

MADISON TURNERS

STOUGHTON ROAD
 MADISON, WI

Architecture: Dimension IV - Madison, LLC, Madison, WI
 Civil Engineer: Professional Engineering, LLC, Middleton, WI
 EDGE Consulting Engineers, Inc., Prairie Du Sac, WI
 Site Lighting: Schultz Electric Inc., Middleton, WI

LIST OF DRAWINGS

GENERAL

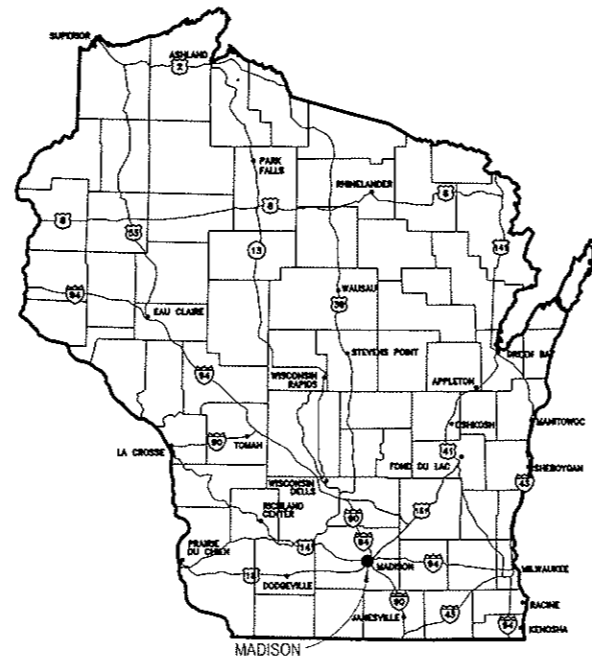
- G0.1 COVER SHEET
- COLOR RENDERING

SITE

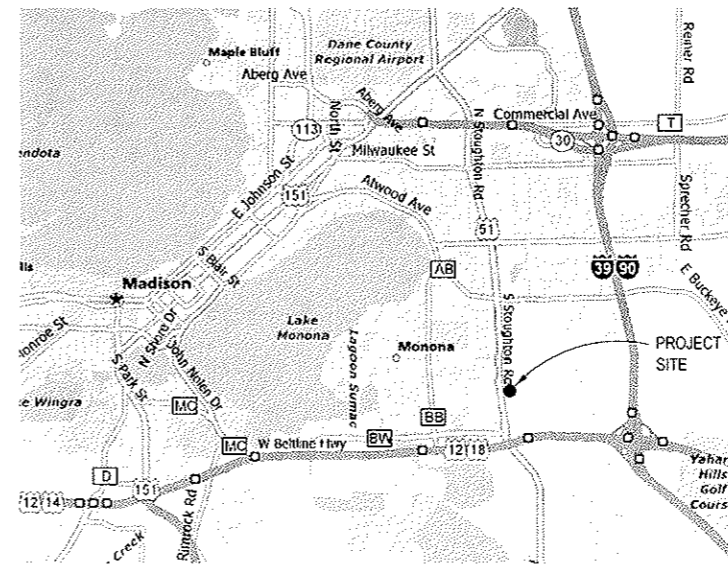
- C1.0 GRADING SURVEY (EDGE)
- C1.1 SITE PLAN (DIMENSION IV)
- C2.0 GRADING PLAN (PROFESSIONAL ENGINEERS)
- C3.0 UTILITY PLAN (PROFESSIONAL ENGINEERS)
- L1.0 LANDSCAPE PLAN
- E1.0 SITE LIGHTING PLAN (SCHULTZ)

ARCHITECTURAL

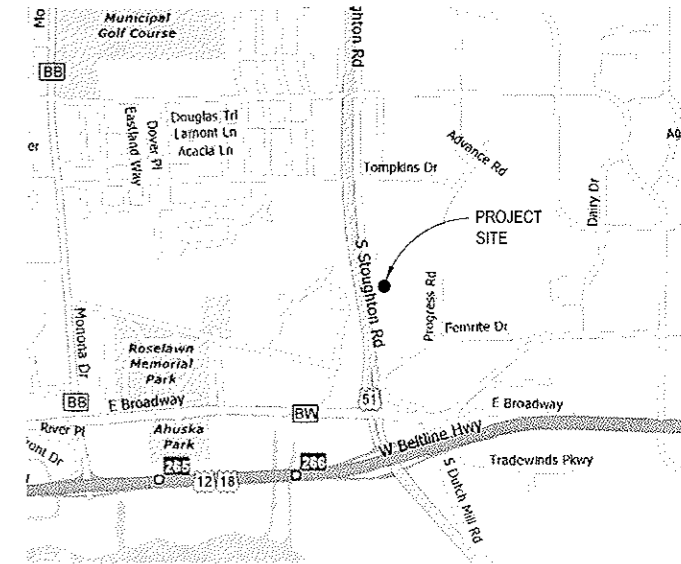
- A1.0 FLOOR PLAN
- A2.0 ELEVATIONS
- PHOTOS



STATE MAP



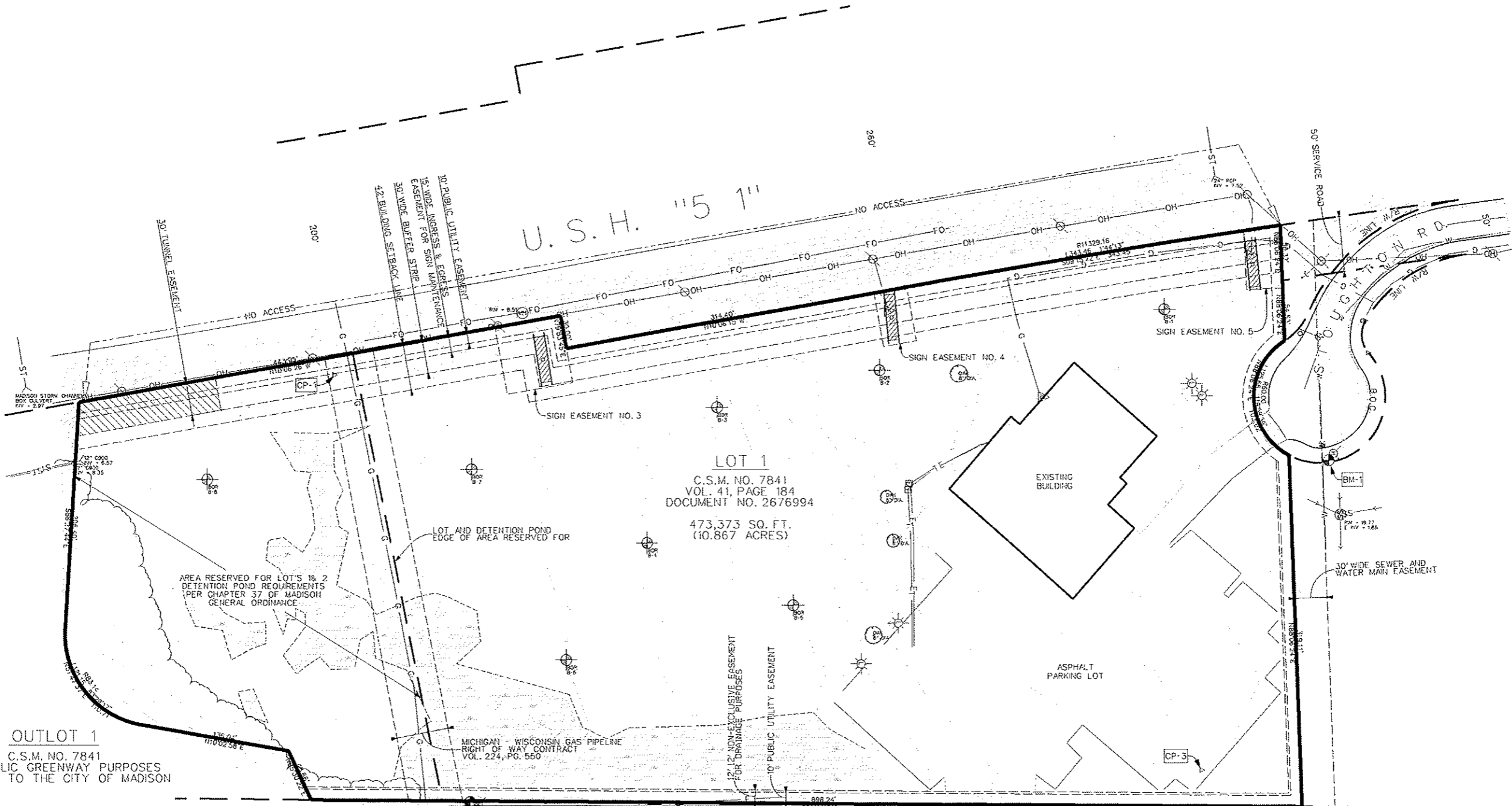
CITY MAP



SITE LOCATION MAP



NORTH



OUTLOT 1
C.S.M. NO. 7841
FOR PUBLIC GREENWAY PURPOSES
DEDICATED TO THE CITY OF MADISON

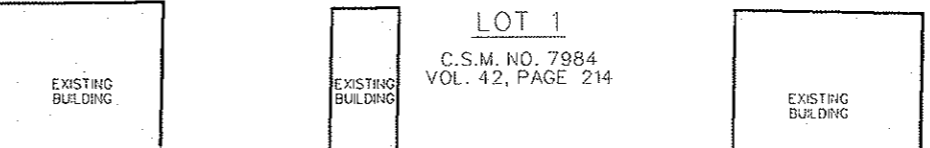
LOT 1
C.S.M. NO. 7841
VOL. 41, PAGE 184
DOCUMENT NO. 2676994
473,373 SQ. FT.
(10.867 ACRES)

LEGEND:

W	EX. WATERMAIN	▲	SIGNAGE
SS	EX. SANITARY SEWER	⊠	TRANSFORMER
ST	EX. STORM SEWER	⊞	PEDESTAL (ELEC./CABLE/TEL.)
G	EX. GAS	⊠	METER (PARKING)
E	EX. UNDERGROUND ELECTRIC	⊠	CURB INLET (INL.)
OHE	EX. OVERHEAD ELECTRIC	⊞	CATCH BASIN (CB)
⊞	EX. MAN HOLE	▲	APRON ENDWALL
⊞	HYDRANT	●	BENCHMARK
⊞	VALVE	▲	CONTROL POINT
⊞	UTILITY POLE	---	EXISTING CONTOUR
⊞	LIGHT POLE		

