0.00115	0.00430	Normal kat
6	0.0038043	0.0027742	0.0032893	1.16	0.93	0.00129	0.00455	Normal kat
7	0.0040832	0.0029622	0.0035227	1.16	0.96	0.00139	0.00460	Normal kat
8	0.0042481	0.0030695	0.0036588	1.16	0.99	0.00144	0.00449	Normal kat
9	0.0043185	0.0031101	0.0037143	1.16	1.00	0.00147	0.00426	Normal kat
10	0.0043124	0.0030968	0.0037046	1.16	1.02	0.00147	0.00395	Normal kat
11	0.0042483	0.0030426	0.0036454	1.17	1.03	0.00145	0.00357	Normal kat
12	0.0041438	0.0029598	0.0035518	1.17	1.03	0.00141	0.00316	Normal kat
13	0.0040257	0.0028674	0.0034465	1.17	1.04	0.00137	0.00274	Normal kat
14	0.0038952	0.0027627	0.0033289	1.17	0.00	0.00132	0.00228	Normal kat

X YÖNÜ (-%5)

Kat	ΔX düst(m)	ΔX dalt(m)	ΔX ort	nbi	nki	ΔX/h	θi	kat tipi
1	0.0000507	0.0000617	0.0000562	1.10	0.10	0.00002	0.00009	Normal kat
2	0.0004598	0.0006142	0.0005370	1.14	0.26	0.00019	0.00090	Normal kat
3	0.0017235	0.0023962	0.0020599	1.16	0.84	0.00068	0.00288	Normal kat
4	0.0020079	0.0028863	0.0024471	1.18	0.83	0.00098	0.00381	Normal kat
5	0.0023912	0.0034956	0.0029434	1.19	0.89	0.00119	0.00431	Normal kat
6	0.0026604	0.0039394	0.0032999	1.19	0.93	0.00134	0.00456	Normal kat
7	0.0028312	0.0042388	0.0035350	1.20	0.96	0.00144	0.00461	Normal kat
8	0.0029242	0.0044209	0.0036725	1.20	0.98	0.00150	0.00451	Normal kat
9	0.0029533	0.0045051	0.0037292	1.21	1.00	0.00153	0.00428	Normal kat
10	0.0029313	0.0045097	0.0037205	1.21	1.02	0.00153	0.00396	Normal kat
11	0.0028707	0.0044532	0.0036620	1.22	1.03	0.00151	0.00359	Normal kat
12	0.0027839	0.0043537	0.0035688	1.22	1.03	0.00148	0.00317	Normal kat
13	0.0026894	0.0042377	0.0034636	1.22	1.04	0.00144	0.00275	Normal kat
14	0.0025862	0.0041048	0.0033455	1.23	0.00	0.00140	0.00229	Normal kat

Y YÖNÜ (+%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0000602	0.0000707	0.0000654	1.08	0.06	0.00002	0.00013	Normal kat
2	0.0009416	0.0010881	0.0010149	1.07	0.43	0.00034	0.00199	Normal kat
3	0.0021206	0.0026215	0.0023711	1.11	0.84	0.00075	0.00393	Normal kat
4	0.0024855	0.0031464	0.0028159	1.12	0.83	0.00107	0.00524	Normal kat
5	0.0029935	0.0038266	0.0034100	1.12	0.88	0.00130	0.00603	Normal kat
6	0.0033881	0.0043556	0.0038719	1.12	0.92	0.00148	0.00651	Normal kat
7	0.0036813	0.0047491	0.0042152	1.13	0.95	0.00162	0.00672	Normal kat
8	0.0038875	0.0050264	0.0044569	1.13	0.97	0.00171	0.00669	Normal kat
9	0.0040187	0.0052040	0.0046113	1.13	0.98	0.00177	0.00645	Normal kat
10	0.0040864	0.0052971	0.0046918	1.13	1.00	0.00180	0.00603	Normal kat
11	0.0041022	0.0053216	0.0047119	1.13	1.01	0.00181	0.00548	Normal kat
12	0.0040765	0.0052917	0.0046841	1.13	1.01	0.00180	0.00485	Normal kat
13	0.0040270	0.0052304	0.0046287	1.13	1.02	0.00178	0.00418	Normal kat
14	0.0039475	0.0051345	0.0045410	1.13	0.00	0.00175	0.00346	Normal kat

Y YÖNÜ (-%5)

Kat	ΔY dsol(m)	ΔY dsağ(m)	ΔY ort	nbi	nki	ΔY/h	θi	kat tipi
1	0.0000720	0.0000600	0.0000660	1.09	0.06	0.00002	0.00013	Normal kat
2	0.0010994	0.0009450	0.0010222	1.08	0.43	0.00034	0.00201	Normal kat
3	0.0026223	0.0021144	0.0023683	1.11	0.84	0.00075	0.00392	Normal kat
4	0.0031354	0.0024878	0.0028116	1.12	0.83	0.00107	0.00524	Normal kat
5	0.0038037	0.0030035	0.0034036	1.12	0.88	0.00129	0.00602	Normal kat
6	0.0043206	0.0034075	0.0038640	1.12	0.92	0.00147	0.00650	Normal kat
7	0.0047017	0.0037099	0.0042058	1.12	0.95	0.00160	0.00671	Normal kat
8	0.0049671	0.0039252	0.0044461	1.12	0.97	0.00169	0.00667	Normal kat
9	0.0051334	0.0040652	0.0045993	1.12	0.98	0.00175	0.00643	Normal kat
10	0.0052163	0.0041412	0.0046787	1.11	1.00	0.00177	0.00601	Normal kat
11	0.0052315	0.0041646	0.0046980	1.11	1.01	0.00178	0.00547	Normal kat
12	0.0051935	0.0041456	0.0046696	1.11	1.01	0.00177	0.00483	Normal kat
13	0.0051258	0.0041016	0.0046137	1.11	1.02	0.00174	0.00416	Normal kat
14	0.0050237	0.0040274	0.0045256	1.11	0.00	0.00171	0.00345	Normal kat

TDY 6.3.2.1 A1 burulma düzensizliği:
1.2< nbi=1.227 <2 , dinamik analizle çözülmüştür ✓
TDY 6.3.2.1 B2 düzensizliği sağlanmaktadır. ✓
TDY 6.20 kosulu sağlanmaktadır. .0018 < .0035 ✓
TDY 6.21 koşulu sağlanmaktadır. max θi=.007 < 0.12 ✓

B1-Düşey doğrultudaki düzensizliklerinin kontrolu

Kat	Aw	Agx	Agy	∑Aex	∑Aey	ncix	nciy	AÇIKLAMA
1	7.89	45.05	24.87	52.94	32.76	1.00	1.00	Düzenli ✓
2	7.89	45.05	24.87	52.94	32.76	1.73	1.15	Düzenli ✓
3	2.49	28.08	26.06	30.57	28.56	1.00	1.00	Düzenli ✓
4	2.49	28.08	26.06	30.57	28.56	0.99	0.98	Düzenli ✓
5	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
6	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
7	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
8	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
9	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
10	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
11	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
12	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
13	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Düzenli ✓
14	4.49	26.51	24.62	31.00	29.11	1.00	1.00	Üst kat ✓

A4 düzensizliği bulunmamıştır. ✓

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU
No = 0,85 . fcd . b . d +fyd . As
Nmax = 0,5 . fck . Ac
Nd,max = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım eksenel yükü
Nd,x/y = x/y yönünde en büyük momente (Md,x/y) sahip kombinasyonun eksenel yükü
Md,x/y = x/y yönünde en büyük kombinasyonun momenti
Mr,x/y = x/y yönünde (Nd,x/y) eksenel yük seviyesindeki kapasite momenti
Vd,max = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti
Vr,max = 2 . fck½ . Ac
Ac = Kolon kesit alanı
As,g = Gerekli donatı alanı
As,m = Mevcut donatı alanı
rm = Mevcut donatı oranı

Mevcut kolon min. boyuna donatı oranı : 0.01
Mevcut kolon donatı korozyon oranı % : 0

1. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S1002	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.4	3.0
S1009	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	31.9	2.7
S1010	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	41.2	4.1
S1011	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	261.9	9.7
S1013	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	402.5	16.4
S1014	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	245.5	15.8
S1016	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	258.7	6.2
S1017	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.2	3.8
S1018	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	50.2	4.1
S1025	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	43.8	3.9
S1027	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	54.0	4.3
S1034	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	45.0	4.0
S1035	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	41.0	4.1
S1036	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	246.5	9.4
S1038	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	353.3	16.1
S1039	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	341.5	16.0
S1041	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	244.7	6.1
S1042	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.1	3.7
S1043	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	36.5	3.0
S1050	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	31.8	2.6

1. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S1002	36.4	1.6	9.5	21.1	8.2	54.0	0.146	0.168	0.152	✓
S1009	31.9	0.9	9.3	11.6	7.0	50.9	0.128	0.096	0.137	✓
S1010	41.2	2.0	9.7	30.5	10.9	56.9	0.165	0.211	0.191	✓
S1011	261.9	41.5	166.8	202.1	4.6	26.0	0.599	0.249	0.175	✓
S1013	402.5	9.1	28.4	279.9	42.7	209.4	0.805	0.319	0.204	✓
S1014	245.5	5.5	29.5	23.4	39.6	126.9	0.491	0.187	0.312	✓
S1016	258.7	38.8	166.7	258.7	5.8	27.0	0.591	0.232	0.216	✓
S1017	36.2	1.3	9.5	27.5	9.6	56.0	0.145	0.138	0.172	✓
S1018	50.2	1.9	10.1	37.1	11.2	58.8	0.201	0.188	0.191	✓
S1025	43.8	1.3	9.8	33.2	10.3	57.7	0.175	0.130	0.178	✓
S1027	54.0	1.8	10.3	39.5	11.8	59.5	0.216	0.180	0.198	✓
S1034	45.0	1.2	9.9	33.7	10.6	57.8	0.180	0.124	0.184	✓
S1035	41.0	2.0	9.7	30.4	10.8	56.8	0.164	0.210	0.189	✓
S1036	246.5	41.3	166.2	246.5	5.6	26.9	0.563	0.248	0.206	✓
S1038	353.3	8.0	29.9	88.6	40.2	160.1	0.707	0.267	0.251	✓
S1039	341.5	7.7	30.1	82.6	40.0	157.4	0.683	0.256	0.254	✓
S1041	244.7	38.2	166.1	244.7	5.5	26.9	0.559	0.230	0.205	✓
S1042	36.1	1.2	9.5	27.4	9.8	56.0	0.145	0.131	0.175	✓
S1043	36.5	1.6	9.5	21.2	8.0	54.0	0.146	0.168	0.149	✓
S1050	31.8	0.7	9.3	17.0	7.2	52.6	0.127	0.072	0.137	✓

Kat Kapasite Kontrolu:
Nmax= 6750.0> Nd,max= 2839.0
Mr,x= 899.8> Md,x= 207.6
Mr,y= 1431.5> Md,y= 299.2

2. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S2002	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	18.4	8.9
S2009	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	16.5	9.7
S2010	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	20.3	12.0
S2011	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	250.5	23.2
S2013	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	369.8	13.2
S2014	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.48	0.010	808.3	500.0	204.1	19.5
S2016	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	251.3	12.6
S2017	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	17.9	13.1
S2018	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	25.0	10.4
S2025	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	21.9	11.9
S2027	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	26.9	11.6
S2034	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	22.4	12.4
S2035	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	20.2	12.3
S2036	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	237.2	22.5
S2038	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	316.8	18.7
S2039	25x160	4000	2x5ø16 + 2x9ø12	40.44	48.23	0.010	808.3	500.0	303.3	21.2
S2041	140x25	3500	2x5ø16 + 2x8ø12	38.18	44.21	0.011	717.9	437.5	236.6	12.0
S2042	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	17.8	13.3
S2043	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	18.5	8.7
S2050	20x100	2000	2x4ø16 + 2x5ø12	27.38	28.13	0.014	431.5	250.0	17.5	9.6

2. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S2002	14.0	3.9	8.4	8.2	17.6	49.7	0.074	0.462	0.354	✓
S2009	12.3	2.7	8.3	2.7	18.6	47.8	0.066	0.330	0.388	✓
S2010	15.6	5.1	8.5	12.8	20.5	51.3	0.081	0.605	0.399	✓
S2011	250.5	45.5	166.5	103.6	4.3	21.6	0.572	0.274	0.197	✓
S2013	369.8	8.3	29.4	166.1	47.3	189.0	0.740	0.283	0.250	✓
S2014	204.1	4.6	28.1	0.2	54.6	113.0	0.408	0.163	0.483	✓
S2016	251.3	35.8	166.6	63.9	6.2	19.1	0.574	0.215	0.324	✓
S2017	14.1	4.1	8.4	7.8	21.5	49.5	0.071	0.484	0.434	✓
S2018	19.5	5.5	8.7	16.2	18.9	52.4	0.100	0.638	0.361	✓
S2025	17.6	4.6	8.6	13.8	21.0	51.6	0.088	0.538	0.407	✓
S2027	20.5	5.2	8.7	17.6	20.7	52.8	0.108	0.592	0.392	✓
S2034	17.8	4.4	8.6	14.4	21.7	51.8	0.090	0.512	0.418	✓
S2035	15.5	5.0	8.5	12.7	21.0	51.2	0.081	0.593	0.409	✓
S2036	237.2	43.0	165.6	65.7	5.5	19.2	0.542	0.260	0.288	✓
S2038	316.8	7.1	30.3	65.9	53.3	149.5	0.634	0.235	0.356	✓
S2039	303.3	6.8	30.3	60.1	56.1	146.7	0.607	0.225	0.382	✓
S2041	236.6	34.6	165.6	63.0	6.5	19.0	0.541	0.209	0.341	✓
S2042	14.0	3.9	8.4	10.7	22.2	50.6	0.071	0.466	0.440	✓
S2043	14.0	3.9	8.4	8.2	17.4	49.7	0.074	0.463	0.350	✓
S2050	13.9	2.6	8.4	17.5	18.7	52.8	0.070	0.313	0.355	✓

Kat Kapasite Kontrolu:
Nmax= 6750.0> Nd,max= 2412.9
Mr,x= 884.3> Md,x= 236.9
Mr,y= 1288.5> Md,y= 473.5

3. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S3011	140x20	2800	2x4ø16 + 2x7ø12	31.90	44.65	0.011	579.5	350.0	156.9	18.9
S3013	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	339.0	11.8
S3014	20x160	3200	2x4ø16 + 2x7ø12	31.90	39.44	0.010	644.9	400.0	158.3	9.9
S3016	140x20	2800	2x4ø16 + 2x7ø12	31.90	41.20	0.011	579.5	350.0	172.9	16.4
S3036	140x20	2800	2x4ø16 + 2x7ø12	31.90	41.20	0.011	579.5	350.0	158.5	19.0
S3038	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	290.7	9.8
S3039	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	277.0	10.0
S3041	140x20	2800	2x4ø16 + 2x7ø12	31.90	41.20	0.011	579.5	350.0	158.4	15.9

3. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S3011	-43.3	49.4	50.0	52.5	4.1	12.3	0.448	0.987	0.336	✓
S3013	339.0	7.1	18.2	228.8	41.5	154.2	0.848	0.392	0.269	✓
S3014	158.3	3.3	17.8	-30.8	44.3	65.6	0.396	0.187	0.676	✓
S3016	-35.0	43.8	54.4	57.1	5.0	12.5	0.494	0.806	0.397	✓
S3036	-30.3	49.2	56.8	55.3	4.9	12.4	0.453	0.866	0.395	✓
S3038	280.3	5.9	19.7	35.6	39.0	102.0	0.727	0.300	0.382	✓
S3039	264.4	5.6	19.9	31.3	41.0	100.0	0.692	0.280	0.410	✓
S3041	-34.8	42.7	54.4	55.4	5.2	12.4	0.453	0.785	0.419	✓

Kat Kapasite Kontrolu:
Nmax= 3000.0> Nd,max= 1711.6
Mr,x= 291.3> Md,x= 207.1
Mr,y= 471.5> Md,y= 185.1

4. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S4011	140x20	2800	2x4ø16 + 2x7ø12	31.90	29.14	0.011	579.5	350.0	138.2	10.2
S4013	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	297.6	29.3
S4014	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	197.3	11.8
S4016	140x20	2800	2x4ø16 + 2x7ø12	31.90	29.14	0.011	579.5	350.0	151.4	11.1
S4036	140x20	2800	2x4ø16 + 2x7ø12	31.90	29.14	0.011	579.5	350.0	139.9	10.6
S4038	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	264.6	17.6
S4039	20x160	3200	2x4ø16 + 2x7ø12	31.90	27.38	0.010	644.9	400.0	251.7	16.6
S4041	140x20	2800	2x4ø16 + 2x7ø12	31.90	29.14	0.011	579.5	350.0	139.2	10.9

4. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S4011	-40.1	23.5	51.7	46.1	6.8	11.9	0.395	0.455	0.570	✓
S4013	135.6	6.7	16.9	203.6	49.5	152.4	0.744	0.399	0.325	✓

S4014	197.3	4.1	19.1	-31.5	20.9	65.2	0.493	0.217	0.320	✓
S4016	-33.0	25.6	55.4	49.2	6.7	12.1	0.432	0.462	0.554	✓
S4036	-27.4	23.9	56.3	48.7	7.3	12.0	0.400	0.410	0.603	✓
S4038	69.7	6.3	13.5	251.1	32.6	154.6	0.661	0.463	0.211	✓
S4039	86.4	6.4	14.5	236.2	31.6	154.4	0.629	0.446	0.205	✓
S4041	-32.1	24.9	55.9	48.3	7.1	12.0	0.398	0.445	0.594	✓