NOTES

- BEARINGS REFERENCED TO RECORDED PLAT OF SURVEY LOT 1, C.S.M. NO. 7841, VOL. 41, PG. 184 (PREPARED BY: CRAIG A. KEACH, MERIDIAN SURVEYING, LLC).
- UTILITY LOCATIONS BASED UPON DIGGER'S HOTLINE MARKINGS FOR TICKET #20072917493 & #20072917849 (07/20/2007) UTILITIES NOTIFIED INCLUDE:
 - SBC_SBC03 (SBC03)
 - PIPELINE CO. ANR05 (ANR05)
 - CITY OF MONONA CMA01 (CMA01)
 - MCLEOD USA OF WISCONSIN MCLO1 (MCLO1)
 - CITY OF MADISON ENGINEERING (MAD01)
 - MADISON GAS & ELECTRIC CO. MGE (MGE01)
 - CHARTER COMMUNICATIONS CHC01 (CHC01)
 - DOT SOUTHWEST REGION-MADISON (DOTO1)

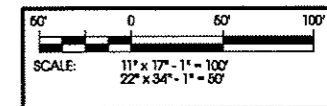


BENCHMARKS

BENCH MARK	ELEVATION	DESCRIPTION
BM-1	19.62	TAG BOLT ON HYDRANT 7'-6" BURY
BM-2	14.14	TAG BOLT ON HYDRANT 7'-6" BURY

CONTROL POINTS

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	384441.92	2163446.91	12.96	SET SPIKE IN GROUND
CP-3	386227.67	2163807.28	17.60	SET PK IN ASPHALT



Edge
Consulting Engineers, Inc.
204 Water Street
P.O. Box 1100
Madison, WI 53703
608.544.1449 v/c/e
608.544.1800 fax
www.edgeinc.com

TOPOGRAPHICAL SURVEY
MADISON TURNERS - LOT 1, CSM 7841
MADISON, WISCONSIN

REVISIONS

NO.	DATE	DESCRIPTION
1	06/07/07	TOPO MAP

PRELIMINARY
NOT FOR CONSTRUCTION

ISSUE DATE:
06/07/07 - TOPO MAP

DRAWN BY:
AMF

CHECKED BY:
AJO

PLT DATE:
8/7/2007

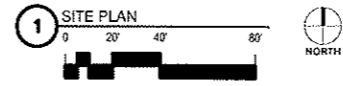
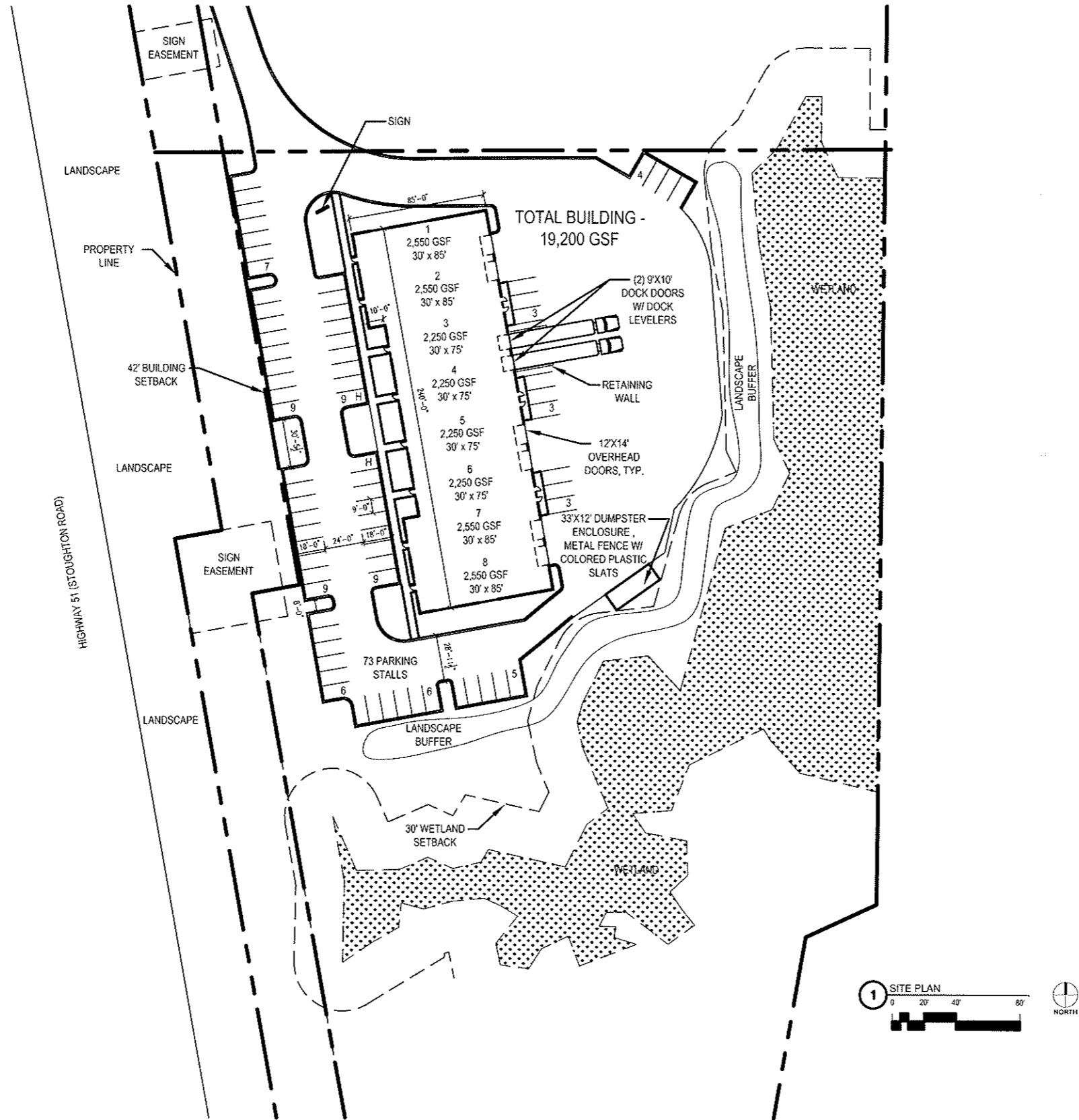
PROJECT NUMBER:
3031

FILE NAME:
C1.0.dgn

SHEET NUMBER:
C1.0

**MADISON
 TURNERS**

STOUGHTON ROAD
 MADISON, WI



DATE OF ISSUE: 04/30/08

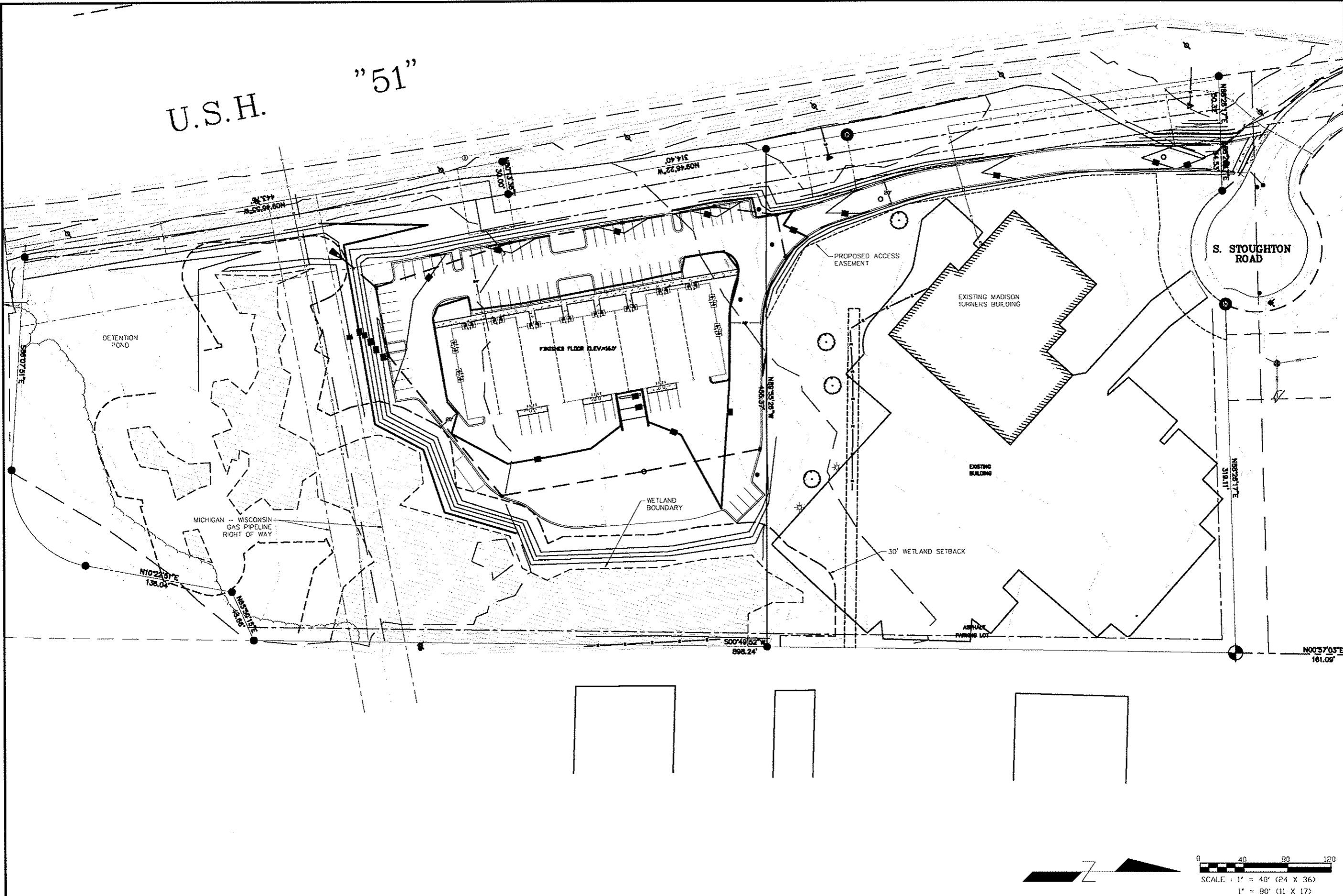
**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

PROJECT NO: 08014

SITE PLAN

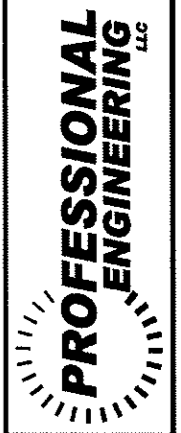
C1.1

U.S.H. "51"



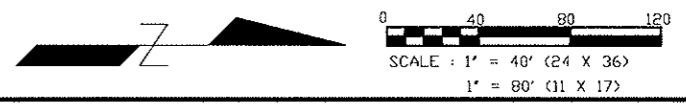
DATE	4-28-08
DRAWN BY	RJJ
REVISION	
DATE	