Kat Kapasite Kontrolu:
Nmax= 3000.0> Nd,max= 1579.8
Mr,x= 285.2> Md,x= 121.5
Mr,y= 574.5> Md,y= 162.4

5. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S5011	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.44	0.012	505.5	300.0	123.2	12.7
S5013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	258.3	27.6
S5014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	179.5	12.0
S5016	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	134.3	12.7
S5036	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	125.0	13.1
S5038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	238.5	16.7
S5039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	226.6	15.8
S5041	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	123.9	12.4

5. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S5011	-33.1	22.5	44.8	41.6	7.2	10.7	0.411	0.501	0.676	✓
S5013	173.2	7.4	15.3	180.4	53.6	116.5	0.795	0.484	0.460	✓
S5014	179.5	3.8	15.3	-30.3	15.5	50.5	0.552	0.246	0.308	✓
S5016	-26.8	22.1	48.2	43.8	7.2	10.8	0.448	0.460	0.671	✓
S5036	-20.7	22.9	51.4	44.1	7.8	10.8	0.417	0.446	0.726	✓
S5038	61.3	6.5	11.8	238.5	36.8	115.7	0.734	0.550	0.318	✓
S5039	76.9	6.7	12.5	226.6	35.7	116.5	0.697	0.536	0.306	✓
S5041	-25.6	21.8	48.8	43.4	7.7	10.8	0.413	0.447	0.719	✓

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 1409.2
Mr,x= 248.2> Md,x= 113.7
Mr,y= 442.3> Md,y= 171.7

6. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S6011	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	106.7	14.8
S6013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	223.7	20.4
S6014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	161.8	7.7
S6016	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	115.7	15.5
S6036	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	108.6	15.3
S6038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	212.7	9.0
S6039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	202.2	7.7
S6041	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	107.1	14.7

6. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S6011	-28.1	22.4	47.5	37.0	8.3	10.5	0.356	0.471	0.792	✓
S6013	103.3	7.7	13.6	104.3	35.9	105.0	0.688	0.569	0.342	✓
S6014	161.8	3.6	15.1	-27.2	15.5	52.3	0.498	0.237	0.296	✓
S6016	-22.6	23.0	50.4	38.4	8.3	10.5	0.386	0.457	0.793	✓
S6036	-16.1	22.9	53.8	39.3	9.0	10.6	0.362	0.426	0.854	✓
S6038	54.5	7.5	11.5	19.0	14.2	75.7	0.655	0.652	0.187	✓
S6039	68.8	7.8	12.2	15.0	14.7	73.8	0.622	0.638	0.199	✓
S6041	-21.1	22.1	51.2	38.4	8.9	10.5	0.357	0.432	0.848	✓

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 1238.5
Mr,x= 255.2> Md,x= 117.0 **Mr,y= 348.9> Md,y= 114.8**

7. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S7011	120x20	2400	2x4ø16 +	2x6ø12	29.64	40.19	0.012	505.5	300.0	91.9	14.9
S7013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	191.7	22.8
S7014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	143.6	9.3
S7016	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	99.2	15.5
S7036	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	94.2	15.6
S7038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	187.1	11.2
S7039	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	177.9	9.9
S7041	120x20	2400	2x4ø16 +	2x6ø12	29.64	36.17	0.012	505.5	300.0	92.2	14.7

7. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S7011	-22.3	21.5	50.6	33.1	9.0	10.3	0.306	0.425	0.874	✓
S7013	89.5	8.3	13.0	137.0	36.5	111.7	0.590	0.636	0.344	✓
S7014	143.6	3.7	14.7	-23.4	14.2	54.4	0.442	0.251	0.261	✓
S7016	-17.6	22.0	53.0	33.8	9.1	10.3	0.331	0.414	0.882	✓
S7036	-10.6	22.3	56.4	35.2	9.8	10.4	0.314	0.395	0.949	✓
S7038	48.3	8.2	11.2	187.1	20.7	116.9	0.576	0.732	0.177	✓
S7039	61.1	8.5	11.8	12.5	12.2	72.7	0.547	0.723	0.168	✓
S7041	-15.9	21.2	53.9	34.0	9.7	10.3	0.307	0.393	0.943	✓

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 1077.8
Mr,x= 264.7> Md,x= 115.7
Mr,y= 397.0> Md,y= 123.1

8. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S8011	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	78.1	15.1
S8013	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	161.9	22.8
S8014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	125.2	8.9
S8016	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	84.0	15.7
S8036	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	81.0	15.8
S8038	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	161.8	10.8
S8039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	153.8	9.3
S8041	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	78.3	14.9

8. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S8011	0.8	23.5	61.5	29.3	9.4	10.1	0.260	0.381	0.938	✓
S8013	110.3	9.5	13.8	72.8	35.3	96.2	0.498	0.686	0.367	✓
S8014	125.2	3.8	14.3	-19.1	13.2	56.8	0.385	0.264	0.233	✓
S8016	4.8	24.3	63.2	29.6	9.6	10.1	0.280	0.384	0.951	✓
S8036	11.1	24.5	65.9	31.3	10.4	10.2	0.270	0.371	1.024	Mr
S8038	42.5	8.7	10.9	161.8	18.5	115.0	0.498	0.795	0.161	✓
S8039	53.6	9.1	11.5	10.7	11.9	71.9	0.473	0.789	0.166	✓
S8041	4.6	23.0	63.1	29.9	10.3	10.1	0.261	0.364	1.019	Mr

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 924.1
Mr,x= 304.3> Md,x= 126.2
Mr,y= 380.4> Md,y= 118.7

9. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S9011	120x20	2400	2x4ø16 + 2x6ø12	29.64	36.17	0.012	505.5	300.0	65.2	14.8
S9013	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	133.9	23.1
S9014	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	106.7	8.9
S9016	120x20	2400	2x4ø16 + 2x6ø12	29.64	32.15	0.012	505.5	300.0	69.9	15.4
S9036	120x20	2400	2x4ø16 + 2x6ø12	29.64	37.49	0.012	505.5	300.0	68.9	15.7
S9038	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	136.7	10.8
S9039	20x130	2600	2x4ø16 + 2x6ø12	29.64	36.17	0.011	538.2	325.0	130.2	9.3
S9041	120x20	2400	2x4ø16 + 2x6ø12	29.64	37.49	0.012	505.5	300.0	65.3	14.6

9. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S9011	1.9	22.2	62.0	25.5	9.7	9.9	0.217	0.358	0.987	✓
S9013	91.9	9.7	13.1	58.7	34.8	91.5	0.412	0.740	0.381	✓
S9014	106.7	3.8	13.7	-14.7	12.1	59.4	0.328	0.276	0.204	✓
S9016	6.5	23.1	64.0	25.5	9.9	9.9	0.233	0.361	1.006	Mr
S9036	13.9	23.5	67.1	27.5	10.8	10.0	0.230	0.350	1.083	Mr
S9038	36.9	8.9	10.7	136.7	17.7	111.6	0.421	0.840	0.158	✓
S9039	46.1	9.3	11.1	9.2	11.0	71.2	0.401	0.841	0.154	✓
S9041	6.6	21.7	64.0	25.9	10.7	9.9	0.218	0.340	1.080	Mr

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 776.8
Mr,x= 305.6> Md,x= 122.3
Mr,y= 373.2> Md,y= 116.7

10. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	Nc (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S10011	120x20	2400	2x4ø16 + 2x6ø12		29.64	32.15	0.012	505.5	300.0	52.9	14.3
S10013	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	107.3	22.9
S10014	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	88.4	8.7
S10016	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	56.5	15.0
S10036	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	57.6	15.4
S10038	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	112.2	10.6
S10039	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	107.1	9.0
S10041	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	53.0	14.1

10. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S10011	3.9	21.3	62.9	21.6	9.9	9.6	0.176	0.339	1.024	Mr
S10013	74.2	9.8	12.4	45.5	34.2	86.7	0.330	0.790	0.394	✓
S10014	86.4	3.7	13.0	-10.2	11.0	61.8	0.272	0.286	0.178	✓
S10016	7.6	22.3	64.4	21.4	10.1	9.6	0.188	0.347	1.047	Mr
S10036	16.2	22.8	68.1	23.6	11.0	9.7	0.192	0.336	1.129	Mr
S10038	31.3	9.0	10.3	112.2	16.6	106.8	0.345	0.874	0.155	✓
S10039	38.6	9.5	10.7	7.9	10.1	70.6	0.330	0.881	0.144	✓
S10041	7.9	21.2	64.5	21.8	10.9	9.6	0.177	0.328	1.128	Mr

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 635.1
Mr,x= 306.4> Md,x= 119.7
Mr,y= 364.4> Md,y= 113.7

11. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	Nc (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S11011	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	41.1	13.6
S11013	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	81.6	22.4
S11014	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	70.4	8.3
S11016	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	43.8	14.3
S11036	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	47.2	15.1
S11038	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	88.1	10.4
S11039	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	84.5	8.6
S11041	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	41.2	13.4

11. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S11011	5.0	20.7	63.3	17.4	9.9	9.4	0.137	0.327	1.050	Mr
S11013	57.0	9.7	11.6	33.0	33.0	81.8	0.251	0.838	0.404	✓
S11014	70.4	3.6	12.2	-5.9	10.0	63.9	0.217	0.297	0.156	✓
S11016	7.8	21.7	64.5	17.2	10.1	9.4	0.146	0.337	1.078	Mr
S11036	17.8	23.1	68.7	19.6	11.1	9.5	0.157	0.336	1.165	Mr
S11038	25.5	9.0	10.0	88.1	15.5	100.8	0.271	0.898	0.154	✓
S11039	30.9	9.5	10.3	6.5	9.6	69.9	0.260	0.917	0.137	✓
S11041	8.1	20.5	64.6	17.6	10.9	9.4	0.137	0.318	1.164	Mr

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 497.9
Mr,x= 305.4> Md,x= 117.9
Mr,y= 354.1> Md,y= 110.1

12. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	Nc (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S12011	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	29.7	13.2
S12013	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	56.7	22.2
S12014	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	52.7	8.2
S12016	120x20	2400	2x4ø16 + 2x6ø12		29.64	37.49	0.012	505.5	300.0	31.5	13.9
S12036	120x20	2400	2x4ø16 + 2x6ø12		29.64	42.58	0.012	505.5	300.0	37.4	13.8
S12038	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	64.5	10.3
S12039	20x130	2600	2x4ø16 + 2x6ø12		29.64	36.17	0.011	538.2	325.0	62.6	8.8
S12041	120x20	2400	2x4ø16 + 2x6ø12		29.64	42.58	0.012	505.5	300.0	29.7	13.0

12. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA
S12011	4.8	20.6	63.2	18.4	10.1	9.4	0.099	0.326	1.069	Mr
S12013	40.0	9.6	10.8	21.2	34.1	76.7	0.174	0.891	0.445	✓
S12014	52.7	3.5	11.4	52.7	14.0	89.4	0.162	0.305	0.156	✓

S12016	6.9	21.7	64.1	12.7	10.0	9.1	0.105	0.338	1.100	Mr	
S12036	18.7	20.9	69.1	22.5	11.5	9.7	0.125	0.302	1.193	Mr	
S12038	19.6	8.8	9.7	64.5	16.2	93.5	0.199	0.916	0.173		✓
S12039	23.0	9.3	9.9	62.6	14.6	92.8	0.193	0.945	0.158		✓
S12041	7.2	20.4	64.3	18.4	11.3	9.4	0.099	0.317	1.199	Mr	

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 364.8
Mr,x= 302.5> Md,x= 114.8
Mr,y= 390.0> Md,y= 121.9

13. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S13011	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	18.3	11.1
S13013	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	32.0	19.7
S13014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	35.5	6.7
S13016	120x20	2400	2x4ø16 +	2x6ø12	29.64	37.49	0.012	505.5	300.0	19.4	11.7
S13036	120x20	2400	2x4ø16 +	2x6ø12	29.64	42.58	0.012	505.5	300.0	28.4	16.4
S13038	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	41.6	8.8
S13039	20x130	2600	2x4ø16 +	2x6ø12	29.64	41.51	0.011	538.2	325.0	37.2	7.0
S13041	120x20	2400	2x4ø16 +	2x6ø12	29.64	42.58	0.012	505.5	300.0	18.4	10.9

13. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA	
S13011	3.4	16.5	62.6	11.2	9.9	9.0	0.061	0.264	1.100	Mr	
S13013	23.0	9.4	9.9	9.8	29.3	71.4	0.099	0.958	0.410		✓
S13014	35.5	3.4	10.6	2.0	9.6	67.8	0.109	0.322	0.142		✓
S13016	4.7	17.5	63.2	11.3	10.2	9.0	0.065	0.277	1.127	Mr	
S13036	19.2	26.9	69.2	16.3	11.3	9.3	0.095	0.388	1.215	Mr	
S13038	13.4	8.6	9.3	41.6	13.2	85.2	0.128	0.930	0.155		✓
S13039	22.2	10.5	9.8	10.4	12.9	71.7	0.114	1.072	0.179	Mr	
S13041	5.0	16.4	63.3	11.3	11.2	9.0	0.061	0.260	1.238	Mr	

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 230.8
Mr,x= 297.9> Md,x= 109.3
Mr,y= 332.5> Md,y= 107.6

14. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm²	MEVCUT DONATI baslik	gövde	Asm cm²	Asg cm²	rm %	No (t)	Nmax (t)	Nd,max (t)	Vd,max (t)
S14011	120x20	2400	2x4ø16 +	2x6ø12	29.64	46.60	0.012	505.5	300.0	7.5	16.6
S14013	20x130	2600	2x4ø16 +	2x6ø12	29.64	45.53	0.011	538.2	325.0	7.6	29.8
S14014	20x130	2600	2x4ø16 +	2x6ø12	29.64	36.17	0.011	538.2	325.0	20.0	10.8
S14016	120x20	2400	2x4ø16 +	2x6ø12	29.64	46.60	0.012	505.5	300.0	7.8	17.2
S14036	120x20	2400	2x4ø16 +	2x6ø12	29.64	57.84	0.012	505.5	300.0	19.7	9.9
S14038	20x130	2600	2x4ø16 +	2x6ø12	29.64	41.51	0.011	538.2	325.0	18.0	14.3
S14039	20x130	2600	2x4ø16 +	2x6ø12	29.64	51.68	0.011	538.2	325.0	19.6	17.3
S14041	120x20	2400	2x4ø16 +	2x6ø12	29.64	51.68	0.012	505.5	300.0	7.5	15.9

14. KAT MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd,x (t)	Md,x (tm)	Mr,x (tm)	Nd,y (t)	Md,y (tm)	Mr,y (tm)	Ndmax /Nmax	Md,x/ Mr,x	Md,y/ Mr,y	ACIKLAMA	
S14011	1.0	28.5	61.6	3.5	10.6	8.6	0.025	0.463	1.233	Mr	
S14013	6.3	8.9	8.9	1.0	52.6	67.3	0.023	1.000	0.781	Mr	
S14014	9.3	6.5	9.0	18.6	21.0	75.5	0.062	0.719	0.279		✓
S14016	1.6	30.2	61.9	3.4	10.9	8.6	0.026	0.489	1.269	Mr	
S14036	18.4	11.8	69.0	9.6	15.6	8.9	0.066	0.172	1.746	Mr	
S14038	9.7	10.2	9.1	17.9	26.7	75.2	0.056	1.123	0.355	Mr	
S14039	14.3	13.2	9.3	19.6	35.3	76.0	0.060	1.416	0.465	Mr	
S14041	1.8	28.1	61.9	3.8	12.0	8.6	0.025	0.453	1.394	Mr	

Kat Kapasite Kontrolu:
Nmax= 2500.0> Nd,max= 107.8
Mr,x= 290.7> Md,x= 137.5
Mr,y= 328.6> Md,y= 184.6

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU
BS25
fcd =192.3 fctd=13.38(kg/cm²)
fyd =3818.2(kg/cm²)
Rot kesme kuvvet kapasitesi:
Vr=2.12 (t) ø20 l=423 mm

PERDELERİN KESME GÜVENLİK KONTROLU

Vr = Ach (0.65 fctd + rsh fyd) Perde Kesme Dayanımı
Vrh = 0.22 fcd Ach Max. Beton Kesme Dayanımı
rshx = Asws.(∑ Letrx/s)/Ach rshy = Asws.(∑ Letry/s)/Ach
Vfr = μ N + fyd Asd = İş Derzi Sürtünme Kesme Dayanımı
N = Ng - Ne Min. Düşey Yük μ = 1.4 (Özel pürüzlendirme)