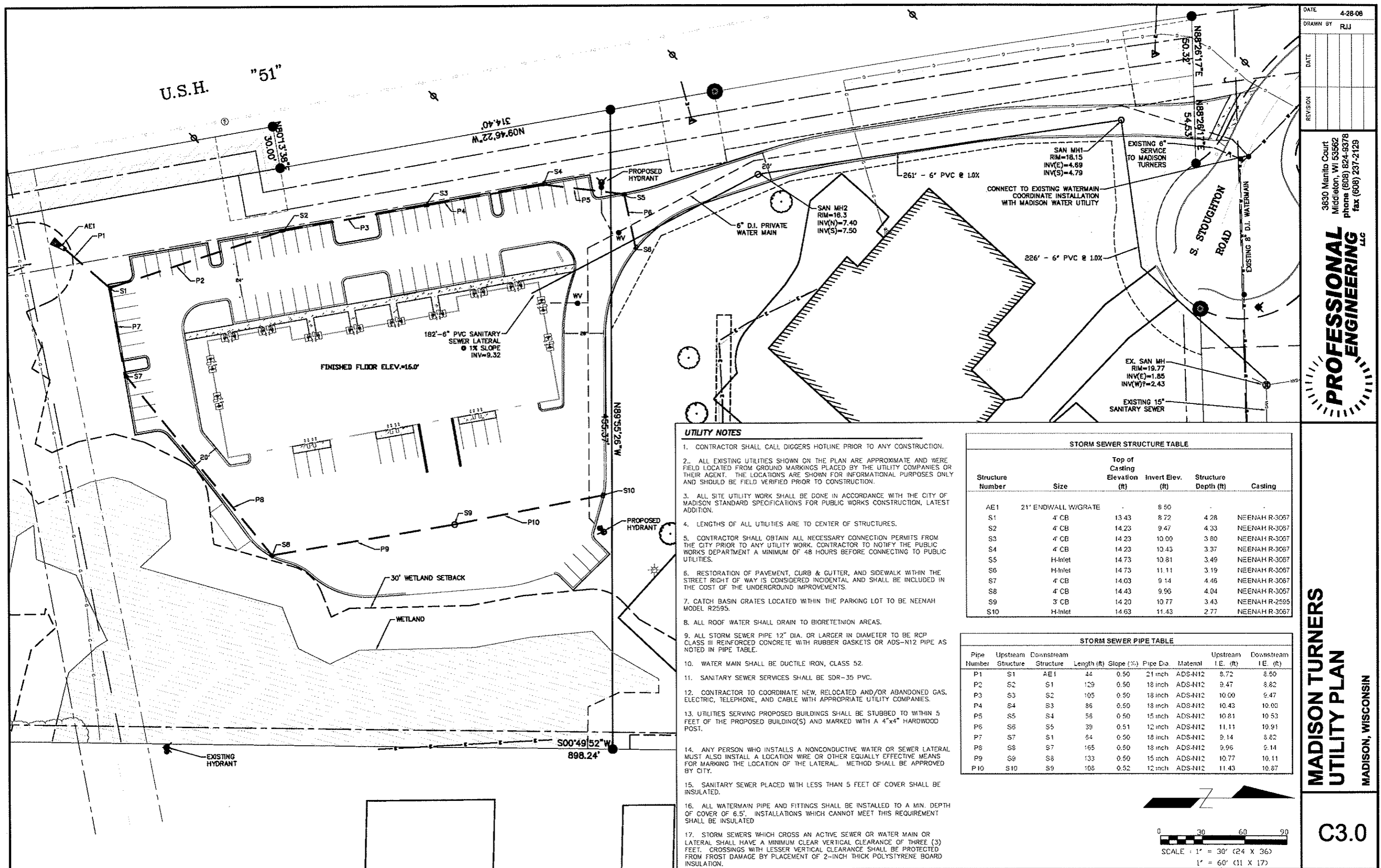
3830 Marito Court
 Middleton, WI 53562
 phone (608) 824-9378
 fax (608) 237-2129



MADISON TURNERS GRADING PLAN
 MADISON, WISCONSIN

C2.0





DATE	4-28-08
DRAWN BY	RJJ
REVISION	
DATE	

3630 Manitoba Court
 Middleton, WI 53562
 phone (608) 824-9378
 fax (608) 237-2129

PROFESSIONAL ENGINEERING LLC

UTILITY NOTES

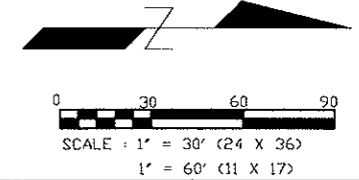
- CONTRACTOR SHALL CALL DIGGERS HOTLINE PRIOR TO ANY CONSTRUCTION.
- ALL EXISTING UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE AND WERE FIELD LOCATED FROM GROUND MARKINGS PLACED BY THE UTILITY COMPANIES OR THEIR AGENT. THE LOCATIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- ALL SITE UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
- LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY CONNECTION PERMITS FROM THE CITY PRIOR TO ANY UTILITY WORK. CONTRACTOR TO NOTIFY THE PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES.
- RESTORATION OF PAVEMENT, CURB & GUTTER, AND SIDEWALK WITHIN THE STREET RIGHT OF WAY IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF THE UNDERGROUND IMPROVEMENTS.
- CATCH BASIN GRATES LOCATED WITHIN THE PARKING LOT TO BE NEENAH MODEL R2595.
- ALL ROOF WATER SHALL DRAIN TO BIORETENTION AREAS.
- ALL STORM SEWER PIPE 12" DIA. OR LARGER IN DIAMETER TO BE RCP CLASS III REINFORCED CONCRETE WITH RUBBER GASKETS OR ADS-N12 PIPE AS NOTED IN PIPE TABLE.
- WATER MAIN SHALL BE DUCTILE IRON, CLASS 52.
- SANITARY SEWER SERVICES SHALL BE SDR-35 PVC.
- CONTRACTOR TO COORDINATE NEW, RELOCATED AND/OR ABANDONED GAS, ELECTRIC, TELEPHONE, AND CABLE WITH APPROPRIATE UTILITY COMPANIES.
- UTILITIES SERVING PROPOSED BUILDINGS SHALL BE STUBBED TO WITHIN 5 FEET OF THE PROPOSED BUILDING(S) AND MARKED WITH A 4"x4" HARDWOOD POST.
- ANY PERSON WHO INSTALLS A NONCONDUCTIVE WATER OR SEWER LATERAL MUST ALSO INSTALL A LOCATION WIRE OR OTHER EQUALLY EFFECTIVE MEANS FOR MARKING THE LOCATION OF THE LATERAL. METHOD SHALL BE APPROVED BY CITY.
- SANITARY SEWER PLACED WITH LESS THAN 5 FEET OF COVER SHALL BE INSULATED.
- ALL WATERMAIN PIPE AND FITTINGS SHALL BE INSTALLED TO A MIN. DEPTH OF COVER OF 6.5'. INSTALLATIONS WHICH CANNOT MEET THIS REQUIREMENT SHALL BE INSULATED.
- STORM SEWERS WHICH CROSS AN ACTIVE SEWER OR WATER MAIN OR LATERAL SHALL HAVE A MINIMUM CLEAR VERTICAL CLEARANCE OF THREE (3) FEET. CROSSINGS WITH LESSER VERTICAL CLEARANCE SHALL BE PROTECTED FROM FROST DAMAGE BY PLACEMENT OF 2-INCH THICK POLYSTYRENE BOARD INSULATION.

STORM SEWER STRUCTURE TABLE

Structure Number	Size	Top of Casting Elevation (ft)	Invert Elev. (ft)	Structure Depth (ft)	Casting
AE1	21" ENDWALL W/GRATE	-	8.50	-	-
S1	4' CB	13.43	8.72	4.28	NEENAH R-3067
S2	4' CB	14.23	9.47	4.33	NEENAH R-3067
S3	4' CB	14.23	10.00	3.80	NEENAH R-3067
S4	4' CB	14.23	10.43	3.37	NEENAH R-3067
S5	H-Inlet	14.73	10.81	3.49	NEENAH R-3067
S6	H-Inlet	14.73	11.11	3.19	NEENAH R-3067
S7	4' CB	14.03	9.14	4.46	NEENAH R-3067
S8	4' CB	14.43	9.96	4.04	NEENAH R-3067
S9	3' CB	14.20	10.77	3.43	NEENAH R-2595
S10	H-Inlet	14.63	11.43	2.77	NEENAH R-3067