Kolon		N	Vd	Vr	Vrh	Vfr	ACIKLAMA
							(t)
S3011	X yönü	-34.858	18.878	77.827	94.769	121.803	✓
	Y yönü	60.922	2.465	49.181	94.769	255.894	✓
S3013	X yönü	172.131	2.014	55.038	108.308	345.601	✓
	Y yönü	167.301	12.142	86.753	108.308	338.839	✓
S3014	X yönü	53.657	1.119	55.038	108.308	225.807	✓
	Y yönü	-22.571	9.920	86.753	108.308	119.088	✓
S3016	X yönü	-25.838	16.411	77.827	94.769	121.232	✓
	Y yönü	66.285	2.811	49.181	94.769	250.205	✓
S3036	X yönü	-21.742	16.955	77.827	94.769	126.968	✓
	Y yönü	63.856	2.882	49.181	94.769	246.804	✓
S3038	X yönü	94.891	2.508	55.038	108.308	237.465	✓
	Y yönü	50.371	9.758	86.753	108.308	175.137	✓
S3039	X yönü	111.532	2.472	55.038	108.308	260.762	✓
	Y yönü	45.209	10.018	86.753	108.308	167.910	✓
S3041	X yönü	-26.274	15.853	77.827	94.769	120.622	✓
	Y yönü	63.941	2.988	49.181	94.769	246.923	✓
S4011	X yönü	-32.655	10.164	77.827	94.769	65.619	✓
	Y yönü	53.527	4.682	49.181	94.769	186.274	✓
S4013	X yönü	151.376	4.985	55.038	108.308	316.545	✓
	Y yönü	149.399	29.294	86.753	108.308	313.777	✓
S4014	X yönü	47.979	2.118	55.038	108.308	171.788	✓
	Y yönü	-24.012	11.819	86.753	108.308	71.000	✓
S4016	X yönü	-24.995	11.100	77.827	94.769	76.343	✓
	Y yönü	57.280	4.548	49.181	94.769	191.528	✓
S4036	X yönü	-19.806	10.580	77.827	94.769	83.607	✓
	Y yönü	56.218	5.066	49.181	94.769	190.042	✓
S4038	X yönü	82.961	4.650	55.038	108.308	220.763	✓
	Y yönü	41.176	17.567	86.753	108.308	162.264	✓
S4039	X yönü	98.893	4.461	55.038	108.308	243.068	✓
	Y yönü	36.191	16.644	86.753	108.308	155.286	✓
S4041	X yönü	-24.580	10.877	77.827	94.769	76.925	✓
	Y yönü	55.848	4.957	49.181	94.769	189.523	✓
S1001	X yönü	247.421	148.599	1779.203	3043.615	2194.954	✓
	Y yönü	-5.343	10.332	1231.043	3043.615	1841.083	✓
S1005	X yönü	168.947	1.685	67.315	108.308	466.876	✓
	Y yönü	64.548	1.236	58.107	108.308	320.718	✓
S1006	X yönü	182.749	1.570	67.315	108.308	486.199	✓
	Y yönü	124.850	0.523	58.107	108.308	405.140	✓
S1026	X yönü	963.654	223.625	842.748	1239.108	2938.535	✓
	Y yönü	923.093	330.114	890.104	1239.108	2881.749	✓
S1046	X yönü	186.038	1.944	67.315	108.308	490.804	✓
	Y yönü	175.354	0.868	58.107	108.308	475.846	✓
S1047	X yönü	189.207	1.965	67.315	108.308	495.240	✓
	Y yönü	174.773	0.786	58.107	108.308	475.032	✓
S1051	X yönü	250.685	148.058	1778.709	3042.769	2199.522	✓
	Y yönü	-1.529	10.786	1230.702	3042.769	1846.424	✓
S1053	X yönü	1111.035	570.742	895.404	1609.215	3829.442	✓
	Y yönü	880.522	625.800	1072.363	1609.215	3506.724	✓
S1054	X yönü	1168.783	572.528	894.272	1608.031	3822.828	✓
	Y yönü	1007.887	622.355	1070.032	1608.031	3597.573	✓
S1055	X yönü	1182.573	569.155	894.193	1607.185	3861.570	✓
	Y yönü	1032.434	626.432	1070.193	1607.185	3651.375	✓
S1056	X yönü	1138.753	572.204	894.799	1608.200	3790.504	✓
	Y yönü	1027.547	623.240	1071.278	1608.200	3634.816	✓
S2001	X yönü	133.399	1975.122	2009.841	3043.615	2035.322	✓
	Y yönü	-61.000	85.785	1324.641	3043.615	1763.164	✓
S2005	X yönü	158.311	5.295	67.315	108.308	451.987	✓
	Y yönü	49.606	6.431	58.107	108.308	299.798	✓

S2006	X yönü	176.488	5.190	67.315	108.308	477.434	✓
	Y yönü	120.208	6.452	58.107	108.308	398.641	✓
S2026	X yönü	881.802	379.313	842.748	1239.108	2823.942	✓
	Y yönü	850.969	128.044	890.104	1239.108	2780.775	✓
S2046	X yönü	179.420	5.678	67.315	108.308	481.539	✓
	Y yönü	171.889	7.846	58.107	108.308	470.995	✓
S2047	X yönü	182.249	5.509	67.315	108.308	485.500	✓
	Y yönü	171.438	7.656	58.107	108.308	470.363	✓
S2051	X yönü	135.876	1942.105	2009.284	3042.769	2038.790	✓
	Y yönü	-58.958	87.270	1324.275	3042.769	1766.023	✓
S2053	X yönü	1062.014	255.121	895.404	1609.215	3721.940	✓
	Y yönü	807.384	413.482	1072.363	1609.215	3365.458	✓
S2054	X yönü	1122.591	260.062	894.272	1608.031	3758.159	✓
	Y yönü	934.800	414.225	1070.032	1608.031	3495.252	✓
S2055	X yönü	1130.957	241.374	894.193	1607.185	3789.307	✓
	Y yönü	957.067	413.162	1070.193	1607.185	3545.861	✓
S2056	X yönü	1091.118	246.395	894.799	1608.200	3723.815	✓
	Y yönü	954.364	414.740	1071.278	1608.200	3532.359	✓
S3005	X yönü	150.692	15.753	67.315	108.308	441.320	✓
	Y yönü	42.296	6.217	58.107	108.308	289.565	✓
S3006	X yönü	176.773	15.478	67.315	108.308	477.833	✓
	Y yönü	132.301	6.325	58.107	108.308	415.572	✓
S3026	X yönü	761.362	257.136	842.748	1239.108	2655.326	✓
	Y yönü	778.283	110.383	890.104	1239.108	2679.016	✓
S3046	X yönü	178.763	14.595	67.315	108.308	480.619	✓
	Y yönü	185.352	7.081	58.107	108.308	489.843	✓
S3047	X yönü	180.999	14.632	67.315	108.308	483.749	✓
	Y yönü	185.026	7.034	58.107	108.308	489.386	✓
S3053	X yönü	974.635	365.573	895.404	1609.215	3541.302	✓
	Y yönü	646.403	413.903	1072.363	1609.215	3081.778	✓
S3054	X yönü	1045.608	364.084	894.272	1608.031	3611.511	✓
	Y yönü	763.465	411.038	1070.032	1608.031	3216.510	✓
S3055	X yönü	1041.026	363.235	894.193	1607.185	3595.378	✓
	Y yönü	790.634	406.349	1070.193	1607.185	3244.830	✓
S3056	X yönü	1009.134	360.813	894.799	1608.200	3560.448	✓
	Y yönü	785.259	402.500	1071.278	1608.200	3247.023	✓
S4005	X yönü	137.026	13.857	67.315	108.308	422.187	✓
	Y yönü	36.847	7.502	58.107	108.308	281.937	✓
S4006	X yönü	157.022	14.505	67.315	108.308	450.181	✓
	Y yönü	115.462	7.893	58.107	108.308	391.997	✓
S4026	X yönü	705.661	281.788	842.748	1239.108	2577.344	✓
	Y yönü	721.216	149.673	890.104	1239.108	2599.122	✓
S4046	X yönü	161.332	11.230	67.315	108.308	456.215	✓
	Y yönü	167.503	11.152	58.107	108.308	464.854	✓
S4047	X yönü	163.652	11.531	67.315	108.308	459.464	✓
	Y yönü	167.234	11.153	58.107	108.308	464.478	✓
S4053	X yönü	882.381	287.568	895.404	1609.215	3363.557	✓
	Y yönü	577.285	385.084	1072.363	1609.215	2936.423	✓
S4054	X yönü	949.425	289.283	894.272	1608.031	3026.111	✓
	Y yönü	687.263	377.886	1070.032	1608.031	2659.085	✓
S4055	X yönü	947.157	289.176	894.193	1607.185	3015.258	✓
	Y yönü	714.944	355.179	1070.193	1607.185	2690.160	✓
S4056	X yönü	915.539	290.295	894.799	1608.200	2978.671	✓
	Y yönü	708.462	354.677	1071.278	1608.200	2688.763	✓
S5005	X yönü	124.635	18.136	67.315	108.308	404.840	✓
	Y yönü	34.420	8.435	58.107	108.308	278.538	✓
S5006	X yönü	138.504	18.578	67.315	108.308	424.257	✓
	Y yönü	100.296	7.923	58.107	108.308	370.765	✓

S5026	X yönü	651.660	288.037	842.748	1239.108	2501.744	✓
	Y yönü	666.453	145.906	890.104	1239.108	2522.454	✓
S5046	X yönü	145.000	15.665	67.315	108.308	433.350	✓
	Y yönü	150.480	10.260	58.107	108.308	441.023	✓
S5047	X yönü	147.423	15.683	67.315	108.308	436.743	✓
	Y yönü	150.280	10.247	58.107	108.308	440.743	✓
S5053	X yönü	795.979	262.233	895.404	1609.215	2880.392	✓
	Y yönü	518.834	363.092	1072.363	1609.215	2492.390	✓
S5054	X yönü	858.330	262.984	894.272	1608.031	2605.841	✓
	Y yönü	620.448	353.710	1070.032	1608.031	2272.807	✓
S5055	X yönü	858.203	263.836	894.193	1607.185	2582.629	✓
	Y yönü	647.663	327.041	1070.193	1607.185	2287.872	✓
S5056	X yönü	827.337	263.421	894.799	1608.200	2528.378	✓
	Y yönü	640.191	326.559	1071.278	1608.200	2266.374	✓
S6005	X yönü	112.176	18.585	67.315	108.308	387.397	✓
	Y yönü	31.245	9.189	58.107	108.308	274.094	✓
S6006	X yönü	122.958	19.841	67.315	108.308	402.492	✓
	Y yönü	88.081	8.214	58.107	108.308	353.664	✓
S6026	X yönü	594.157	279.981	842.748	1239.108	2421.240	✓
	Y yönü	608.665	134.117	890.104	1239.108	2441.550	✓
S6046	X yönü	128.779	16.701	67.315	108.308	410.641	✓
	Y yönü	133.528	11.248	58.107	108.308	417.289	✓
S6047	X yönü	131.313	16.764	67.315	108.308	414.188	✓
	Y yönü	133.404	11.245	58.107	108.308	417.117	✓
S6053	X yönü	713.078	233.599	895.404	1609.215	2679.869	✓
	Y yönü	465.545	340.191	1072.363	1609.215	2333.323	✓
S6054	X yönü	770.101	234.569	894.272	1608.031	2331.633	✓
	Y yönü	557.653	329.820	1070.032	1608.031	2034.206	✓
S6055	X yönü	771.741	235.660	894.193	1607.185	2769.676	✓
	Y yönü	583.596	301.742	1070.193	1607.185	2506.272	✓
S6056	X yönü	742.178	235.368	894.799	1608.200	2350.129	✓
	Y yönü	575.373	301.674	1071.278	1608.200	2116.601	✓
S7005	X yönü	99.651	20.300	67.315	108.308	369.863	✓
	Y yönü	28.579	9.836	58.107	108.308	270.361	✓
S7006	X yönü	107.896	20.706	67.315	108.308	381.406	✓
	Y yönü	76.742	8.428	58.107	108.308	337.790	✓
S7026	X yönü	533.763	261.989	842.748	1239.108	2336.688	✓
	Y yönü	547.789	117.562	890.104	1239.108	2356.323	✓
S7046	X yönü	112.998	18.088	67.315	108.308	388.548	✓
	Y yönü	116.982	10.994	58.107	108.308	394.126	✓
S7047	X yönü	115.656	18.201	67.315	108.308	392.269	✓
	Y yönü	116.947	10.993	58.107	108.308	394.076	✓
S7053	X yönü	630.596	200.818	895.404	1609.215	2428.584	✓
	Y yönü	414.127	314.791	1072.363	1609.215	2125.526	✓
S7054	X yönü	681.849	201.264	894.272	1608.031	2042.515	✓
	Y yönü	496.032	303.556	1070.032	1608.031	1782.372	✓
S7055	X yönü	684.664	203.193	894.193	1607.185	2157.793	✓
	Y yönü	520.126	273.130	1070.193	1607.185	1927.439	✓
S7056	X yönü	657.016	202.416	894.799	1608.200	2123.404	✓
	Y yönü	511.385	273.045	1071.278	1608.200	1919.521	✓
S8005	X yönü	86.957	21.180	67.315	108.308	352.090	✓
	Y yönü	26.079	10.252	58.107	108.308	266.862	✓
S8006	X yönü	93.220	21.525	67.315	108.308	360.859	✓
	Y yönü	66.113	8.530	58.107	108.308	322.909	✓
S8026	X yönü	471.441	242.883	842.748	1239.108	2249.437	✓
	Y yönü	484.751	101.587	890.104	1239.108	2268.070	✓
S8046	X yönü	97.566	18.799	67.315	108.308	366.943	✓
	Y yönü	100.801	11.069	58.107	108.308	371.473	✓

S8047	X yönü	100.360	18.958	67.315	108.308	355.498	✓
	Y yönü	100.864	11.071	58.107	108.308	356.204	✓
S8053	X yönü	548.749	171.848	895.404	1609.215	2222.816	✓
	Y yönü	363.816	289.455	1072.363	1609.215	1963.911	✓
S8054	X yönü	593.917	171.940	894.272	1608.031	1785.999	✓
	Y yönü	435.074	277.638	1070.032	1608.031	1563.619	✓
S8055	X yönü	597.241	174.450	894.193	1607.185	1786.334	✓
	Y yönü	456.876	245.815	1070.193	1607.185	1589.823	✓
S8056	X yönü	572.088	173.253	894.799	1608.200	1755.438	✓
	Y yönü	447.863	245.730	1071.278	1608.200	1581.524	✓
S9005	X yönü	74.193	21.754	67.315	108.308	334.221	✓
	Y yönü	23.508	10.426	58.107	108.308	263.261	✓
S9006	X yönü	78.836	21.993	67.315	108.308	340.721	✓
	Y yönü	56.009	8.561	58.107	108.308	308.764	✓
S9026	X yönü	407.568	222.149	842.748	1239.108	2160.014	✓
	Y yönü	419.826	86.117	890.104	1239.108	2177.176	✓
S9046	X yönü	82.392	19.140	67.315	108.308	345.700	✓
	Y yönü	84.925	11.051	58.107	108.308	349.245	✓
S9047	X yönü	85.335	19.340	67.315	108.308	349.820	✓
	Y yönü	85.096	11.058	58.107	108.308	349.485	✓
S9053	X yönü	467.614	144.308	895.404	1609.215	1600.537	✓
	Y yönü	313.831	263.762	1072.363	1609.215	1385.241	✓
S9054	X yönü	506.433	144.066	894.272	1608.031	1663.522	✓
	Y yönü	374.169	251.574	1070.032	1608.031	1478.353	✓
S9055	X yönü	509.613	147.209	894.193	1607.185	1663.654	✓
	Y yönü	393.368	218.938	1070.193	1607.185	1500.912	✓
S9056	X yönü	487.502	145.590	894.799	1608.200	1637.019	✓
	Y yönü	384.330	218.792	1071.278	1608.200	1492.578	✓
S10005	X yönü	61.389	21.952	67.315	108.308	316.296	✓
	Y yönü	20.663	10.442	58.107	108.308	259.278	✓
S10006	X yönü	64.662	22.180	67.315	108.308	320.878	✓
	Y yönü	46.279	8.537	58.107	108.308	295.141	✓
S10026	X yönü	342.686	199.026	842.748	1239.108	2069.179	✓
	Y yönü	353.542	70.464	890.104	1239.108	2084.378	✓
S10046	X yönü	67.400	19.231	67.315	108.308	324.710	✓
	Y yönü	69.296	11.072	58.107	108.308	327.365	✓
S10047	X yönü	70.508	19.521	67.315	108.308	329.062	✓
	Y yönü	69.590	11.076	58.107	108.308	327.776	✓
S10053	X yönü	387.235	116.257	895.404	1609.215	1488.007	✓
	Y yönü	263.586	236.616	1072.363	1609.215	1314.898	✓
S10054	X yönü	419.507	115.726	894.272	1608.031	1541.826	✓
	Y yönü	312.887	224.217	1070.032	1608.031	1392.558	✓
S10055	X yönü	421.878	119.452	894.193	1607.185	1540.826	✓
	Y yönü	329.247	191.198	1070.193	1607.185	1411.142	✓
S10056	X yönü	403.324	117.367	894.799	1608.200	1519.169	✓
	Y yönü	320.435	190.899	1071.278	1608.200	1403.124	✓
S11005	X yönü	48.572	21.551	67.315	108.308	298.351	✓
	Y yönü	17.400	10.307	58.107	108.308	254.710	✓
S11006	X yönü	50.634	21.801	67.315	108.308	301.239	✓
	Y yönü	36.792	8.432	58.107	108.308	281.860	✓
S11026	X yönü	277.034	173.231	842.748	1239.108	1977.267	✓
	Y yönü	286.123	54.277	890.104	1239.108	1989.992	✓
S11046	X yönü	52.525	18.732	67.315	108.308	303.886	✓
	Y yönü	53.862	11.029	58.107	108.308	305.758	✓
S11047	X yönü	55.814	19.107	67.315	108.308	308.491	✓
	Y yönü	54.288	11.053	58.107	108.308	306.353	✓
S11053	X yönü	307.618	86.361	895.404	1609.215	1376.542	✓
	Y yönü	212.616	207.556	1072.363	1609.215	1243.540	✓

S11054	X yönü	333.184	85.575	894.272	1608.031	1420.973	✓
	Y yönü	250.876	195.062	1070.032	1608.031	1305.742	✓
S11055	X yönü	334.088	90.144	894.193	1607.185	1417.920	✓
	Y yönü	264.224	161.913	1070.193	1607.185	1320.110	✓
S11056	X yönü	319.610	87.295	894.799	1608.200	1401.969	✓
	Y yönü	255.923	161.403	1071.278	1608.200	1312.808	✓
S12005	X yönü	35.775	21.999	67.315	108.308	280.436	✓
	Y yönü	13.649	10.172	58.107	108.308	249.460	✓
S12006	X yönü	36.690	22.100	67.315	108.308	281.717	✓
	Y yönü	27.437	8.444	58.107	108.308	268.762	✓
S12026	X yönü	211.023	142.570	842.748	1239.108	1884.852	✓
	Y yönü	217.965	33.613	890.104	1239.108	1894.570	✓
S12046	X yönü	37.713	19.448	67.315	108.308	283.149	✓
	Y yönü	38.574	11.183	58.107	108.308	284.355	✓
S12047	X yönü	41.200	19.759	67.315	108.308	288.030	✓
	Y yönü	39.148	11.149	58.107	108.308	285.158	✓
S12053	X yönü	228.734	49.525	895.404	1609.215	1266.106	✓
	Y yönü	160.608	171.307	1072.363	1609.215	1170.729	✓
S12054	X yönü	247.476	48.479	894.272	1608.031	1300.981	✓
	Y yönü	187.896	159.362	1070.032	1608.031	1217.570	✓
S12055	X yönü	246.300	53.740	894.193	1607.185	1295.017	✓
	Y yönü	198.115	125.381	1070.193	1607.185	1227.557	✓
S12056	X yönü	236.350	50.191	894.799	1608.200	1285.406	✓
	Y yönü	190.591	124.521	1071.278	1608.200	1221.342	✓
S13005	X yönü	22.955	18.104	67.315	108.308	262.488	✓
	Y yönü	9.274	9.422	58.107	108.308	243.334	✓
S13006	X yönü	22.804	18.524	67.315	108.308	262.276	✓
	Y yönü	18.138	7.772	58.107	108.308	255.745	✓
S13026	X yönü	144.833	113.446	842.748	1239.108	1792.185	✓
	Y yönü	149.303	12.926	890.104	1239.108	1798.443	✓
S13046	X yönü	22.928	14.837	67.315	108.308	262.450	✓
	Y yönü	23.367	10.670	58.107	108.308	263.065	✓
S13047	X yönü	26.467	15.491	67.315	108.308	267.404	✓
	Y yönü	24.092	10.820	58.107	108.308	264.080	✓
S13053	X yönü	150.569	21.329	895.404	1609.215	1156.674	✓
	Y yönü	107.375	137.316	1072.363	1609.215	1096.203	✓
S13054	X yönü	162.410	13.766	894.272	1608.031	1181.890	✓
	Y yönü	123.853	125.254	1070.032	1608.031	1127.910	✓
S13055	X yönü	158.295	28.054	894.193	1607.185	1171.810	✓
	Y yönü	130.667	89.311	1070.193	1607.185	1133.130	✓
S13056	X yönü	153.584	19.567	894.799	1608.200	1169.533	✓
	Y yönü	124.397	88.457	1071.278	1608.200	1128.671	✓
S14005	X yönü	10.248	30.578	67.315	108.308	244.698	✓
	Y yönü	4.900	11.974	58.107	108.308	237.211	✓
S14006	X yönü	8.887	29.902	67.315	108.308	242.793	✓
	Y yönü	8.771	10.042	58.107	108.308	242.629	✓
S14026	X yönü	78.687	54.050	842.748	1239.108	1699.581	✓
	Y yönü	80.071	61.004	890.104	1239.108	1701.518	✓
S14046	X yönü	8.112	30.991	67.315	108.308	241.707	✓
	Y yönü	8.245	12.399	58.107	108.308	241.894	✓
S14047	X yönü	10.660	29.140	67.315	108.308	245.275	✓
	Y yönü	9.187	12.044	58.107	108.308	243.212	✓
S14053	X yönü	73.073	105.183	895.404	1609.215	1048.179	✓
	Y yönü	53.317	60.749	1072.363	1609.215	1020.521	✓
S14054	X yönü	77.885	109.713	894.272	1608.031	1063.555	✓
	Y yönü	58.915	67.165	1070.032	1608.031	1036.996	✓
S14055	X yönü	70.764	124.418	894.193	1607.185	1049.266	✓
	Y yönü	62.392	99.445	1070.193	1607.185	1037.545	✓

S14056	X yönü	71.399	120.952	894.799	1608.200	1054.474	✓
	Y yönü	57.622	79.518	1071.278	1608.200	1035.186	✓
S1059	X yönü	38.825	0.507	106.483	186.222	261.671	✓
	Y yönü	186.714	20.853	144.081	186.222	468.715	✓
S1060	X yönü	142.720	0.622	106.483	186.222	407.123	✓
	Y yönü	166.300	20.345	144.081	186.222	440.135	✓
S1061	X yönü	121.043	0.638	106.483	186.222	376.776	✓
	Y yönü	173.800	21.872	144.081	186.222	450.635	✓
S1062	X yönü	167.120	0.498	106.483	186.222	441.284	✓
	Y yönü	147.179	20.082	144.081	186.222	413.367	✓
S2059	X yönü	25.269	6.258	106.483	186.222	229.735	✓
	Y yönü	173.324	13.442	144.081	186.222	437.011	✓
S2060	X yönü	131.574	3.660	106.483	186.222	378.561	✓
	Y yönü	156.389	11.862	144.081	186.222	413.303	✓
S2061	X yönü	88.267	13.378	106.483	186.222	317.932	✓
	Y yönü	164.259	12.626	144.081	186.222	424.321	✓
S2062	X yönü	150.650	3.815	106.483	186.222	405.268	✓
	Y yönü	137.914	11.756	144.081	186.222	387.438	✓
S3059	X yönü	18.464	21.234	102.591	181.483	224.527	✓
	Y yönü	150.662	18.549	141.724	181.483	409.604	✓
S3061	X yönü	31.043	18.711	97.878	172.006	229.180	✓
	Y yönü	165.682	20.529	133.941	172.006	417.676	✓
S3062	X yönü	129.561	17.425	102.591	181.483	380.063	✓
	Y yönü	138.508	18.126	141.724	181.483	392.589	✓
S3060	X yönü	123.448	16.805	102.591	181.483	371.504	✓
	Y yönü	152.658	18.255	141.724	181.483	412.399	✓
S4059	X yönü	11.576	41.711	102.591	181.483	382.367	✓
	Y yönü	134.040	33.987	141.724	181.483	553.818	✓
S4061	X yönü	29.410	24.873	97.878	172.006	226.895	✓
	Y yönü	148.748	23.925	133.941	172.006	393.968	✓
S4062	X yönü	118.607	34.006	102.591	181.483	364.727	✓
	Y yönü	123.751	33.788	141.724	181.483	371.929	✓
S4060	X yönü	107.750	31.802	102.591	181.483	349.528	✓
	Y yönü	135.003	32.064	141.724	181.483	387.682	✓
S5059	X yönü	10.576	44.874	93.164	162.529	353.614	✓
	Y yönü	118.121	32.558	126.158	162.529	504.177	✓
S5061	X yönü	32.674	27.460	97.878	172.006	231.464	✓
	Y yönü	135.100	28.200	133.941	172.006	374.860	✓
S5062	X yönü	110.058	35.739	93.164	162.529	335.482	✓
	Y yönü	112.108	31.238	126.158	162.529	338.353	✓
S5060	X yönü	94.646	34.029	93.164	162.529	313.905	✓
	Y yönü	118.189	29.521	126.158	162.529	346.866	✓
S6059	X yönü	13.578	51.451	93.164	162.529	428.361	✓
	Y yönü	104.871	29.973	126.158	162.529	556.171	✓
S6061	X yönü	36.339	29.713	97.878	172.006	236.595	✓
	Y yönü	119.497	29.903	133.941	172.006	353.017	✓
S6062	X yönü	101.118	40.450	93.164	162.529	322.966	✓
	Y yönü	98.019	27.433	126.158	162.529	318.628	✓
S6060	X yönü	83.442	38.764	93.164	162.529	365.885	✓
	Y yönü	104.953	25.350	126.158	162.529	396.000	✓
S7059	X yönü	17.976	54.392	93.164	162.529	434.519	✓
	Y yönü	92.548	33.135	126.158	162.529	538.919	✓
S7061	X yönü	42.004	30.943	97.878	172.006	244.526	✓
	Y yönü	106.599	31.996	133.941	172.006	334.959	✓
S7060	X yönü	73.791	40.882	93.164	162.529	352.374	✓
	Y yönü	92.731	27.972	126.158	162.529	378.890	✓
S7062	X yönü	94.295	42.554	93.164	162.529	381.080	✓
	Y yönü	87.076	30.339	126.158	162.529	370.973	✓

S8059	X yönü	21.503	56.150	93.164	162.529	447.134	✓
	Y yönü	80.055	34.522	126.158	162.529	529.108	✓
S8061	X yönü	44.307	31.237	97.878	172.006	247.750	✓
	Y yönü	91.788	33.243	133.941	172.006	314.223	✓
S8062	X yönü	84.539	43.728	93.164	162.529	367.421	✓
	Y yönü	74.606	31.412	126.158	162.529	353.515	✓
S8060	X yönü	64.082	42.093	93.164	162.529	413.165	✓
	Y yönü	80.233	28.834	126.158	162.529	435.777	✓
S9059	X yönü	24.347	56.460	93.164	162.529	466.473	✓
	Y yönü	68.275	35.450	126.158	162.529	527.972	✓
S9061	X yönü	47.015	30.843	97.878	172.006	251.542	✓
	Y yönü	79.433	33.968	133.941	172.006	296.926	✓
S9062	X yönü	70.323	43.783	93.164	162.529	347.519	✓
	Y yönü	64.812	32.144	126.158	162.529	339.803	✓
S9060	X yönü	55.170	42.216	93.164	162.529	400.688	✓
	Y yönü	68.453	29.381	126.158	162.529	419.285	✓
S10059	X yönü	24.858	55.807	93.164	162.529	451.832	✓
	Y yönü	56.005	35.800	126.158	162.529	495.438	✓
S10061	X yönü	45.171	29.919	97.878	172.006	248.959	✓
	Y yönü	64.961	34.189	133.941	172.006	276.665	✓
S10062	X yönü	55.034	43.083	93.164	162.529	326.114	✓
	Y yönü	53.151	32.379	126.158	162.529	323.478	✓
S10060	X yönü	45.854	41.612	93.164	162.529	387.647	✓
	Y yönü	56.302	29.456	126.158	162.529	402.274	✓
S11059	X yönü	23.928	54.173	93.164	162.529	442.852	✓
	Y yönü	44.408	35.699	126.158	162.529	471.524	✓
S11061	X yönü	42.940	28.488	97.878	172.006	245.837	✓
	Y yönü	52.758	34.050	133.941	172.006	259.581	✓
S11060	X yönü	37.045	40.270	93.164	162.529	375.314	✓
	Y yönü	44.768	29.216	126.158	162.529	386.126	✓
S11062	X yönü	43.031	41.654	93.164	162.529	383.695	✓
	Y yönü	43.913	32.201	126.158	162.529	384.929	✓
S12059	X yönü	20.434	53.095	93.164	162.529	437.959	✓
	Y yönü	32.475	35.507	126.158	162.529	454.817	✓
S12061	X yönü	35.794	27.406	97.878	172.006	235.832	✓
	Y yönü	38.278	33.595	133.941	172.006	239.309	✓
S12060	X yönü	27.667	39.332	93.164	162.529	362.185	✓
	Y yönü	32.782	28.738	126.158	162.529	369.346	✓
S12062	X yönü	29.867	40.581	93.164	162.529	365.265	✓
	Y yönü	32.644	32.132	126.158	162.529	369.152	✓
S13059	X yönü	15.187	46.982	93.164	162.529	360.069	✓
	Y yönü	21.117	32.387	126.158	162.529	368.371	✓
S13061	X yönü	28.009	23.704	97.878	172.006	224.932	✓
	Y yönü	25.869	31.715	133.941	172.006	221.937	✓
S13060	X yönü	18.520	34.675	93.164	162.529	274.995	✓
	Y yönü	21.326	26.872	126.158	162.529	278.923	✓
S13062	X yönü	19.872	36.040	93.164	162.529	276.887	✓
	Y yönü	23.632	28.523	126.158	162.529	282.152	✓
S14059	X yönü	8.073	64.660	93.164	162.529	574.701	✓
	Y yönü	9.417	49.472	126.158	162.529	576.584	✓
S14060	X yönü	9.268	47.540	93.164	162.529	430.006	✓
	Y yönü	9.267	36.965	126.158	162.529	430.004	✓
S14061	X yönü	13.839	32.342	97.878	172.006	272.760	✓
	Y yönü	11.257	42.936	133.941	172.006	269.145	✓
S14062	X yönü	7.962	49.380	93.164	162.529	443.534	✓
	Y yönü	12.742	47.933	126.158	162.529	450.226	✓
S1063	X yönü	-139.087	10.964	141.779	186.222	12.594	✓
	Y yönü	179.164	3.426	108.785	186.222	458.145	✓

S1064	X yönü	-39.719	11.578	141.779	186.222	151.709	✓
	Y yönü	185.565	3.584	108.785	186.222	467.107	✓
S1065	X yönü	-123.022	9.629	141.779	186.222	35.084	✓
	Y yönü	182.521	3.335	108.785	186.222	462.844	✓
S1066	X yönü	-94.202	8.691	141.779	186.222	75.433	✓
	Y yönü	164.239	3.492	108.785	186.222	437.250	✓
S2063	X yönü	-171.967	30.609	141.779	186.222	76.938	✓
	Y yönü	160.616	6.884	108.785	186.222	542.554	✓
S2065	X yönü	-153.273	27.578	141.779	186.222	103.109	✓
	Y yönü	166.389	8.205	108.785	186.222	550.637	✓
S2066	X yönü	-120.642	26.147	141.779	186.222	102.723	✓
	Y yönü	147.778	7.278	108.785	186.222	478.510	✓
S3063	X yönü	-193.003	32.741	139.422	181.483	107.955	✓
	Y yönü	141.389	9.362	104.893	181.483	576.104	✓
S3064	X yönü	-93.272	30.868	139.422	181.483	121.365	✓
	Y yönü	145.316	9.285	104.893	181.483	455.388	✓
S3066	X yönü	-137.086	30.220	139.422	181.483	106.096	✓
	Y yönü	134.239	10.143	104.893	181.483	485.951	✓
S3065	X yönü	-172.389	29.864	139.422	181.483	107.540	✓
	Y yönü	147.792	10.184	104.893	181.483	555.795	✓
S4063	X yönü	-168.578	39.279	139.422	181.483	62.007	✓
	Y yönü	130.045	13.967	104.893	181.483	480.079	✓
S4064	X yönü	-75.229	38.536	139.422	181.483	89.038	✓
	Y yönü	129.358	15.041	104.893	181.483	375.459	✓
S4066	X yönü	-117.645	41.862	139.422	181.483	87.243	✓
	Y yönü	118.515	15.666	104.893	181.483	417.866	✓
S4065	X yönü	-150.585	36.950	139.422	181.483	87.197	✓
	Y yönü	134.717	14.370	104.893	181.483	486.619	✓
S5065	X yönü	-120.631	33.030	123.857	162.529	81.143	✓
	Y yönü	124.403	16.544	95.466	162.529	424.190	✓
S5066	X yönü	-89.362	37.074	123.857	162.529	94.206	✓
	Y yönü	104.478	17.580	95.466	162.529	365.582	✓
S5064	X yönü	-51.304	34.746	123.857	162.529	105.256	✓
	Y yönü	114.182	16.743	95.466	162.529	336.937	✓
S5063	X yönü	-136.800	35.465	123.857	162.529	89.220	✓
	Y yönü	120.351	15.860	95.466	162.529	449.232	✓
S6063	X yönü	-114.111	31.940	123.857	162.529	74.915	✓
	Y yönü	106.017	18.148	95.466	162.529	383.094	✓
S6064	X yönü	-35.404	29.372	123.857	162.529	127.517	✓
	Y yönü	103.697	19.093	95.466	162.529	322.258	✓
S6066	X yönü	-71.755	34.749	123.857	162.529	76.626	✓
	Y yönü	94.663	20.060	95.466	162.529	309.610	✓
S6065	X yönü	-99.142	31.851	123.857	162.529	80.514	✓
	Y yönü	109.277	18.959	95.466	162.529	372.301	✓
S7063	X yönü	-90.620	32.401	123.857	162.529	107.802	✓
	Y yönü	92.456	19.669	95.466	162.529	364.108	✓
S7064	X yönü	-19.634	29.733	123.857	162.529	149.594	✓
	Y yönü	93.202	20.541	95.466	162.529	307.565	✓
S7066	X yönü	-53.456	35.283	123.857	162.529	102.243	✓
	Y yönü	85.122	21.624	95.466	162.529	296.253	✓
S7065	X yönü	-76.920	31.956	123.857	162.529	69.394	✓
	Y yönü	95.137	20.611	95.466	162.529	310.275	✓
S8063	X yönü	-67.616	31.770	123.857	162.529	82.420	✓
	Y yönü	79.714	20.807	95.466	162.529	288.681	✓
S8064	X yönü	-4.995	28.372	123.857	162.529	170.089	✓
	Y yönü	82.614	21.558	95.466	162.529	292.742	✓
S8066	X yönü	-35.608	34.663	123.857	162.529	127.231	✓
	Y yönü	75.644	22.742	95.466	162.529	282.983	✓