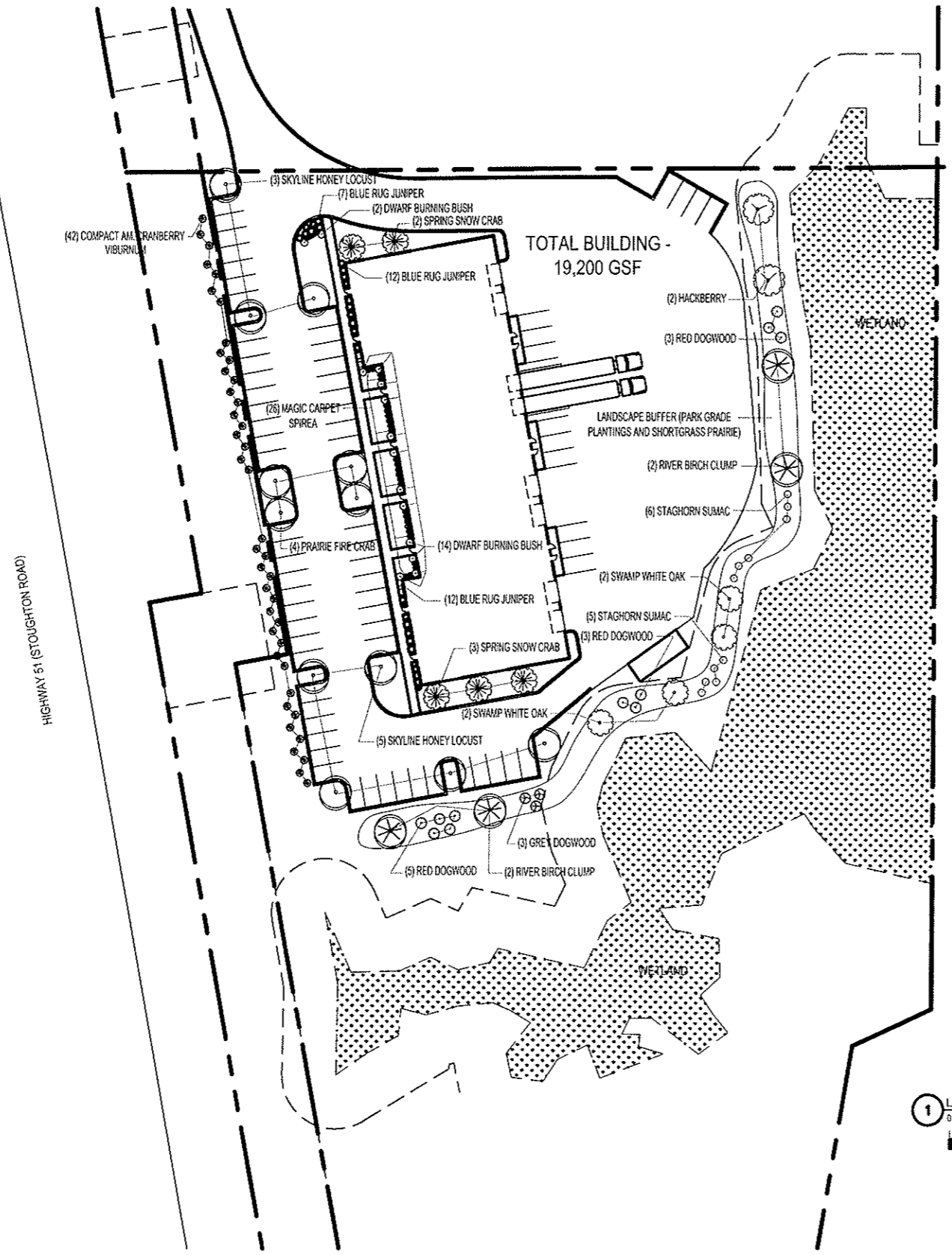
STORM SEWER PIPE TABLE

Pipe Number	Upstream Structure	Downstream Structure	Length (ft)	Slope (%)	Pipe Dia	Material	Upstream I.E. (ft)	Downstream I.E. (ft)
P1	S1	AE1	44	0.50	21 inch	ADS-N12	8.72	8.50
P2	S2	S1	129	0.50	18 inch	ADS-N12	9.47	8.82
P3	S3	S2	105	0.50	18 inch	ADS-N12	10.00	9.47
P4	S4	S3	86	0.50	18 inch	ADS-N12	10.43	10.00
P5	S5	S4	56	0.50	15 inch	ADS-N12	10.81	10.53
P6	S6	S5	39	0.51	12 inch	ADS-N12	11.11	10.91
P7	S7	S1	64	0.50	18 inch	ADS-N12	9.14	8.82
P8	S8	S7	165	0.50	18 inch	ADS-N12	9.96	9.14
P9	S9	S8	133	0.50	15 inch	ADS-N12	10.77	10.11
P10	S10	S9	168	0.52	12 inch	ADS-N12	11.43	10.87



MADISON TURNERS
 UTILITY PLAN
 MADISON, WISCONSIN

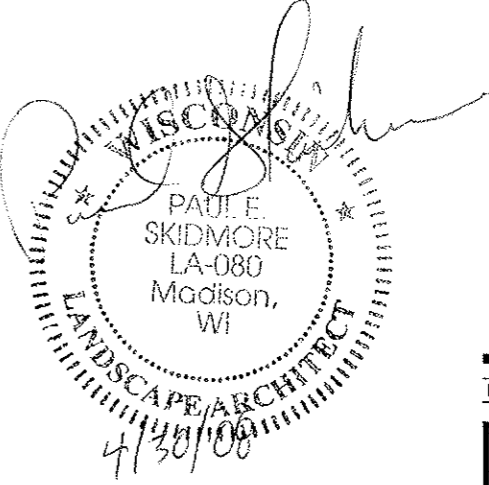
C3.0



PLANT LIST

QUANTITY	SIZE	TYPE	ROOT
4	8"	RIVER BIRCH CLUMP	BB
2	2"	HACKBERRY	BB
8	2 1/2"	SKYLINE HONEY LOCUST	BB
4	2"	SWAMP WHITE OAK	BB
4	1 1/2"	PRAIRIE FIRE CRAB	BB
5	1 1/2"	SPRING SNOW CRAB	BB
16	24"	DWARF BURNING BUSH	CONT.
11	18"	RED DOGWOOD	CONT.
3	18"	GREY DOGWOOD	CONT.
42	24"	COMPACT AM. CRANBERRY VIBURNUM	CONT.
26	15"	MAGIC CARPET SPIREA	CONT.
11	18"	STAGHORN SUMAC	CONT.
31	26"	BLUE RUG JUNIPER	CONT.

- NOTES:
1. ALL LAWN AREAS IN FRONT (WEST) OF BUILDING TO RECEIVE TOPSOIL, SEED (MADISON PARKS), FERTILIZER, AND MULCH.
 2. ALL LAWN AREAS IN LANDSCAPE BUFFER TO RECEIVE TOPSOIL. SEE (SHORTGRASS PRAIRIE), FERTILIZER, AND MULCH.
 3. ALL PLANTING BEDS AND TREE RINGS TO RECEIVE 3" SHREDED HARDWOOD BARK MULCH.
 4. ALL PLANTING BEDS TO BE SEPARATED FROM LAWN AREAS WITH 5" VINYL EDGE.



DATE OF ISSUE: 04/30/08

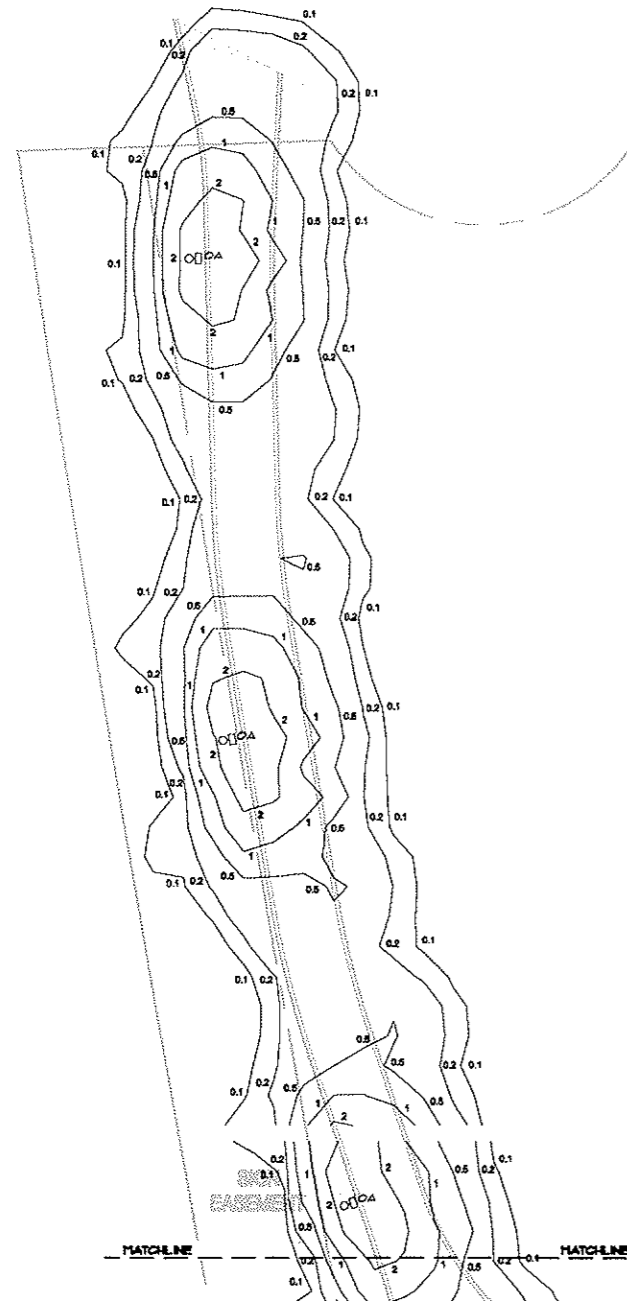
**PRELIMINARY
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PROJECT NO: 08014