S8065	X yönü	-55.361	31.142	123.857	162.529	99.577	✓
	Y yönü	81.922	21.861	95.466	162.529	291.773	✓
S9065	X yönü	-35.948	29.527	123.857	162.529	126.755	✓
	Y yönü	69.293	22.691	95.466	162.529	274.092	✓
S9066	X yönü	-19.792	33.148	123.857	162.529	149.374	✓
	Y yönü	65.852	23.408	95.466	162.529	269.275	✓
S9064	X yönü	7.050	26.633	123.857	162.529	186.952	✓
	Y yönü	71.609	22.142	95.466	162.529	277.335	✓
S9063	X yönü	-46.603	30.352	123.857	162.529	111.838	✓
	Y yönü	67.473	21.541	95.466	162.529	271.544	✓
S10063	X yönü	-28.461	28.330	123.857	162.529	137.237	✓
	Y yönü	55.649	21.981	95.466	162.529	254.991	✓
S10064	X yönü	15.964	24.205	123.857	162.529	199.432	✓
	Y yönü	60.334	22.396	95.466	162.529	261.550	✓
S10066	X yönü	-6.656	30.971	123.857	162.529	167.764	✓
	Y yönü	55.830	23.737	95.466	162.529	255.244	✓
S10065	X yönü	-19.563	27.335	123.857	162.529	149.695	✓
	Y yönü	57.135	23.214	95.466	162.529	257.071	✓
S11063	X yönü	-13.939	25.957	123.857	162.529	157.568	✓
	Y yönü	44.056	22.015	95.466	162.529	238.761	✓
S11064	X yönü	20.955	21.472	123.857	162.529	206.419	✓
	Y yönü	48.447	22.307	95.466	162.529	244.908	✓
S11066	X yönü	2.939	28.369	123.857	162.529	181.196	✓
	Y yönü	45.207	23.670	95.466	162.529	240.372	✓
S11065	X yönü	-6.952	24.794	123.857	162.529	167.349	✓
	Y yönü	45.233	23.300	95.466	162.529	240.408	✓
S12063	X yönü	-3.431	23.030	123.857	162.529	172.278	✓
	Y yönü	32.695	22.470	95.466	162.529	222.855	✓
S12064	X yönü	21.854	18.199	123.857	162.529	207.677	✓
	Y yönü	36.167	22.391	95.466	162.529	227.715	✓
S12066	X yönü	8.755	25.316	123.857	162.529	189.339	✓
	Y yönü	34.130	23.899	95.466	162.529	224.864	✓
S12065	X yönü	1.473	21.742	123.857	162.529	179.144	✓
	Y yönü	33.541	23.846	95.466	162.529	224.039	✓
S13063	X yönü	2.836	20.583	123.857	162.529	181.052	✓
	Y yönü	21.463	19.861	95.466	162.529	207.131	✓
S13064	X yönü	18.449	15.471	123.857	162.529	202.910	✓
	Y yönü	23.026	20.368	95.466	162.529	209.319	✓
S13066	X yönü	10.444	22.188	123.857	162.529	191.703	✓
	Y yönü	22.137	21.413	95.466	162.529	208.074	✓
S13065	X yönü	5.483	19.085	123.857	162.529	184.759	✓
	Y yönü	21.916	21.074	95.466	162.529	207.764	✓
S14063	X yönü	6.119	20.243	123.857	162.529	262.432	✓
	Y yönü	10.766	30.552	95.466	162.529	268.938	✓
S14064	X yönü	10.816	14.319	123.857	162.529	276.686	✓
	Y yönü	9.598	28.546	95.466	162.529	274.981	✓
S14066	X yönü	9.015	23.223	123.857	162.529	274.166	✓
	Y yönü	9.794	31.431	95.466	162.529	275.256	✓
S14065	X yönü	5.928	18.372	123.857	162.529	277.522	✓
	Y yönü	10.595	32.575	95.466	162.529	284.056	✓
S2064	X yönü	-74.192	30.321	141.779	186.222	152.396	✓
	Y yönü	164.960	6.163	108.785	186.222	487.208	✓
S1067	X yönü	122.981	7.978	141.779	186.222	379.489	✓
	Y yönü	152.063	4.151	108.785	186.222	420.204	✓
S1068	X yönü	218.717	9.841	141.779	186.222	513.519	✓
	Y yönü	206.277	4.230	108.785	186.222	496.104	✓
S1069	X yönü	167.110	7.565	141.779	186.222	441.269	✓
	Y yönü	189.791	5.206	108.785	186.222	473.023	✓

S1070	X yönü	151.521	8.320	141.779	186.222	419.445	✓
	Y yönü	163.248	5.137	108.785	186.222	435.863	✓
S2067	X yönü	126.094	22.409	141.779	186.222	375.208	✓
	Y yönü	141.059	5.764	108.785	186.222	396.160	✓
S2068	X yönü	192.915	27.548	141.779	186.222	468.758	✓
	Y yönü	194.810	7.460	108.785	186.222	471.411	✓
S2070	X yönü	149.049	23.250	141.779	186.222	407.346	✓
	Y yönü	146.253	9.299	108.785	186.222	403.432	✓
S2069	X yönü	160.283	23.178	141.779	186.222	423.074	✓
	Y yönü	174.941	10.858	108.785	186.222	443.595	✓
S3067	X yönü	123.956	39.849	139.422	181.483	367.896	✓
	Y yönü	135.777	8.830	104.893	181.483	384.446	✓
S3068	X yönü	180.505	38.585	139.422	181.483	447.066	✓
	Y yönü	178.817	7.695	104.893	181.483	444.703	✓
S3070	X yönü	140.429	36.249	139.422	181.483	390.959	✓
	Y yönü	131.576	8.620	104.893	181.483	378.565	✓
S3069	X yönü	147.801	38.481	139.422	181.483	401.280	✓
	Y yönü	156.741	7.688	104.893	181.483	413.796	✓
S4067	X yönü	90.346	70.863	139.422	181.483	320.842	✓
	Y yönü	116.070	14.124	104.893	181.483	356.856	✓
S4068	X yönü	174.549	61.294	139.422	181.483	438.727	✓
	Y yönü	162.395	7.897	104.893	181.483	421.711	✓
S4069	X yönü	118.400	72.296	139.422	181.483	360.118	✓
	Y yönü	143.266	7.681	104.893	181.483	394.931	✓
S4070	X yönü	109.149	65.191	139.422	181.483	347.167	✓
	Y yönü	114.581	12.194	104.893	181.483	354.772	✓
S5067	X yönü	58.697	65.392	123.857	162.529	259.259	✓
	Y yönü	98.598	15.620	95.466	162.529	315.120	✓
S5068	X yönü	153.763	55.748	123.857	162.529	392.350	✓
	Y yönü	147.802	9.635	95.466	162.529	384.005	✓
S5069	X yönü	88.907	65.849	123.857	162.529	301.552	✓
	Y yönü	131.155	9.400	95.466	162.529	360.699	✓
S5070	X yönü	77.857	60.033	123.857	162.529	286.082	✓
	Y yönü	98.037	14.363	95.466	162.529	314.334	✓
S6067	X yönü	41.216	65.307	123.857	162.529	234.785	✓
	Y yönü	88.238	18.146	95.466	162.529	300.616	✓
S6068	X yönü	129.919	60.338	123.857	162.529	358.968	✓
	Y yönü	129.222	11.034	95.466	162.529	357.993	✓
S6070	X yönü	59.439	57.741	123.857	162.529	260.297	✓
	Y yönü	88.425	16.486	95.466	162.529	300.878	✓
S6069	X yönü	71.523	66.351	123.857	162.529	277.214	✓
	Y yönü	115.165	10.502	95.466	162.529	338.312	✓
S7067	X yönü	27.013	68.153	123.857	162.529	214.901	✓
	Y yönü	78.957	19.582	95.466	162.529	287.622	✓
S7068	X yönü	108.831	60.613	123.857	162.529	329.446	✓
	Y yönü	112.969	12.143	95.466	162.529	335.238	✓
S7070	X yönü	43.659	60.781	123.857	162.529	238.205	✓
	Y yönü	79.455	17.873	95.466	162.529	288.319	✓
S7069	X yönü	57.034	68.186	123.857	162.529	256.929	✓
	Y yönü	101.060	11.457	95.466	162.529	318.566	✓
S8068	X yönü	87.964	59.554	123.857	162.529	300.231	✓
	Y yönü	96.316	12.967	95.466	162.529	311.924	✓
S8067	X yönü	14.879	68.631	123.857	162.529	197.912	✓
	Y yönü	69.420	20.650	95.466	162.529	274.270	✓
S8070	X yönü	29.609	60.521	123.857	162.529	218.534	✓
	Y yönü	69.984	18.874	95.466	162.529	275.059	✓
S8069	X yönü	42.826	68.016	123.857	162.529	237.038	✓
	Y yönü	86.386	12.118	95.466	162.529	298.022	✓

S9067	X yönü	5.792	67.674	123.857	162.529	185.190	✓
	Y yönü	60.342	21.258	95.466	162.529	261.561	✓
S9068	X yönü	70.253	56.892	123.857	162.529	275.437	✓
	Y yönü	81.723	13.519	95.466	162.529	291.494	✓
S9070	X yönü	18.406	59.053	123.857	162.529	202.850	✓
	Y yönü	60.845	19.473	95.466	162.529	262.265	✓
S9069	X yönü	31.436	66.370	123.857	162.529	221.092	✓
	Y yönü	73.264	12.539	95.466	162.529	279.652	✓
S10067	X yönü	-1.280	65.341	123.857	162.529	175.290	✓
	Y yönü	50.646	21.601	95.466	162.529	247.986	✓
S10068	X yönü	53.003	53.162	123.857	162.529	251.286	✓
	Y yönü	66.267	13.875	95.466	162.529	269.856	✓
S10069	X yönü	20.697	63.338	123.857	162.529	206.058	✓
	Y yönü	59.338	12.782	95.466	162.529	260.155	✓
S10070	X yönü	9.115	56.330	123.857	162.529	189.843	✓
	Y yönü	51.018	19.797	95.466	162.529	248.507	✓
S11067	X yönü	-5.597	62.079	123.857	162.529	169.247	✓
	Y yönü	41.072	21.456	95.466	162.529	234.582	✓
S11068	X yönü	38.973	48.759	123.857	162.529	231.644	✓
	Y yönü	52.574	13.914	95.466	162.529	250.686	✓
S11070	X yönü	2.598	52.821	123.857	162.529	180.719	✓
	Y yönü	41.335	19.689	95.466	162.529	234.951	✓
S11069	X yönü	13.255	59.443	123.857	162.529	195.639	✓
	Y yönü	47.180	12.749	95.466	162.529	243.133	✓
S12067	X yönü	-8.008	58.373	123.857	162.529	165.870	✓
	Y yönü	30.632	21.941	95.466	162.529	219.966	✓
S12068	X yönü	25.561	43.790	123.857	162.529	212.867	✓
	Y yönü	37.764	14.367	95.466	162.529	229.951	✓
S12070	X yönü	-1.969	48.752	123.857	162.529	174.326	✓
	Y yönü	30.852	20.148	95.466	162.529	220.275	✓
S12069	X yönü	6.623	55.034	123.857	162.529	186.354	✓
	Y yönü	34.118	13.070	95.466	162.529	224.847	✓
S13067	X yönü	-8.221	52.216	123.857	162.529	165.573	✓
	Y yönü	20.016	18.620	95.466	162.529	205.105	✓
S13068	X yönü	15.098	38.303	123.857	162.529	198.220	✓
	Y yönü	24.612	12.229	95.466	162.529	211.539	✓
S13070	X yönü	-4.110	43.299	123.857	162.529	171.328	✓
	Y yönü	20.334	17.192	95.466	162.529	205.550	✓
S13069	X yönü	2.952	49.066	123.857	162.529	181.214	✓
	Y yönü	22.696	11.181	95.466	162.529	208.856	✓
S14067	X yönü	-5.489	65.690	123.857	162.529	261.537	✓
	Y yönü	8.634	31.082	95.466	162.529	281.310	✓
S14068	X yönü	6.459	42.840	123.857	162.529	186.125	✓
	Y yönü	10.024	20.832	95.466	162.529	191.116	✓
S14070	X yönü	-3.397	51.578	123.857	162.529	249.110	✓
	Y yönü	9.309	28.363	95.466	162.529	266.898	✓
S14069	X yönü	1.570	60.541	123.857	162.529	179.280	✓
	Y yönü	10.743	18.878	95.466	162.529	192.123	✓

RADYE MAT TEMELLERIN SONLU ELEMANLARLA ANALİZİ

ZEMİN YATAK KATSAYISI (t/m³) : 4500.0
ZEMİN EMNİYET GERİMESİ (t/m²) : 30.0
BETONARME HESAP YÖNTEMİ .....:TAŞIMA GÜCÜ YÖNTEMİ (TS 500, 2000)
BETON ve ÇELİK MALZEME BİLGİLERİ
Beton dayanım gerilmesi (kg/cm²)..:250
Çelik akma gerilmesi (kg/cm²)..:4200

BETONARME HESAP YÜK KOMBİNASYON PARAMETRESİ

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.40	1.60	0.00	0.00	0.00
1.40	1.60	1.60	0.00	0.00
1.40	0.00	0.00	0.00	0.00
1.00	1.00	0.00	1.00	0.00
1.00	1.00	1.00	1.00	0.00
0.90	0.00	0.00	1.00	0.00
1.00	1.30	0.00	0.00	1.30
1.00	1.30	1.00	0.00	1.30
0.90	0.00	0.00	1.00	1.30
0.90	0.00	0.90	0.00	1.30

CODE:TS500T.COD

ZEMİN GERİLMESİ YÜK KOMBİNASYONU

Ölü yük Cg	Hareketli yük Cq	Zemin Cs	Deprem ±Ce	Rüzgar ±Cw
1.00	1.00	0.00	0.00	0.00
1.00	1.00	1.00	0.00	0.00
0.67	0.67	0.67	0.67	0.00
0.80	0.00	0.80	0.00	0.80

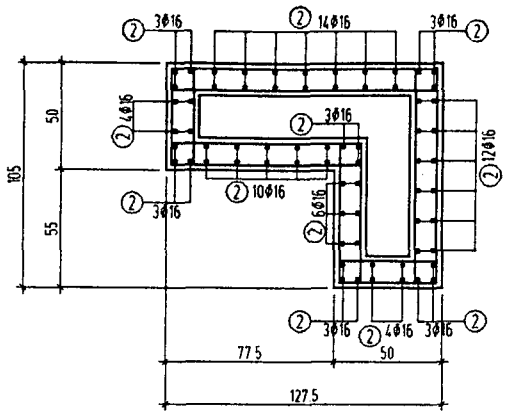
STATİK ANALİZ YÜK KOMBİNASYON NOTASYONLARI:

1. G+G+G+G+G	GENEL ÖLÜ YÜK
2. Q+Q+Q+Q+Q	1. GENEL HAREKETLİ YÜK
3. Q+o+Q+o+Q	2. HAREKETLİ YÜK
4. o+Q+o+Q+o	3. HAREKETLİ YÜK
5. Q+Q+o+Q+Q	4. HAREKETLİ YÜK
6. o+Q+Q+o+Q	5. HAREKETLİ YÜK
7. Q+o+Q+Q+o	6. HAREKETLİ YÜK
8. Gz	Yatay zemin itkisi
9. Ex + %5 x ey	X yönü deprem + %5 eksantrisite
10. Ex - %5 x cy	X yönü deprem - %5 eksantrisite
11. Ey + %5 x ex	Y yönü deprem + %5 eksantrisite
12. Ey - %5 x ex	Y yönü deprem - %5 eksantrisite
13. Wx + %5 x ey	X yönü rüzgar + %5 eksantrisite
14. Wx - %5 x ey	X yönü rüzgar - %5 eksantrisite
15. Wy + %5 x ex	Y yönü rüzgar + %5 eksantrisite
16. Wy - %5 x ex	Y yönü rüzgar - %5 eksantrisite

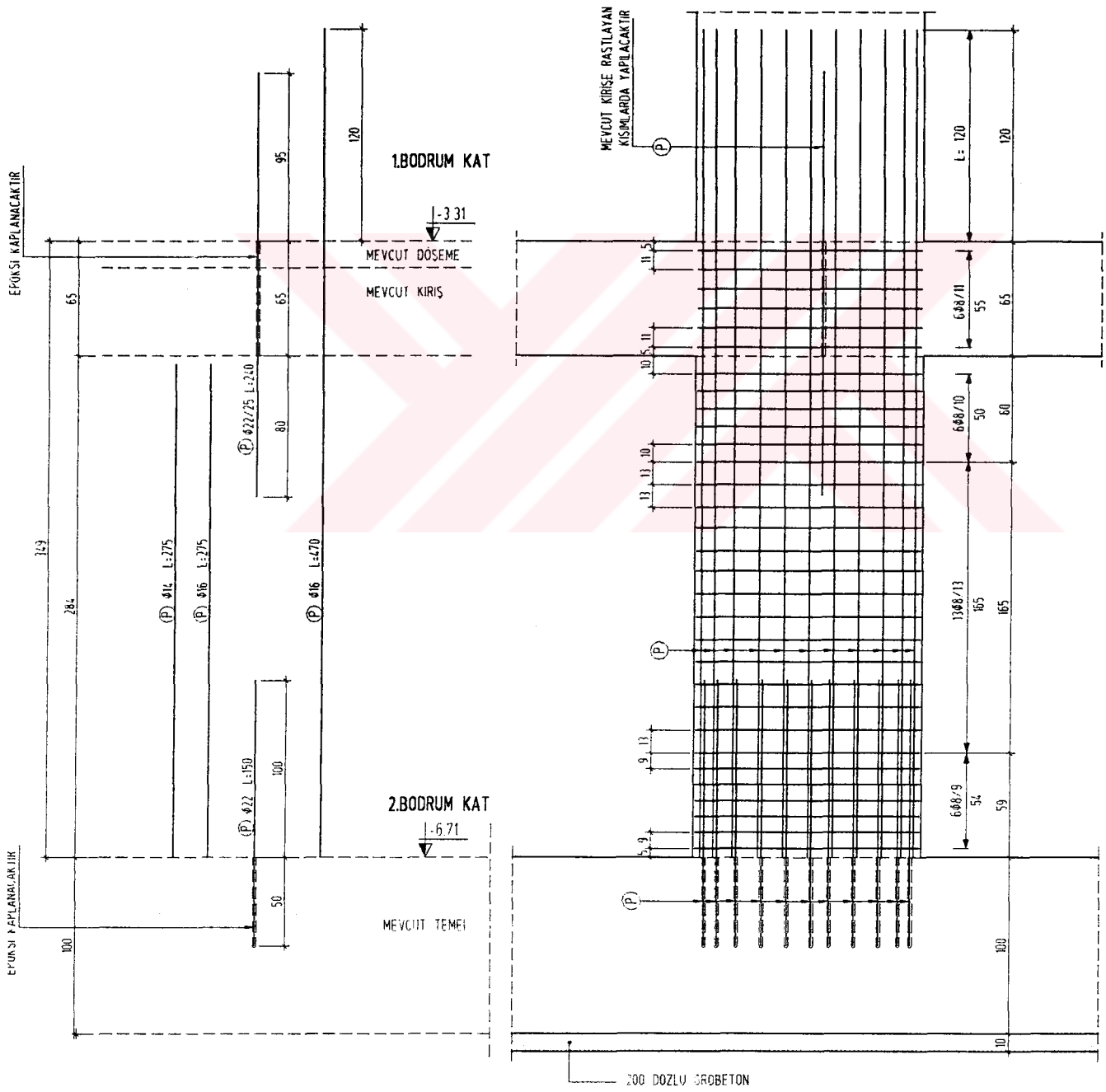
ZEMİN GERİLMESİ t/m²

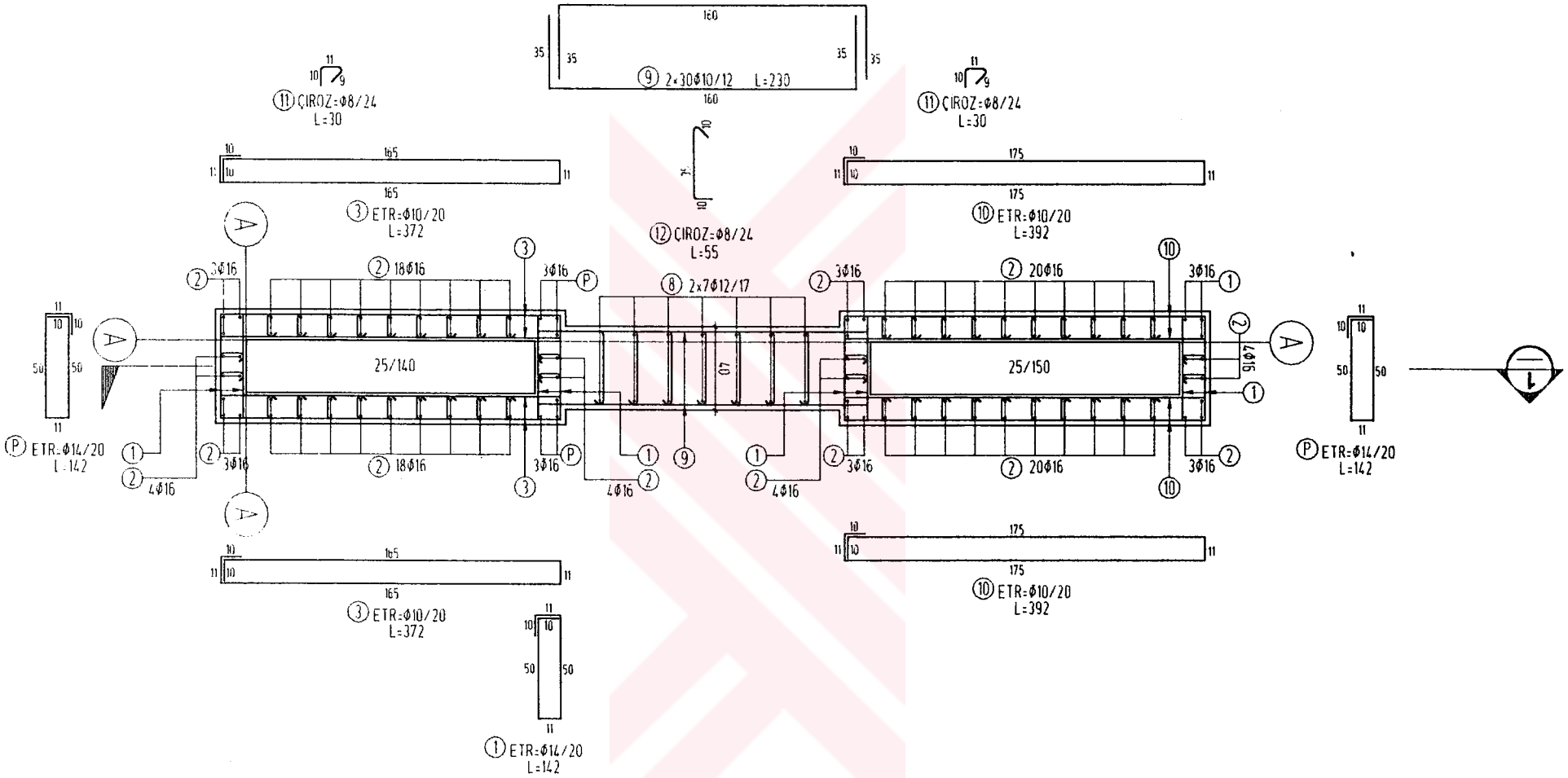
Nok no	1 g	2 q	3 q	4 q	5 q	6 q	7 q	8 z	9 e	10 e	11 e	12 e	13 w	14 w	15 w	16 w	max. σ
498	18.44	1.379	1.383	1.38	1.381	1.381	1.379	0.0	1.150	0.711	-5.36	-4.99	0.029	0.048	-0.28	-0.27	19.82

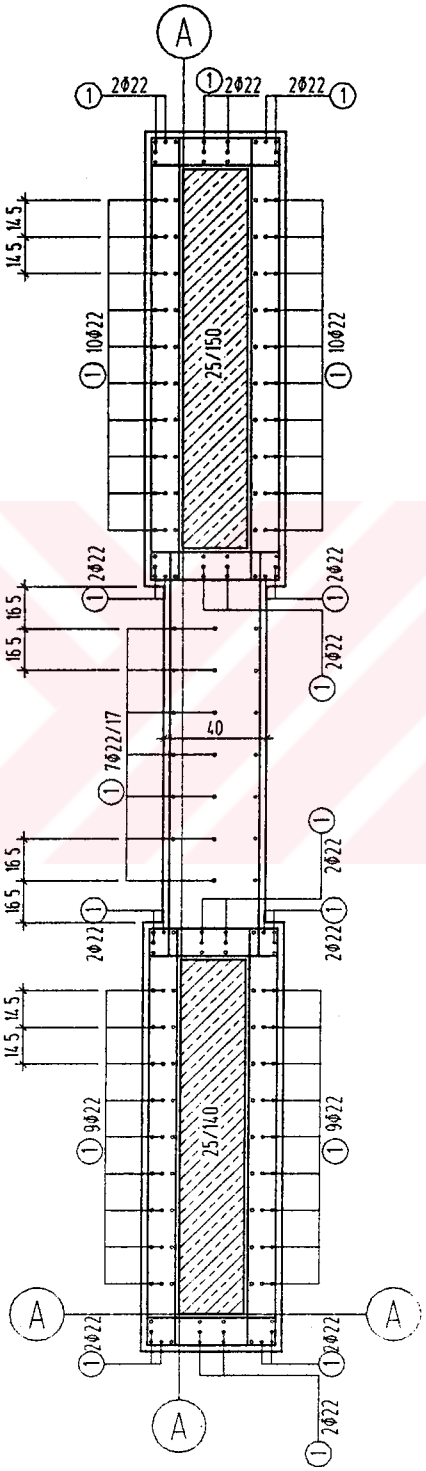
max ZEMİN GERİLMESİ=19.824 t/m²

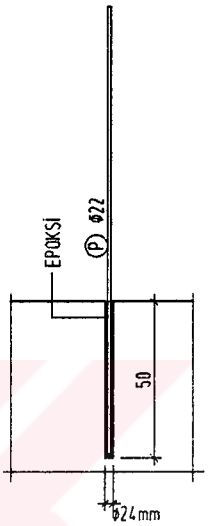


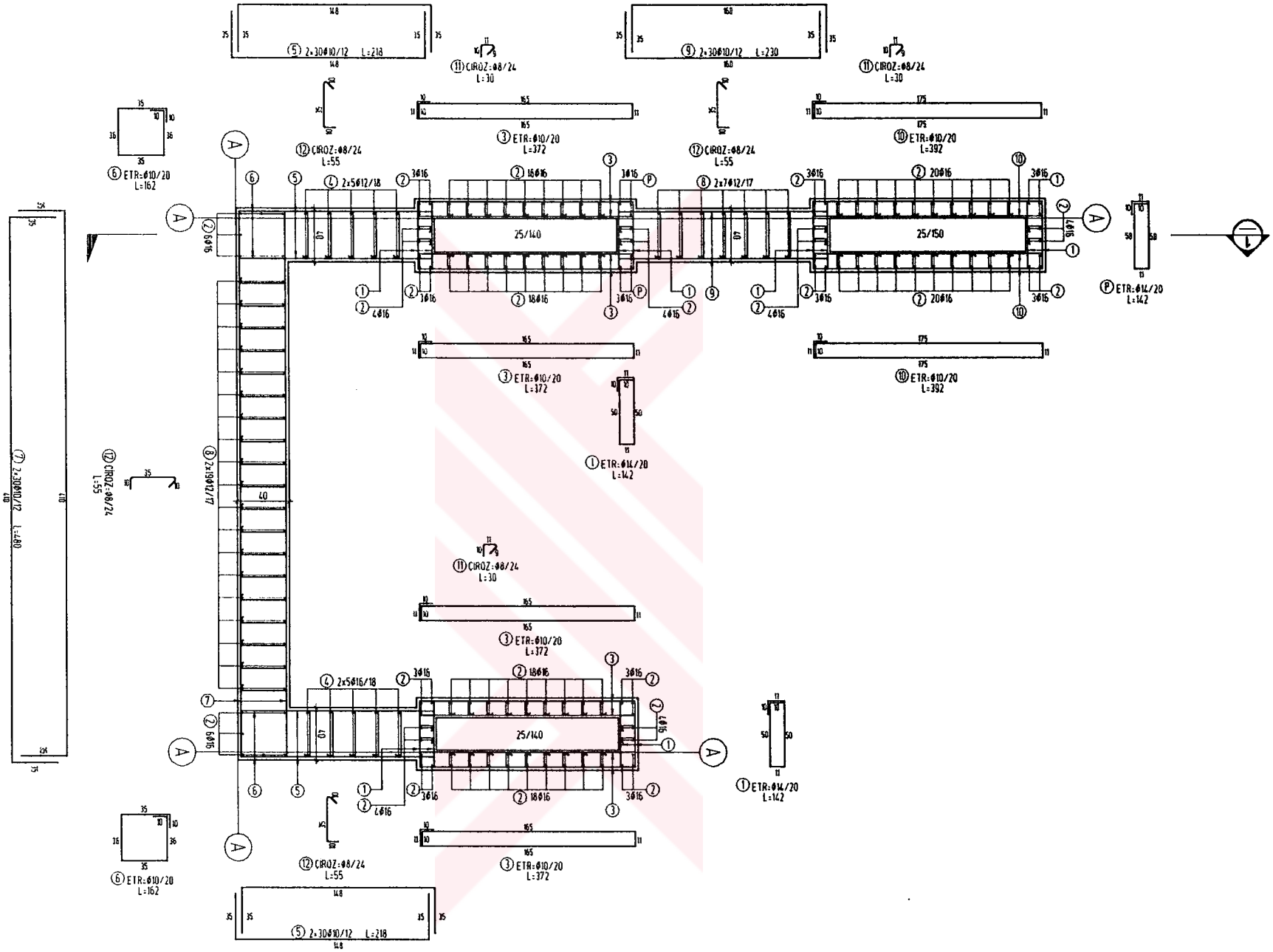
S1057 KOLON DETAYI

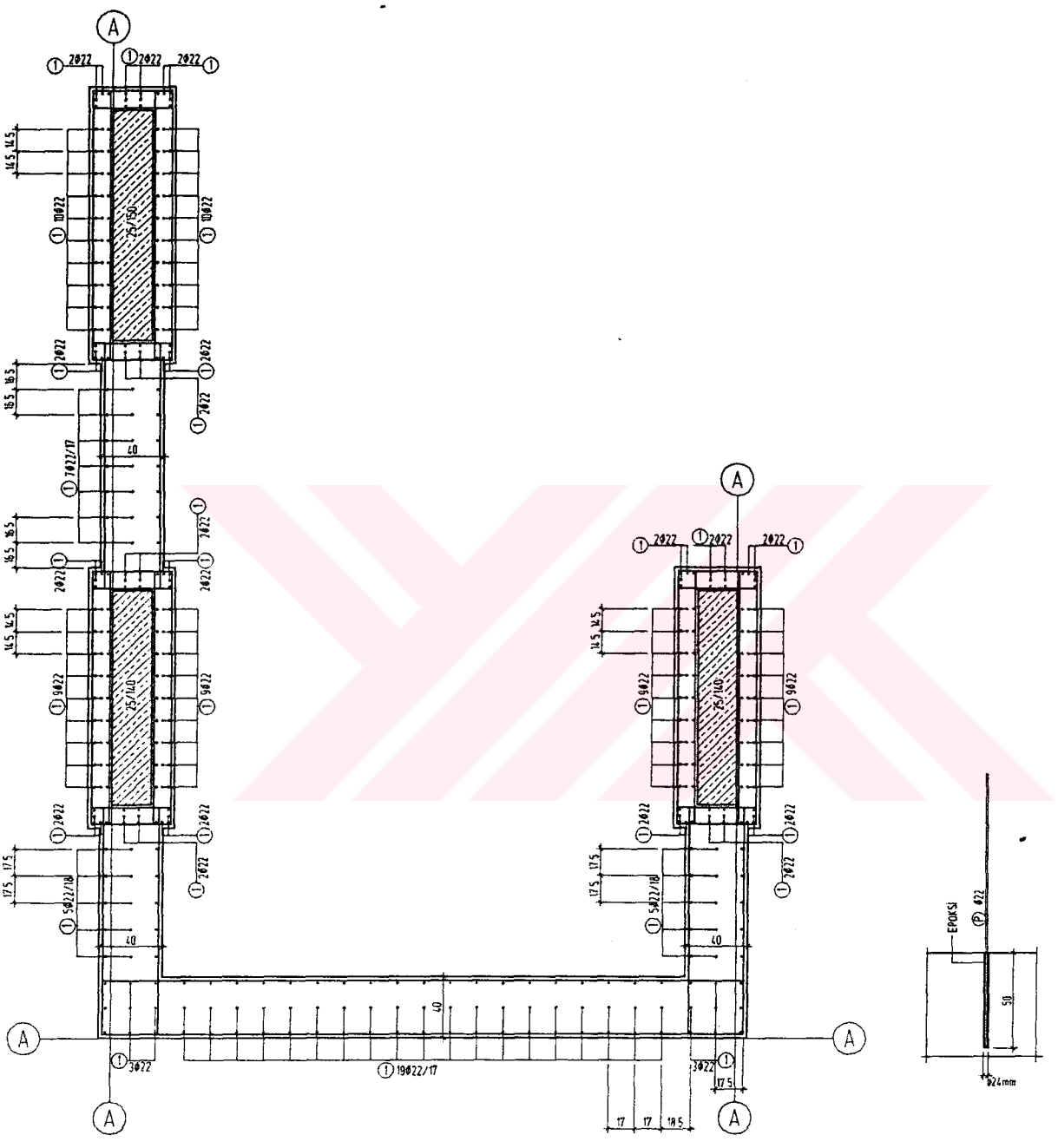



160
35
35
35
35
⑨ 2×30Φ10/12 L=230
160
⑪ ÇIROZ=Φ8/24
L=30
⑪ ÇIROZ=Φ8/24
L=30
⑫ ÇIROZ=Φ8/24
L=55
③ ETR=Φ10/20
L=372
⑩ ETR=Φ10/20
L=392
③ ETR=Φ10/20
L=372
⑩ ETR=Φ10/20
L=392
⑧ 2×7Φ12/17
2 18Φ16
2 18Φ16
2 20Φ16
2 20Φ16
25/140
25/150
40
3Φ16
3Φ16
3Φ16
3Φ16
3Φ16
3Φ16
4Φ16
4Φ16
4Φ16
4Φ16
Ⓟ ETR=Φ14/20
L=142
Ⓟ ETR=Φ14/20
L=142
① ETR=Φ14/20
L=142
A
A
A
A


A
2Φ22
2Φ22
2Φ22
14.5 14.5
10Φ22
25/150
10Φ22
2Φ22
2Φ22
16.5
16.5
2Φ22
7Φ22/17
40
2Φ22
16.5
16.5
2Φ22
2Φ22
2Φ22
14.5 14.5
9Φ22
25/140
9Φ22
A
A
2Φ22
2Φ22
A
2Φ22


EPOKSİ
Φ22
50
Φ24mm


⑤ 2×30Φ10/12 L=218
⑨ 2×30Φ10/12 L=230
⑪ CIROZ:Φ8/24 L=30
⑫ CIROZ:Φ8/24 L=55
③ ETR:Φ10/20 L=372
⑩ ETR:Φ10/20 L=392
⑥ ETR:Φ10/20 L=162
④ 2×5Φ12/18
② 18Φ16
② 20Φ16
⑧ 2×7Φ12/17
25/140
25/150
① ETR:Φ14/20 L=142
⑦ 2×30Φ10/12 L=480
⑫ CIROZ:Φ8/24 L=55
⑪ CIROZ:Φ8/24 L=30
④ 2×5Φ16/18
② 18Φ16
25/140
① ETR:Φ14/20 L=142
⑫ CIROZ:Φ8/24 L=55
③ ETR:Φ10/20 L=372
⑥ ETR:Φ10/20 L=162
⑤ 2×30Φ10/12 L=218


A
2Ø22
25/150
25/140
25/160
5Ø22/18
19Ø22/17
3Ø22
EPOKSI
Ø22
50
Ø24mm

BU BÖLGEDE TEK KAT EPOKSİ KAPLANACAKTIR.