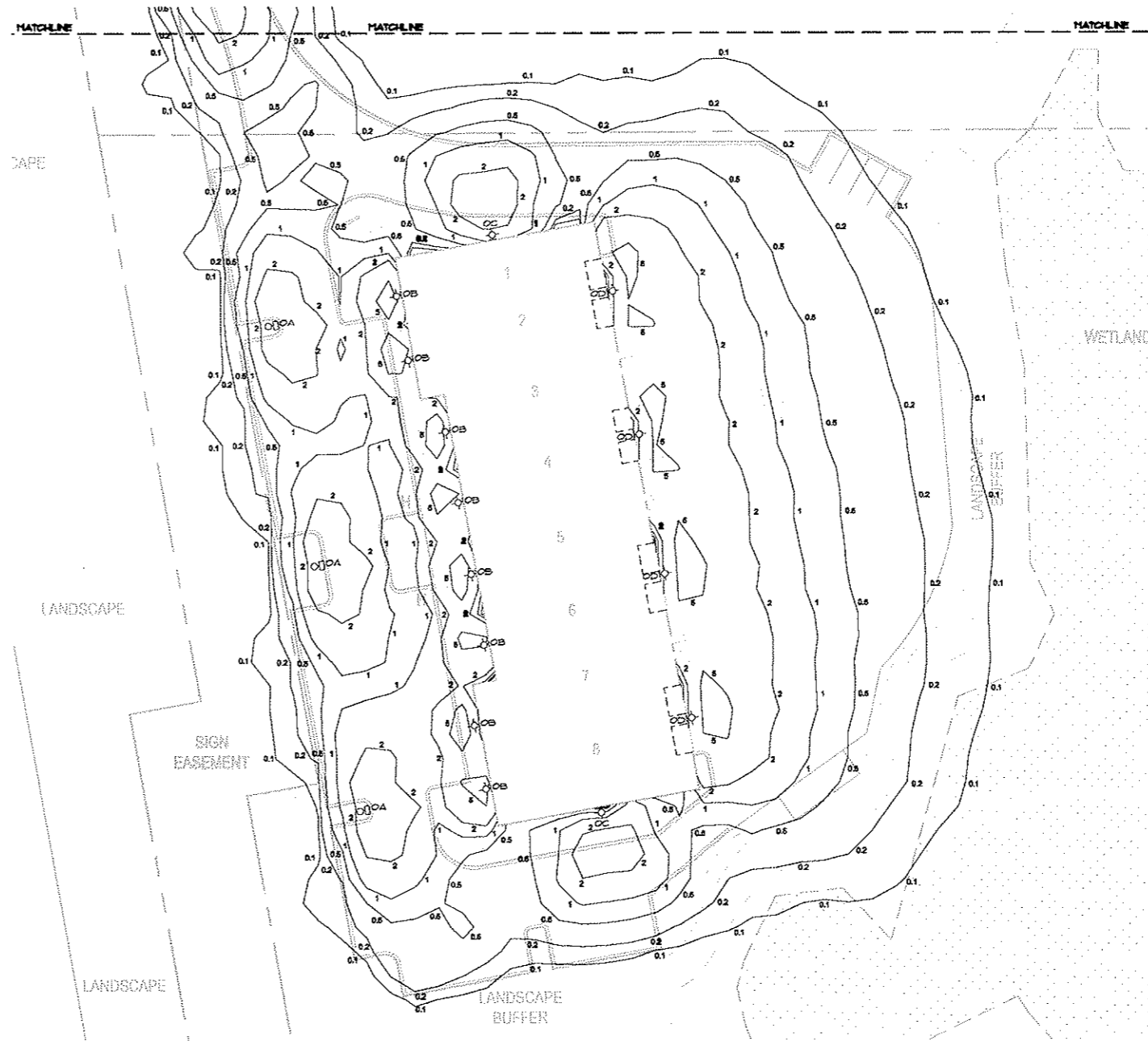
LANDSCAPE PLAN

L1.0

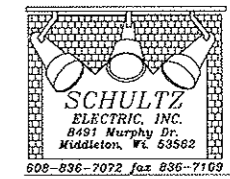
LIGHTING FIXTURE SCHEDULE													
TYPE	LIGHTING FIXTURE			MOUNTING	CEILING TYPE	LENS	VOLT	LAMP DATA					NOTES
	DESCRIPTION	MANUFACTURER	CATALOG NO.					NO.	WATT	TYPE	MANUFACTURER	CATALOG NO.	
OA	SINGLE HEAD SITE LIGHTING FIXTURE	NVIE	Y021-250-MH-MT-35-BZ-HS	POLE	NA	GLASS	TBD	1	250W	MH	GE	MYR250	
OB	WALL PACK	LUMARK	MH-IP-T-100-77	WALL	NA	GLASS	TBD	1	100W	MH	GE	MYR100	
OC	WALL PACK	LUMARK	MH-IP-TM-750-4-MT	WALL	NA	GLASS	TBD	1	750W	MH	GE	MYR750	
OD	WALL PACK	LITHONIA	TWH-460R1-TB-LP1	WALL	NA	GLASS	TBD	1	400W	MH	GE	MYR400	



2 ELECTRICAL SITE LIGHTING PLAN CONT.
SCALE: 1"=30'



1 ELECTRICAL SITE LIGHTING PLAN
SCALE: 1"=30'



**MADISON
TURNERS**

STOUGHTON ROAD
MADISON, WI

DATE OF ISSUE: 4/28/08

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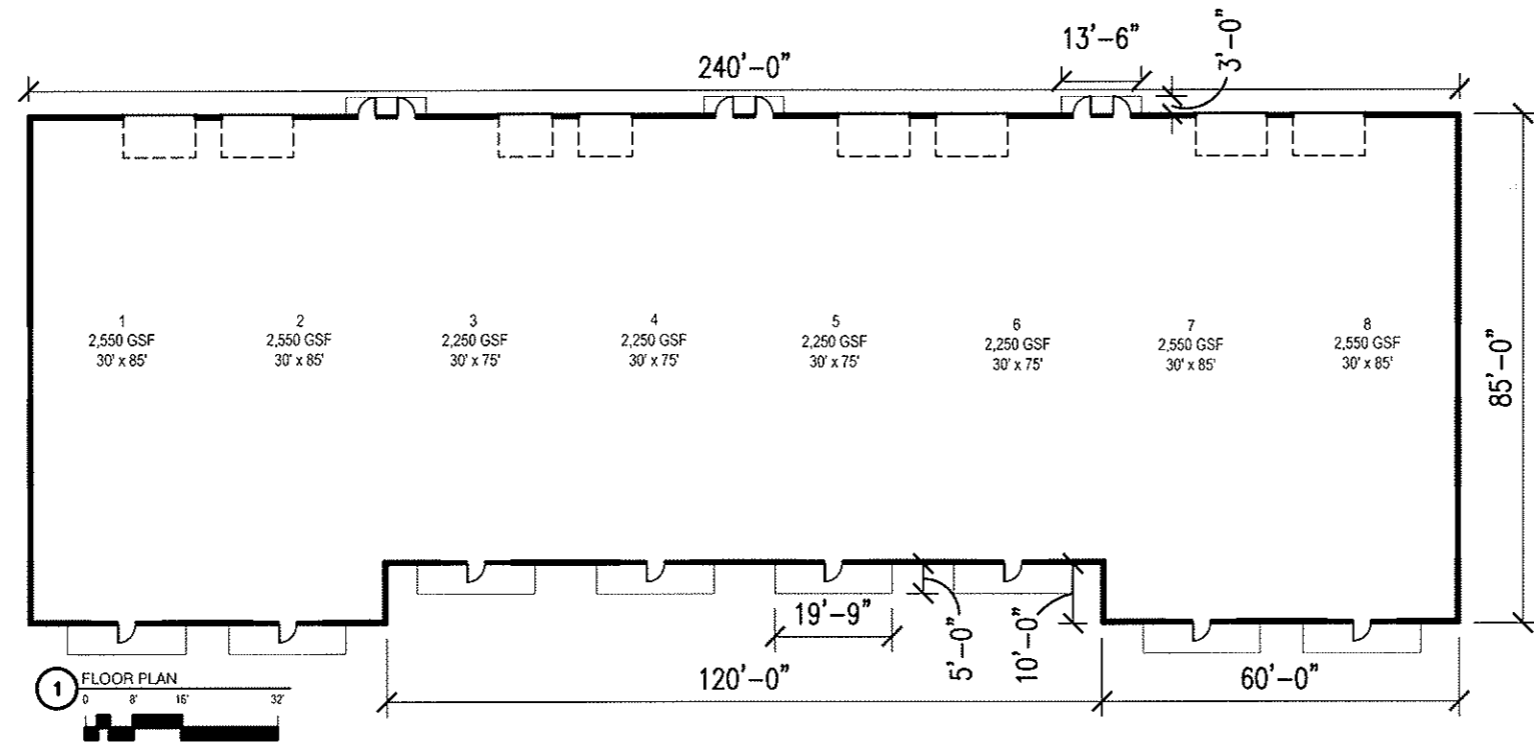
PROJECT NO: XXXX

ELECTRICAL SITE PLAN

E1.0

**MADISON
TURNERS**

STOUGHTON ROAD
MADISON, WI



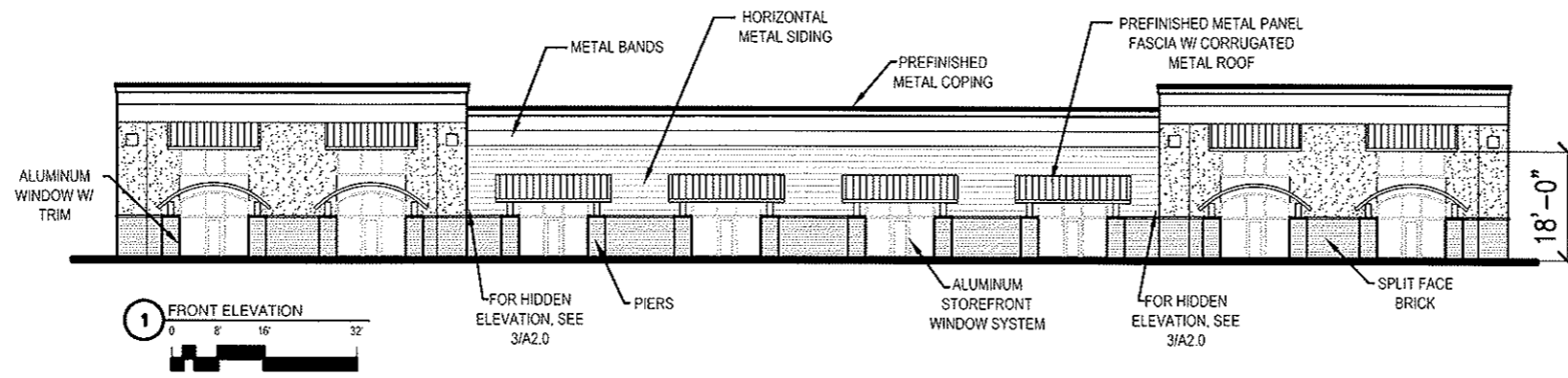
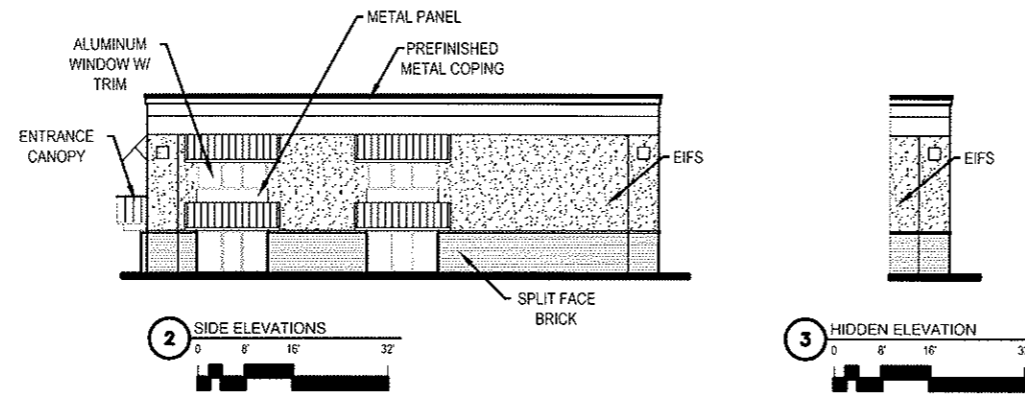
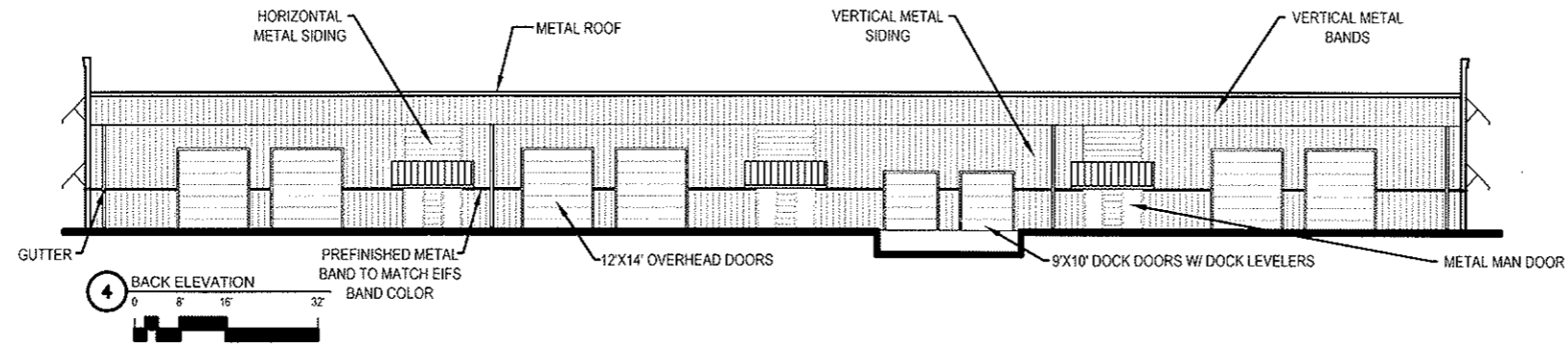
DATE OF ISSUE: 04/30/08