BU BÖLGEDE TEK KAT EPOKSİ KAPLANACAKTIR.

BU BÖLGEDE TEK KAT EPOKSİ KAPLANACAKTIR.

BU BÖLGEDE TEK KAT EPOKSİ KAPLANACAKTIR.

MEVCUT TEMEL

2.BODRUM KAT

MEVCUT KİRİŞ

MEVCUT DÖŞEME

1.BODRUM KAT

MEVCUT KİRİŞ

MEVCUT DÖŞEME

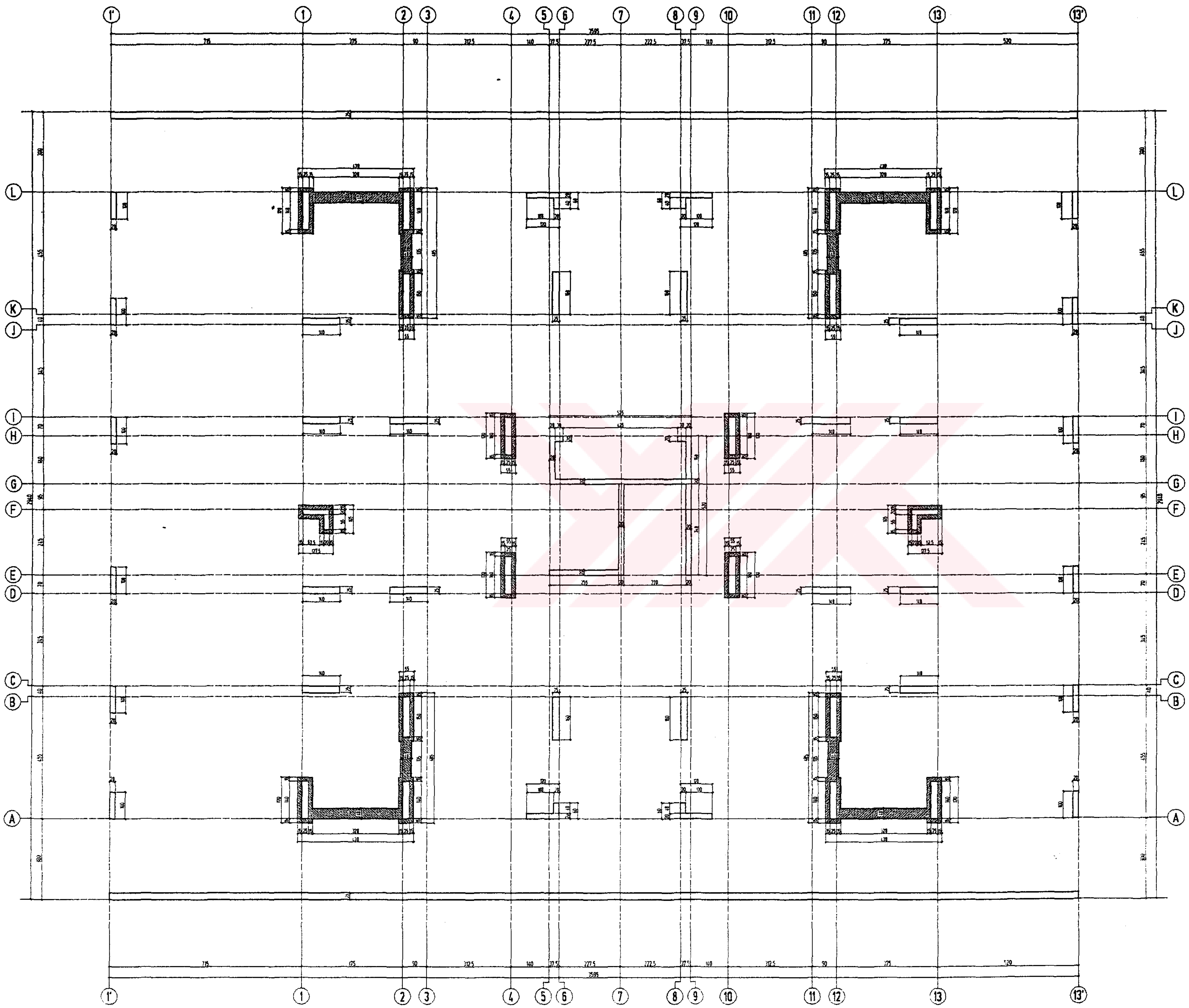
ZEMİN KAT

MEVCUT KİRİŞ

MEVCUT DÖŞEME

1.KAT

"1"



REV. NO	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

1. - 2. BODRUM KAT KOLON YERLEŞİM DETAYI

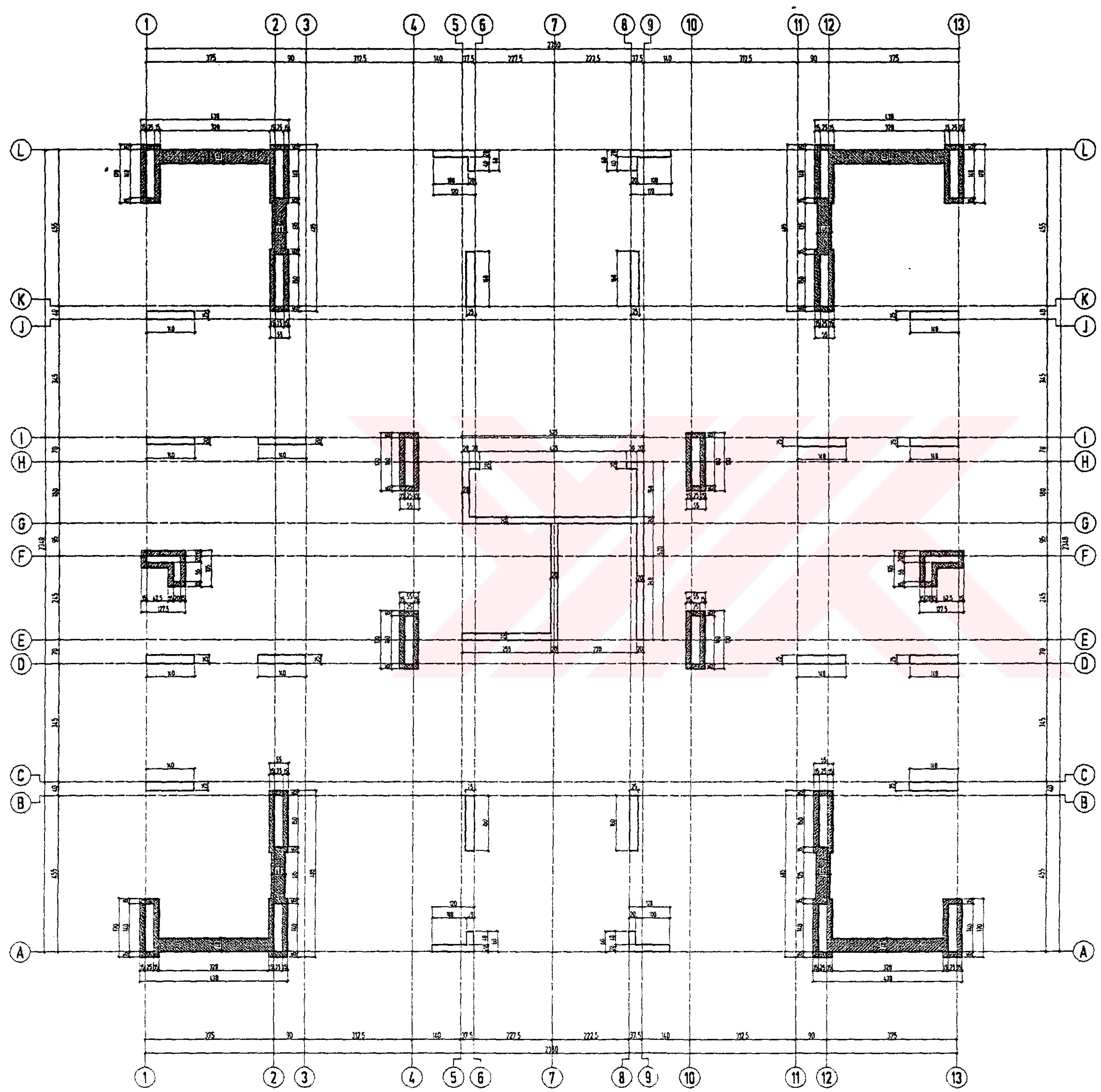
TAKVİYE PERDELER

30 t/m²	4600 t/m³
Z1	Ao = 0.40 (1. Derece Dep. Böl.)
R = 4 (Süneklik Düzeyi Normal)	I = 1

İŞ NO Job No	ÖLÇEK Scale	MALZEME Material	SIRA NO Sequence no	BOYUT Size	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0

TARİH - Date	YAPAN - Made by	ÇİZEN - Drawn by	KONTROL - Checked by	ONAY - Approved by
16.12.2009	İ. ÇETİNKAYA	İ. ÇETİNKAYA	Prof. G. ÇAĞDAŞ	
İMZA - Signature				

	İSİM - Name	TARİH - Date	İMZA - Signature
KONTROL - Checked by			
ONAY - Approved by			



REV NO.	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description
5				
4				
3				
2				
1				

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

ZEMİN VE 1. NORMAL KAT KOLON YERLEŞİM DETAYI

TAKVİYE PERDELER

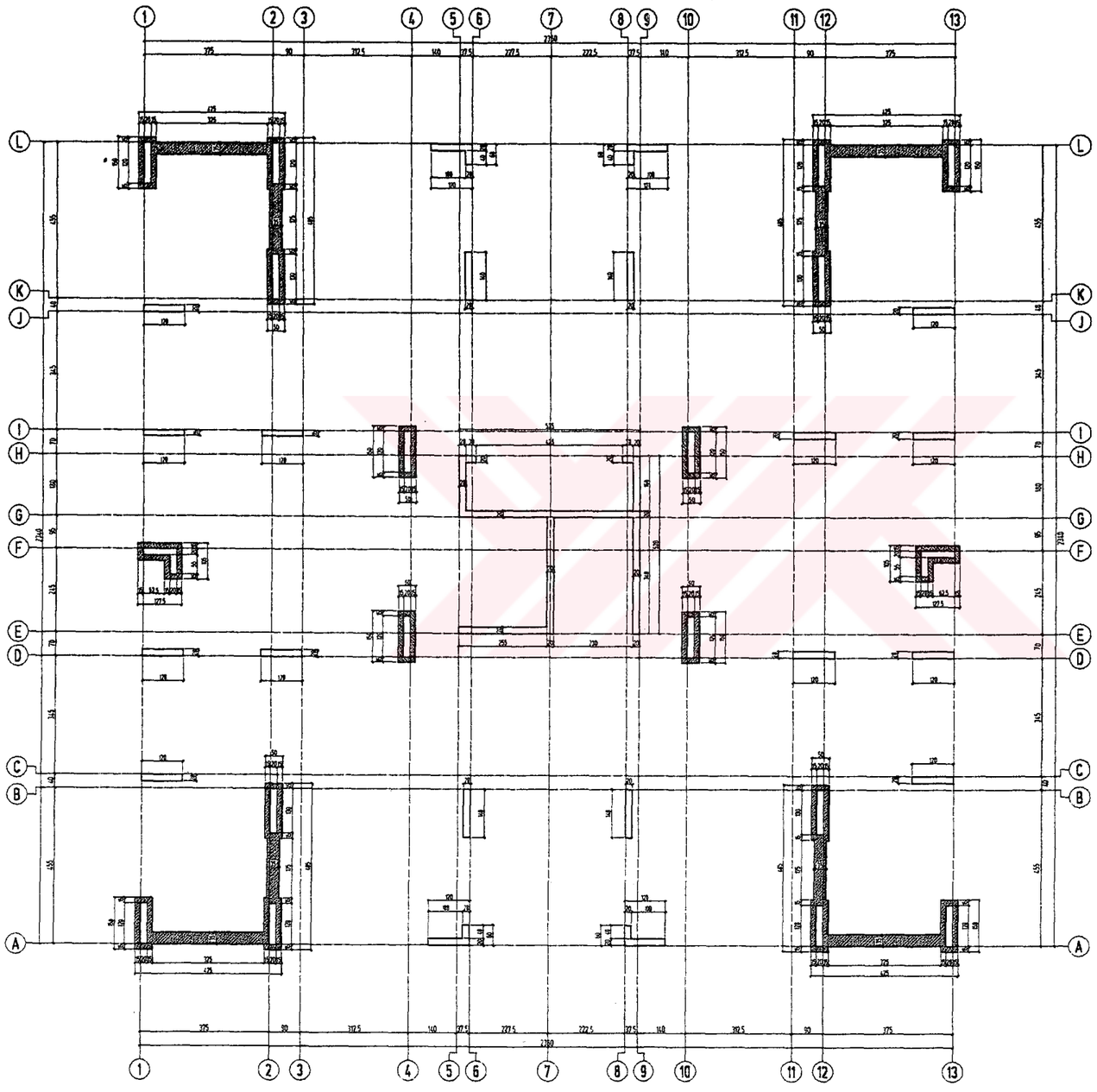
30 t/m²	4800 t/m³
Z1	Ao = 0.40 (1 Derece Dep. Bd.)
R = 4 (Sünekliği Normal)	I = 1

İŞ NO	ÖLÇEK Scale	MALZEME Material	SIRA NO ALT SIRA	BOYUT Size	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0

TARİH - Date	YAPAN - Made by	ÇİZEN - Drawn by	KONTROL - Checked By	ONAY - Approved by
18.12.2001	I.ÇETİNKAYA	I.ÇETİNKAYA	Prof. G.ÇAĞDAŞ	

İMZA - Signature

	ADI - Name	TARİH - Date	İMZA - Signature
KONTROL - Checked by			
ONAY - Approved by			



A BLOK | B BLOK | C BLOK

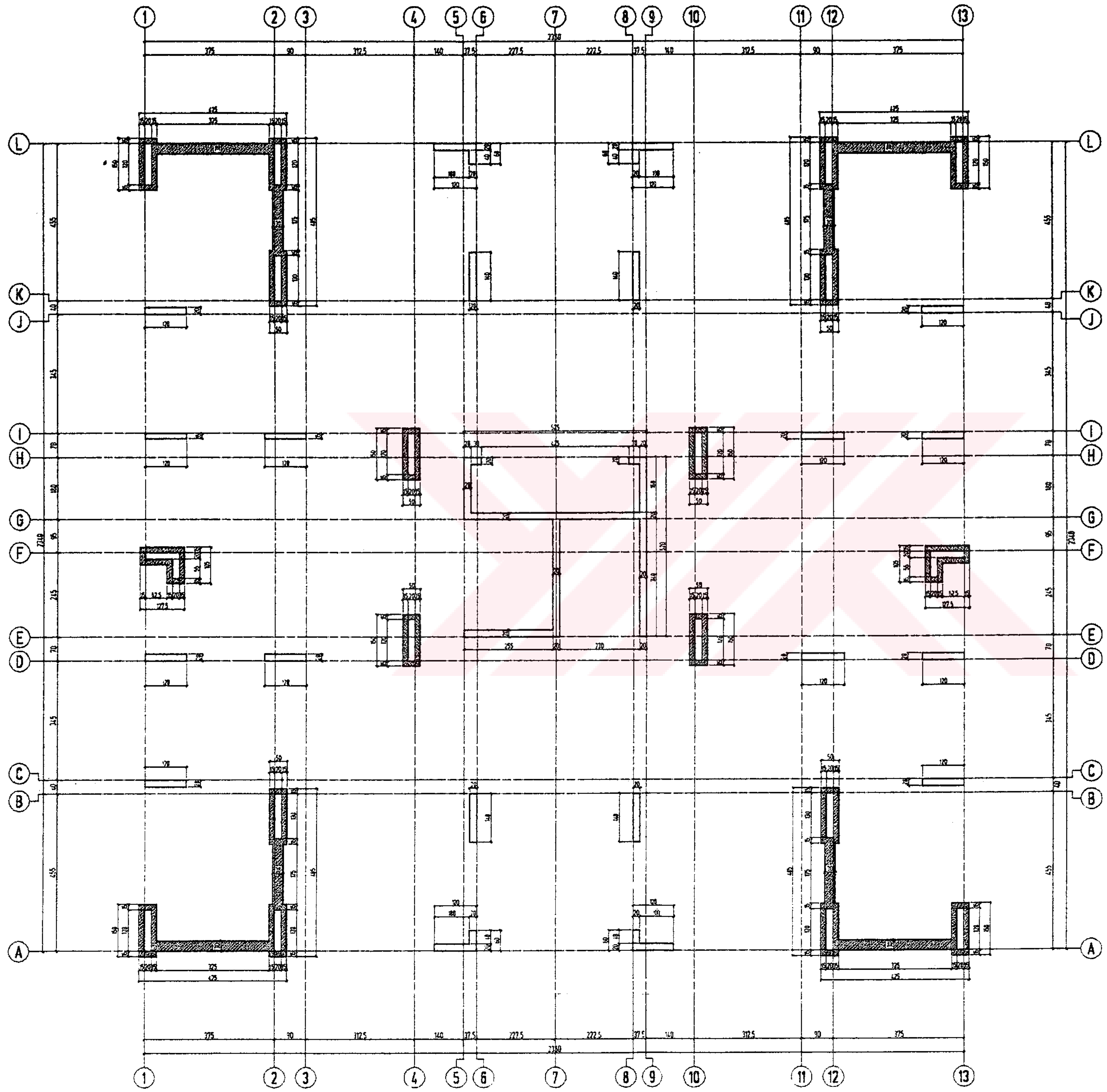
REV. NO.	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