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PROJECT NO: 08014

FLOOR PLAN

A1.0



**MADISON
TURNERS**

STOUGHTON ROAD
MADISON, WI

DATE OF ISSUE: 04/30/08

**PRELIMINARY
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CONSTRUCTION**

PROJECT NO: 08014

ELEVATIONS

A2.0



AERIAL VIEW



NORTH VIEW



EAST VIEW



SOUTH VIEW

DESCRIPTION

The classic lines and sophisticated construction of the Vision Site luminaire makes it an ideal complement to site design. The combination of smooth contours and sharp rear reveals allow the fixture to change character from different viewing angles while providing excellent low-glare photometrics. U.L. listed and CSA certified for wet locations.

Catalog #	VXM-250-MH-MT-3S-BZ-HS	Type	OA
Project		Date	04/29/2008
Comments			
Prepared by			

SPECIFICATION FEATURES

A ... Housing

One-piece, die-cast aluminum housing maintains a nominal 0.125" wall thickness. Integral reveal channels along top surface of housing promote heat extraction and prolonged electrical component life. Solid cast wall separates optical chamber from electrical area.

B ... Electrical Tray

Ballast and related electrical componentry are mounted to a reinforced one piece galvanized steel tray with integral handle. For ease of maintenance, tray hinges open via toolless release of one spring loaded latch. Electrical quick disconnects allow tray to be completely removed from housing providing ample hand and tool room for attachment of fixture during installation, and a safer servicing environment. Optional tray mounted fuse connections offer a distinct and easy to maintain alternative to common inline fuse connections.

C ... Door

One-piece die-cast aluminum door frame. Door frame opens via release of two flush mounted toolless latches.

Tempered 1/8" thick clear glass lens seals to door with a weather-tight continuous gasket. Optical chamber is sealed against entry of dirt and moisture by a continuous door mounted gasket which firmly compresses against optical enclosure walls.

D ... Lens

Impact resistant 1/8" thick tempered clear flat glass.

E ... Optical Systems

Choice of five (5) efficiency segmented optical systems constructed of premium 95% reflective anodized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs, or other means of attachment which may cause streaking in the light distribution. Optional high efficiency hydroformed reflectors available in VXM housing only in four (4) distributions patterns. All reflector modules feature toolless removal, quick disconnect wiring plugs, and are field rotatable in 90 degree increments. HID lamp sources in medium housing (VXM) optics feature mogul-base lampholders.

F ... Arm

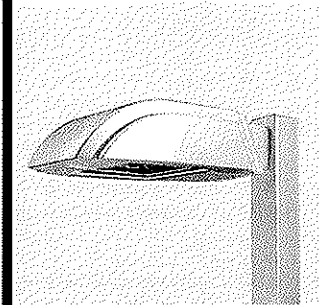
One-piece extruded rectangular arm available in standard 6" and 10" lengths. Internal bolt guides allow easy positioning of fixture during installation to pole or wall surface.

G ... Structural Mount

Die-cast aluminum cleat factory mounted to luminaire and finished in luminaire color. Stainless steel structural rod measures 1/2" in diameter and is provided in luminaire finish color or optional natural finish. Product works in conjunction with accessory 10" arms. INVUE poles provided pre-drilled for suspension mount option. See INVUE pole brochure for a complete selection of matching poles.

H ... Finish

Housing and arm finished in a 5 stage premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult your INVUE Lighting Systems Representative for more information.



VXM VISION SITE MEDIUM

85-400W

Metal Halide

Pulse Start Metal Halide

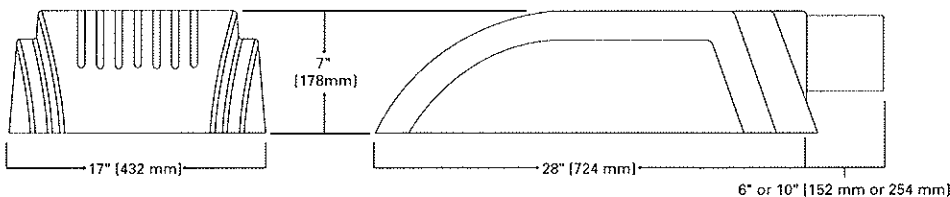
High Pressure Sodium

Compact Fluorescent

Electrodeless Fluorescent

ARCHITECTURAL
AREA LUMINAIRE

DIMENSIONS



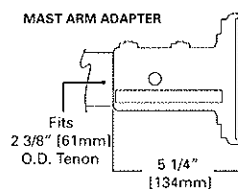
Wattage Table

	VXM
Metal Halide	175, 250, 400W
Pulse Start Metal Halide	250, 320, 350, 400W
High Pressure Sodium	150, 250, 400W
Compact Fluorescent	(2) 57, (2) 70W
Electrodeless Fluorescent	85W

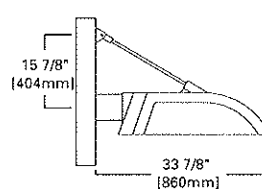
Certifications

IP54 Rated	U.L. 1598 Listed	3G Vibration Tested	FCO Full Cutoff
CSA Listed	40°C Ambient	ISO 9001	

MOUNTING OPTIONS



STRUCTURAL MOUNT



EPA: (effected projected area)

Single: 1.6

Single Structural: 1.82

SHIPPING DATA (approx.)

Net Weight (lbs.): 51

Volume (cu. ft): 3.18

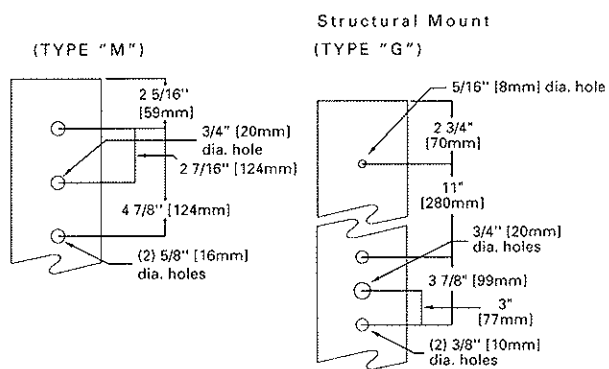
ORDERING INFORMATION

VXM-250-MH-MT-3S-BZ-HS

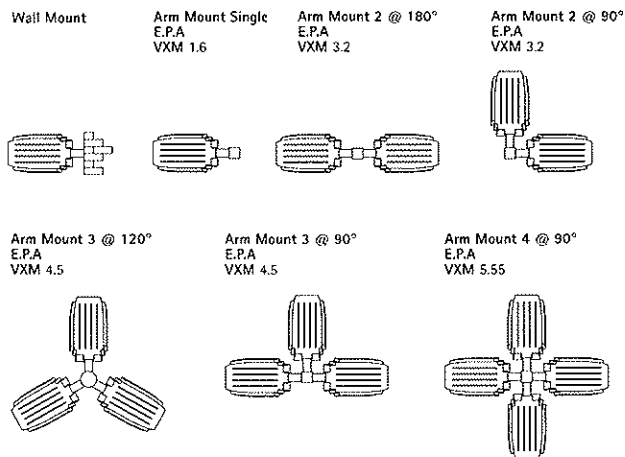
VXM	250	MH	MT	3S	BZ	HS
Product Family ¹ VXM: Vision Site Medium	Lamp Type MH: Metal Halide		Optical System 3S: Type III		Options ⁵ HS: House Side Shield ⁶	
Lamp Wattage 250: 250W	Voltage ⁷ MT: Multi-Tap wired ³ 277V		Color ⁴ BZ: Bronze			

Notes: 1 Arm not included. See accessories. 2 Products also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information. 3 Multi-tap is 120/208/240/277V wired 277V. 4 Custom and RAL color matching available upon request. Consult your INVUE Lighting Systems Representative for further information. 5 Add as suffix in the order shown. 6 House side shield not available on 5S and SL optics. 7 Order separately, replace XX with color suffix.

DRILLING PATTERNS



MOUNTING VARIATIONS



COOPER LIGHTING - LUMARK®

DESCRIPTION

The IMPACT Trapezoid cutoff wall luminaire makes an ideal complement to site design. U.L. Listed and CSA Certified for wet locations in down mount applications and damp locations in up mounted applications.

Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities.

Catalog #	MHIP-T-100-MT	Type	OB
Project		Date	04/29/2008
Comments			
Prepared by			

SPECIFICATION FEATURES

A ... Housing

The housing is a two-piece design of die-cast aluminum for precise control of tolerances and repeatability.

B ... Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" J-Box or wall with "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom.

C ... Optical Modules

All optical modules utilize high performance 95% reflective sheet. Type II optical module is standard.

D ... Ballast

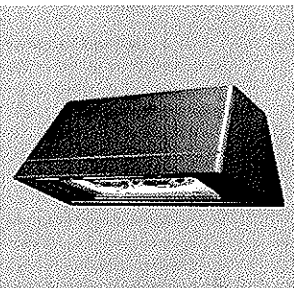
HID luminaires supplied with high power factor ballast with Class H insulation. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MH. Compact Fluorescent luminaires feature electronic universal 120-277V high efficient 50/60Hz ballast with -18°C (0°F) minimum starting.

E ... Door

Die-cast door features, 1/8" heat- and impact-resistant clear tempered glass lens mounted with internal plated steel clips and sealed with EPDM gasketing. Hinged door secured in place via two (2) captive fasteners.

F ... Finish

Durable polyester powder coat finish. Standard color is bronze. Optional white and black colors available. Other finish colors available. Consult your Cooper Lighting Representative concerning special color requirements.



IP IMPACT TRAPEZOID

50 - 175W
High Pressure Sodium
Metal Halide
26 - 52W
Compact Fluorescent

FULL CUTOFF
WALL MOUNT LUMINAIRE

TECHNICAL DATA

25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA

High Reactance Ballast Input Watts

50W HPS HPF (66 Watts)
50W MH HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MH HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MH HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MH HPF (185 Watts)

CWA Ballast Input Watts

175W MH HPF (210 Watts)

Electronic Ballast Input Watts

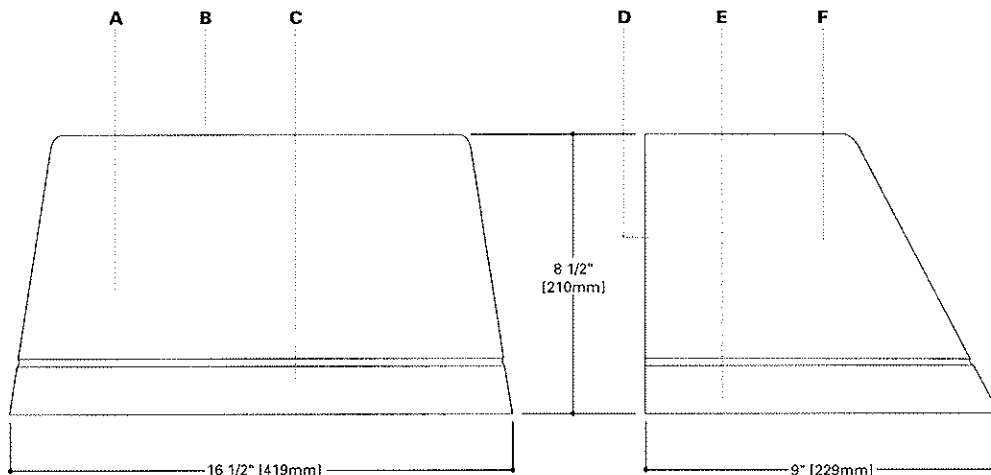
26W PL HPF (29 Watts)
32W PL HPF (36 Watts)
42W PL HPF (46 Watts)
52W PL HPF (55 Watts)

SHIPPING DATA

Approximate Net Weight:
18 lbs. (8 kgs.)



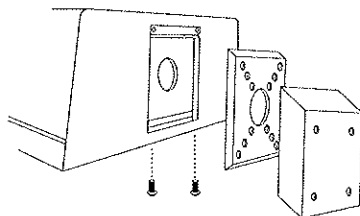
ADH060603
04/28/2008 1:16:54 PM

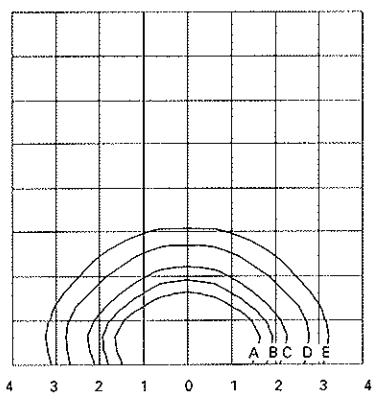


In downlight applications only.

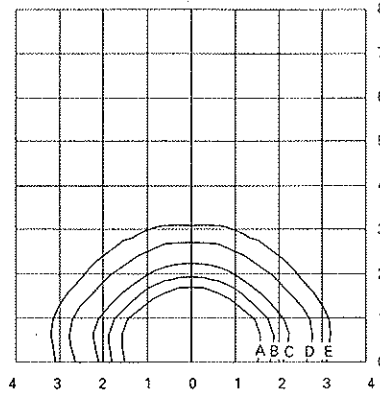
HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)





MHIP-T-175-MT-LL
175-Watt MH
14,000-Lumen Clear Lamp



HPIP-T-150-MT-LL
150-Watt HPS
16,000-Lumen Clear Lamp

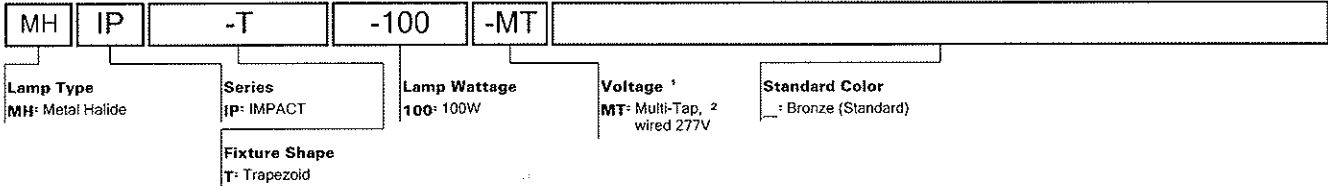
Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
10'	4.50	2.25	1.13	0.45	0.23
15'	2.00	1.00	0.50	0.20	0.10
20'	1.12	0.56	0.28	0.11	0.06

ORDERING INFORMATION

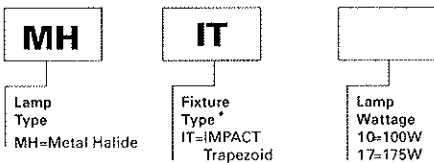
MHIP-T-100-MT



- Notes: 1 Products also available in non-US voltages and 50HZ for international markets.
 2 Multi-Tap ballast 120/208/240/277V wired 277V.
 3 Add as suffix in the order shown.

STOCK SAMPLE NUMBER (Lamp Included)

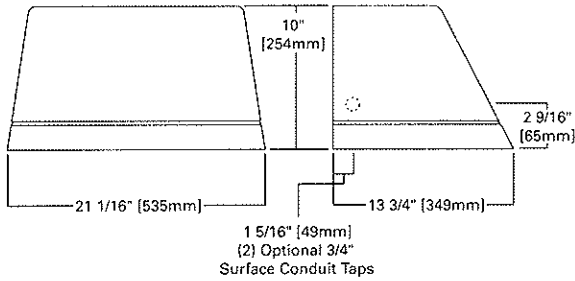
SAMPLE NUMBER: MHIT17



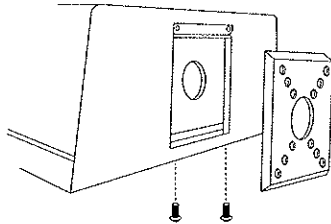
NOTES: Options not available with stock products. Order Accessories as separate items for field installation. Refer to standard ordering information to add options and accessories.
 * Painted bronze. Supplied with lamp and Multi-Tap HPF ballast wired 277V.

COOPER LIGHTING - LUMARK®

DIMENSIONS



HOOK-N-LOCK MOUNTING (Mounting attachment included. J-Box not included.)



PRELIMINARY
Consult www.lumark-lighting.com
For updated specifications.

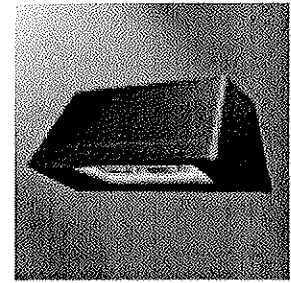
DESCRIPTION

The IMPACT Trapezoid full cutoff wall luminaire makes an ideal complement to site design. U.L. Listed and CSA Certified for wet locations in down mount applications and damp locations in up mounted applications.

Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities.



NOTE: in down light applications only.



IPTM IMPACT TRAPEZOID MEDIUM

1 7 5 - 4 0 0 W

High Pressure Sodium
Metal Halide

1 1 4 - 1 7 0 W

Compact Fluorescent

FULL CUTOFF

WALL MOUNT LUMINAIRE

ORDERING INFORMATION

SAMPLE NUMBER: MHIP-TM-400-4-MT-LL

Lamp Type ¹	Fixture Type	Fixture Shape	Lamp Wattage ²	Distribution	Voltage ⁴	Options & Accessories
MP=Pulse Start Metal Halide MH=Metal Halide HP=High Pressure Sodium PL=Compact Fluorescent	IP=Impact	TM=Trapezoid Medium	HID 175=175W 200=200W 250=250W 320=320W 350=350W 400=400W Compact Fluorescent 114=(2) 57W 121=(1) 120W ³ 122=(2) 60W 126=(3) 42W 140=(2) 70W 170=(2) 85W	HID 3=Type III 4=Type IV Compact Fluorescent 2=Type II ⁴ 4=Type IV ⁵	120V 208V 240V 277V 347V 480V DT=Dual-Tap ⁷ MT=Multi-Tap ⁸ TT=Triple-Tap ⁹ E=Electronic Ballast ¹⁰	(See Below)

Options¹¹

F1=Single Fuse (120, 277 or 347V)—Must Specify Voltage
F2=Double Fused (208 or 240V)—Must Specify Voltage
TR=Tamper Resistant Screw (Door and Mounting Plate)
PE=Button Photocontrol (Must Specify Voltage)
UPL10=10% Uplight
UPL50=50% Uplight
LL=Lamp Included (Must Specify Wattage on PL)¹²
BK=Black
WH=White
SC=Surface Conduit Taps (2) 3/4" NPSM
Q=Quartz Restrike T4 Lamp^{13, 14, 15, 16, 17}
EM=Emergency Quartz Restrike T4 Lamp With Time Delay Relay^{13, 14, 15, 16, 17}
EMCWB-XXX=CFL Cold Weather Emergency Battery Pack (Must Specify 120 or 277V)^{18, 19}
CF/EM-XXX=Emergency Battery Pack (Must Specify 120 or 277V)^{18, 19}
QMR=Quartz Restrike MR16 Lamp^{15, 16, 17, 20}
EMMR=Emergency Quartz Restrike MR16 Lamp With Time Delay Relay^{15, 16, 17, 20}
EM/SC=Emergency Separate Circuit T4 Lamp^{14, 15, 21}
EM/SC/MR=Emergency Separate Circuit MR16 Lamp^{20, 21}
EM/SC/12V=Emergency Separate Circuit (12V)²²
2QMR=(2) Quartz Restrike MR16 Lamps^{15, 16, 17, 20}
2EMMR=(2) Emergency Quartz Restrike MR16 Lamps With Time Delay Relay^{15, 16, 17, 20}
2EM/SC/MR=(2) Emergency Separate Circuit MR16 Lamps^{20, 21}
2EM/SC/12V=(2) Emergency Separate Circuit MR16 Lamps (12V)²²
2QMR/SC=(1) Quartz Restrike MR16 Lamp and (1) Emergency Separate Circuit MR16 Lamp^{15, 16, 17, 20, 21}
2EMMR/SC=(1) Emergency Quartz Restrike MR16 Lamp with Time Delay Relay and (1) Emergency Separate Circuit MR16 Lamp^{15, 16, 17, 20, 21}

Accessories²³

WG/ITM=Wire Guard Trapezoid Medium (Painted Bronze)
VS/ITM=Vandal Shield Trapezoid Medium (External Polycarbonate Shield)