2. - 3. ve 4. NORMAL KAT KOLON YERLEŞİM DETAYI

TAKVİYE PERDELER

İŞ NO	ÖLÇEK	MALZEME	ŞEMA NO/ALT NO	BOYUT	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0
TARİH - Date	YAPAN - Made by	ÇİZEN - Drafted by	KONTROL - Checked by	ONAY - Approved by	
15.12.2021	İ.ÇETİNKAYA	İ.ÇETİNKAYA	Prof. Ö.ÇAĞDAŞ		



A BLOK	B BLOK	C BLOK

REV NO	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description
5				
4				
3				
2				
1				

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

5. - 6. ve 7. NORMAL KAT KOLON YERLEŞİM DETAYI

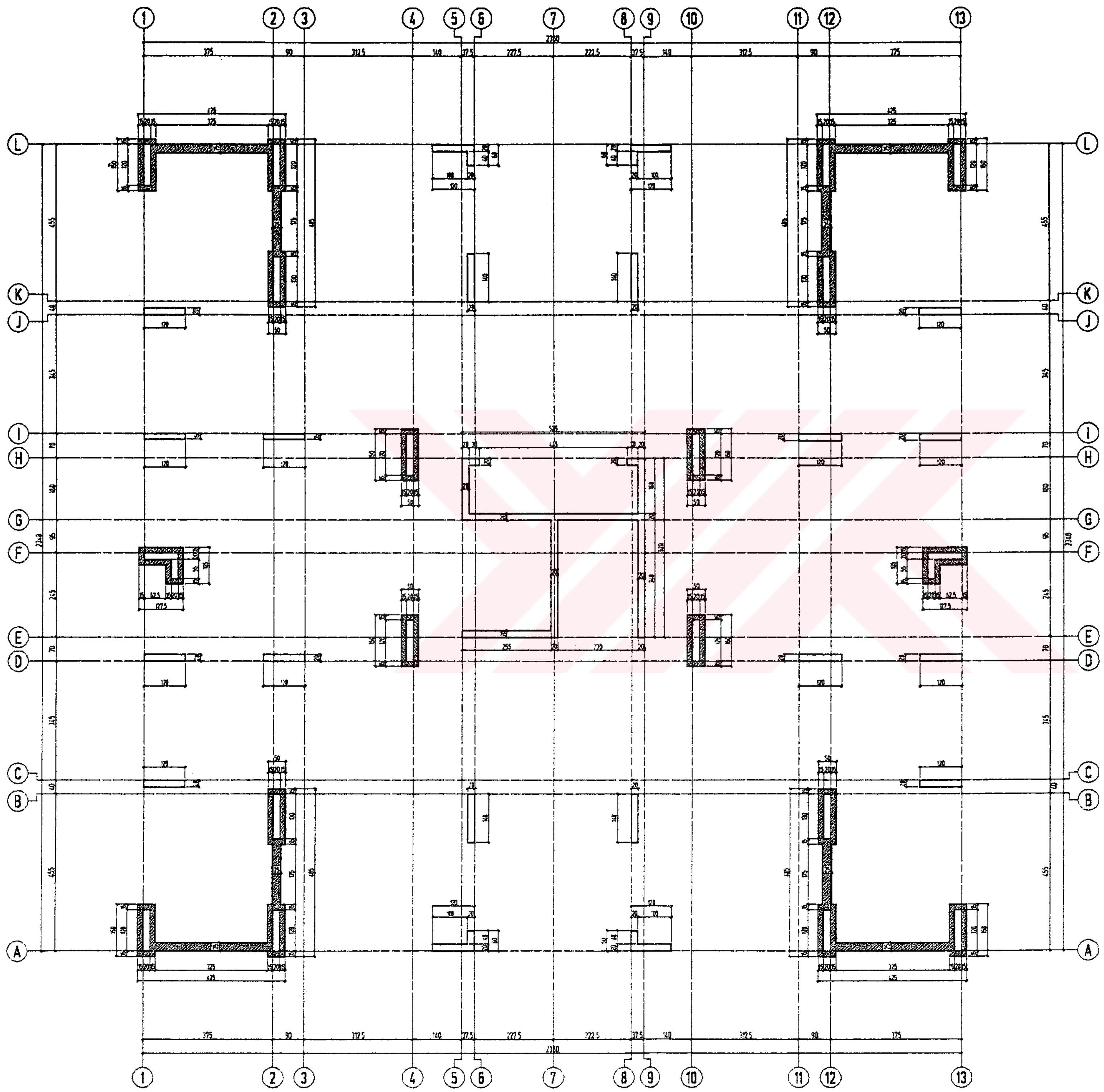
TAKVİYE PERDELER

30 t/m²	4000 t/m³
Z1	Ao = 0.40 (1. Derece Dep. Böl.)
R = 4 (Süneklik Normal)	I = 1

İŞ NO	ÖLÇEK Scale	MALZEME Material	SIRA NO ALT SIRA	BOYUT Size	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0
TARİH - Date	YAPAN - Made by	ÇİZEN - Drawn by	KONTROL - Checked by	ONAY - Approved by	
15.12.2009	İ ÇETİNKAYA	İ ÇETİNKAYA	Prof. S ÇAĞDAŞ		
İMZA - Signature					

	İSİM - Name	TARİH - Date	İMZA - Signature
KONTROL - Checked by			
ONAY - Approved by			

T.C. YÜKSEKÖĞRETİM KURULU DOKÜMANTASYON MERKEZİ



REV NO.	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description
5				
4				
3				
2				
1				

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

8. - 9. - 10. ve 11. NORMAL KAT KOLON YERLEŞİM DETAYI

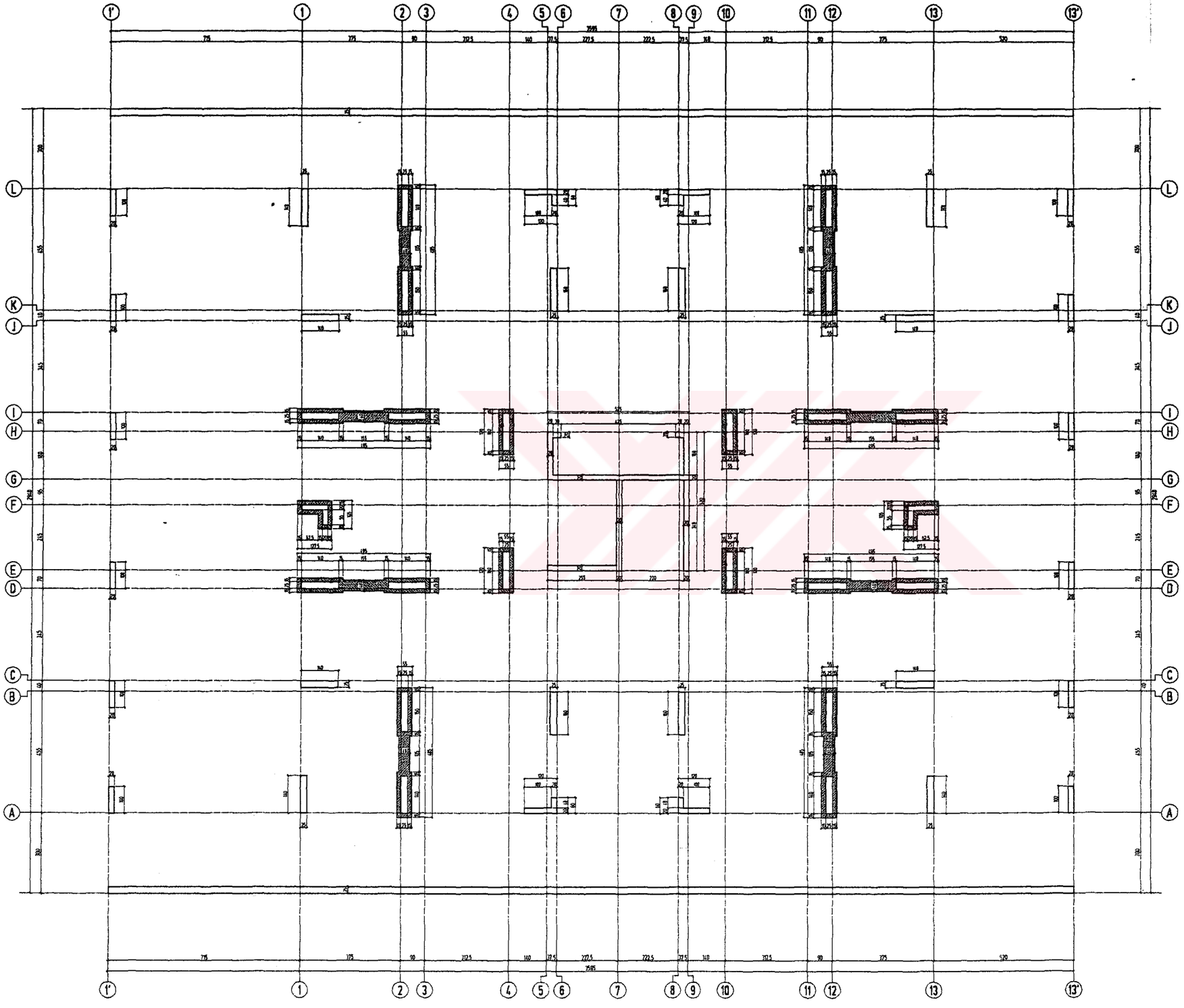
TAKVİYE PERDELER

30 t/m²	4500 t/m³
Z1	Ao = 0.40 (1 Derece Dep. Böl.)
R = 4 (Sünekliği Normal)	I = 1

İŞ NO	ÖLÇEK Scale	MALZEME Material	SIRA NO ALT SIRA	BOYUT Size	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0

TARİH - Date	YAPAN - Made by	ÇİZEN - Drawn by	KONTROL - Checked by	ONAY - Approved by
16.12.2001	İ.ÇETİNKAYA	İ.ÇETİNKAYA	Prof. Ş.ÇAĞDAŞ	
İMZA - Signature				

	İSİM - Name	TARİH - Date	İMZA - Signature
KONTROL - Checked by			
ONAY - Approved by			



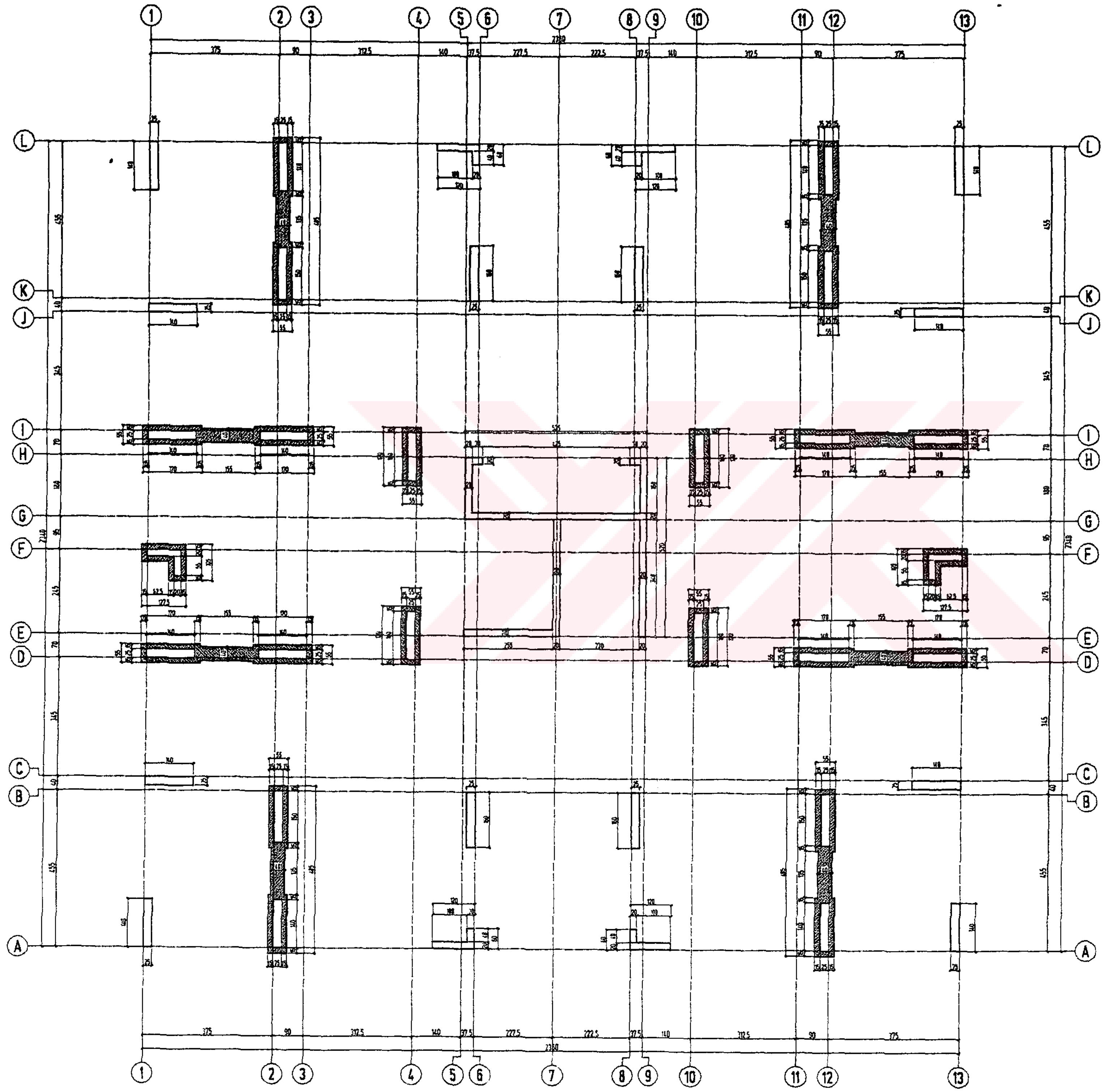
A BLOK | B BLOK | C BLOK

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

1. - 2. BODRUM KAT KOLON YERLEŞİM DETAYI

TAKVİYE PERDELER

İŞ NO: J1/1201	ÖLÇEK: 1/50
TARİH - Date: 16.12.2008	YAPAN - Made by: İ.ÇETİNKAYA
	ÇİZİM - Drawn by: İ.ÇETİNKAYA
	KONTROL - Checked by: Prof. Ö.ÇAĞDAŞ
	KOLON NO./KİRİŞ ADI: S-001
	BOYUT: A1
	REVİZYON: 0
	ONAY - Approved by:



A BLOK | B BLOK | C BLOK

REV. NO.	TARİH Date	YAPAN Made by	KONTROL Checked by	AÇIKLAMA Description
5				
4				
3				
2				
1				

SOYAK GÖKYÜZÜ EVLERİ / KOŞUYOLU
B BLOK GÜÇLENDİRME PROJESİ

ZEMİN VE 1. NORMAL KAT KOLON YERLEŞİM DETAYI

TAKVİYE PERDELER

30 t/m²	4500 t/m²
Z1	A0 = 0.40 (1. Derece Dep. Bd.)
R = 4 (Sünekliği Normal)	I = 1

İŞ NO	ÖLÇEK	MALZEME		BOYUT	REVİZYON
01/1201	1/50	C25-S420a	S-001	A1	0

TARİH - Date	YAPAN - Made by	ÇİZEN - Drawn by	KONTROL - Checked by	ONAY - Approved by
19.12.2001	İ. ÇETİNKAYA	İ. ÇETİNKAYA	Prof. G. ÇAĞDAŞ	
İMZA - Signature				

		TARİH - Date	İMZA - Signature
KONTROL - Checked by			
ONAY - Approved by			

ÖZGEÇMİŞ

Doğum tarihi	09.07.1976	
Doğum yeri	Kayseri	
Lise	1987-1984	Kadıköy Anadolu Lisesi
Lisans	1995-1999	Sakarya Üniversitesi Mühendislik Fak. İnşaat Mühendisliği Bölümü
Yüksek Lisans	1999-2002	Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü İnşaat Müh. Anabilim Dalı, Mekanik

Çalıştığı kurumlar

1999-2000	Sena İnş.Tic.Turizm Ltd Şti.
2000-2002	Parlar Mühendislik Müşavirlik Ltd Şti.
2002-Devam ediyor	Uzay Sistem Prefabrik-Çelik-Konstrüksiyon İnşaat San. ve Tic. Ltd. Şti.

T.C. YÜKSEKÖĞRETİM KURULU
DOKÜMANTASYON MERKEZİ