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	250, 400W
Compact Fluorescent	(2) 57, (2) 60, (1) 120, (3) 42, (2) 70, (2) 85W

NOTES: 1 Lamp type not available in all wattages. See wattage table. 2 All HID Metal Halide lamps are mogul-base, reduced envelope ED-28 except 200W Pulse Start Metal Halide is T15, all enclosed rated. All HID High Pressure Sodium lamps are mogul-base ED-18. 3 Available in Type IV distribution only. Used with forward throw optic. 4 Not available with (1) 120W lamp. 5 Available with (1) 120W Compact Fluorescent lamp only. 6 Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Lighting Representative for availability and ordering information. 7 Dual-Tap ballast are 120/277V wired 277V. 8 Multi-Tap ballast are 120/208/240/277V wired 277V. 9 Triple-Tap ballast are 120/277/347V wired 347V. 10 Supplied with 120V through 277V 50/60Hz for Compact Fluorescent. 11 Add as suffix in the order shown. 12 Lamp is Cooper designated product based on luminaire requirements. Specified lamps must be ordered as a separate line item. 13 The power might need to cycle and allow HID lamp to cool in warm climates. 14 Use with T4 double contact DC bayonet base, 100W maximum, 120V halogen lamp by others. 15 Lamps wired to quartz restrike relay. 16 Not available with CFL. 17 Not available with uplight. 18 CF lamps only, rated for minimum temperature of 0°F (-18°C). 70W CFL maximum. 19 CF lamps only, rated for minimum temperature of 32°F (0°C). 70W CFL maximum. 20 For use with MR16, GU10 base, 50W maximum, 120V halogen lamp by others. 21 Leads run out back for connection to auxiliary 120V circuit. 22 Supplied with 12V Bi-pin socket for connection to emergency battery pack (supplied by others). For use with MR16, GU5.3 base, 35W maximum, 12V halogen lamp by others. 23 Order separately. 24 Consult your Cooper Lighting Representative for availability and ordering information. 25 Specifications and dimensions subject to change without notice.

- Two-piece die-cast aluminum housing
- Rigid steel mounting attachment anchored directly to wall over 4" J-Box with "Hook-N-Lock" mechanism for quick installation
- HID luminaires supplied with high power factor ballast with Class H insulation. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MH. Compact Fluorescent luminaires feature electronic, high efficient multi-voltage 50/60Hz ballast with -18°C (0°F) minimum starting
- Die-cast door features 1/8" heat- and impact-resistant clear tempered glass lens. Hinged removable door secured in place via two (2) captive fasteners
- Durable polyester powder coat finish. Standard color is bronze. Other finish colors available
- U.L. listed for wet locations. CSA certified
- Approximate net weight: 42 lbs. (19 kgs.)



FEATURES & SPECIFICATIONS

INTENDED USE

Outdoor storage areas, warehouse and factory perimeters and loading docks.

CONSTRUCTION

Rugged, corrosion-resistant, die-cast aluminum. Corrosion-resistant external hardware includes slotted hex-head fasteners.

FINISH

Standard finish is electrostatically-applied, oven-cured, dark bronze (DOB) corrosion-resistant polyester powder paint.

OPTICAL SYSTEM

Reflector is specular anodized aluminum. Refractor is prismatic borosilicate glass which is sealed and gasketed to inhibit the entrance of outside contaminants.

ELECTRICAL SYSTEM

Electrical components are mounted in hinged front cover that includes primary and secondary electrical disconnect.

Ballast: High reactance, high power factor for 35W and 70-150W. Constant wattage autotransformer for 175-400W. Metal halide 150W and below are standard with pulse-start ignitor technology; super CWA pulse-start ballast required for 200W, 320W and 350W (SCWA option). Ballast is copper-wound and 100% factory-tested.

Socket: Porcelain, horizontally oriented, single-ended bayonet base socket for 35W low pressure sodium; medium base socket for 70-150W; and mogul base socket for 175W and above, with copper alloy, nickel-plated screw shell and center contact. UL listed 1500W, 600V.

INSTALLATION

Back housing is separated from front housing, eliminating ballast weight and promoting easy handling. Top 3/4" threaded wiring access. Back access through removable 3/4" knock-out. Feed-thru wiring can be achieved by using a conduit tee. Mount on any vertical surface. **Not recommended in applications where a sprayed stream of water can come in direct contact with glass lens.**

LISTING

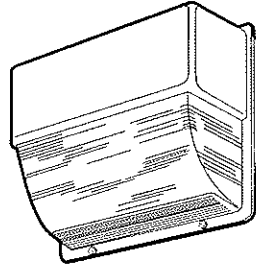
UL Listed (standard). CSA or NDM Certified (see Options). UL listed for 25°C ambient and suitable for wet locations. IP65 rated (250 watt and below) or IP54 rated (400 watt) in accordance with IEC Standard 529.

Specifications subject to change without notice.

Catalog Number		TWH-400M-TB-LPI	
Notes		Type OD	

Wall-Packs

TWH



METAL HALIDE

70W -- 400W

HIGH PRESSURE SODIUM

70W -- 400W

LOW PRESSURE SODIUM

35W

8' to 25' Mounting

Specifications

Height: 15-3/4" (40cm)

Width: 16-1/4" (42.6cm)

Depth: 8" (20.3cm)

*Weight: 29.95 (13.59kg)

*Weight as configured in example below.

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: TWH 175M TB LPI

TWH	400M	TB	Ballast	Options	Finish ¹⁶	LPI
Series		Voltage				Lamp ¹⁸
TWH		120	(blank) Magnetic ballast	Shipped installed in fixture	(blank) Dark bronze	LPI Lamp included
Wattage		208 ⁷	CWI Constant wattage isolated	SF Single fuse (120, 277, 347V) ¹¹	DNA Natural aluminum	L/LP Less lamp
<u>Low pressure sodium</u> ^{1,2}	<u>Metal halide</u>	240 ⁷		DF Double fuse (208, 240, 480V) ¹¹	DBL Black	
35L	70M ^{1,2,4}	277	Pulse Start	EC Emergency circuit ¹²	DMB Medium bronze	
<u>High pressure sodium</u> ¹	100M ¹	347	SCWA Super CWA ballast	QRS Quartz restrike system ¹²	DWH White	
70S ²	150M ²	480 ⁷	NOTE: SCWA ballast must be selected to comply with California Title 20 metal halide regulations. SCWA may also be required to meet other states' regulations. Consult local authorities.	QRSTD Quartz restrike with time delay ^{10,12}	CR Enhanced corrosion resistance	
100S	175M ³	TB ⁸		PE Photoelectric cell - button type ^{4,11,13}	CRT Non-stick protective coating ¹⁷	
150S^{2,3}	200M ⁵	TBV ⁹		PER NEMA twist-lock receptacle ¹⁴		
200S	250M	23050HZ ¹⁰		FS Full shield		
250S	320M ⁵			TP Tamper proof screws		
400S	350M ⁵			CSA Listed and labeled to comply with Canadian Standards		
	400M⁶			NOM NOM Certified (consult factory)		
				Shipped separately¹⁵		
				PE1 NEMA twist-lock photocontrol (120V/208V/240V)		
				PE3 NEMA twist-lock photocontrol (347V)		
				PE4 NEMA twist-lock photocontrol (480V)		
				PE7 NEMA twist-lock photocontrol (277V)		
				SC Shorting cap for PER option		
				VG Vandal guard		
				WG Wireguard		

NOTES:

- Not available with SCWA.
- Not available with five-tap ballast.
- Operates 55V lamp.
- Not available with 480V.
- Must be ordered with SCWA.
- Requires T-15, ED or BT28 reduced jacket lamp.
- Must specify CWI for use in Canada.
- Optional multi-tap ballast (120, 208, 240, 277V); in Canada (120, 277, 347V).
- Optional five-tap ballast (120, 208, 240, 277, 480V).
- Consult factory for available wattages.
- Must specify voltage. Not available with TB or TBV.
- Max allowable wattage lamp included.
- Not available with 347V.
- Photocell not included.
- May be ordered as an accessory.
- See www.lithonia.com/archcolors for additional color options.
- Black finish only.
- Must be specified.
- Requires field modification when ordered as an accessory.

Accessories

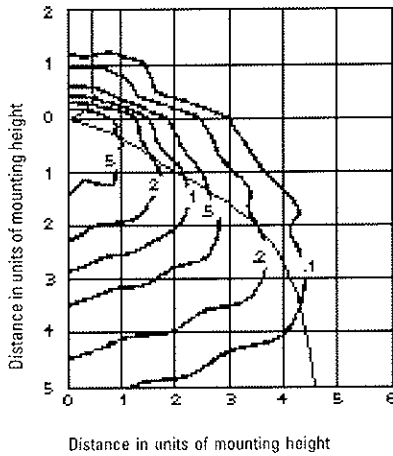
Order as separate catalog number.
TWHVG Vandal guard¹⁹
TWHWG Wire guard¹⁹

TWH Metal Halide Wall-Packs

Coefficient of Utilization _____
 Initial Footcandles _____

TWH 175M Test report no. 94121101

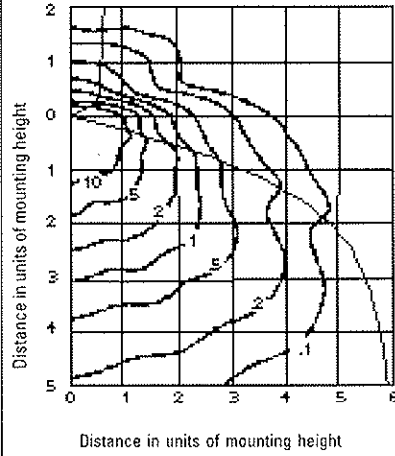
Coefficients of utilization



175W, metal halide lamp, horizontal lamp orientation, 12' mounting height, 14,000 rated lumens. Total fixture efficiency: 60.6%

TWH 250M Test report no. 95011902

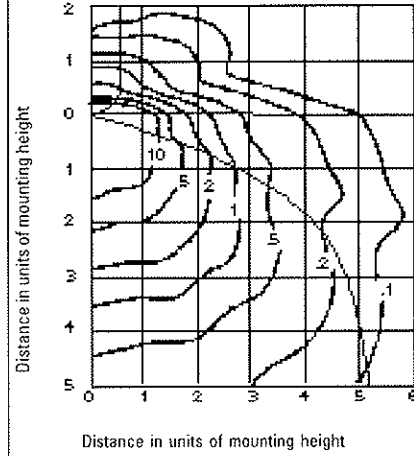
Coefficients of utilization



250W, metal halide lamp, horizontal lamp orientation, 12' mounting height, 20,500 rated lumens. Total fixture efficiency: 76.9%

TWH 400M Test report no. 94121102

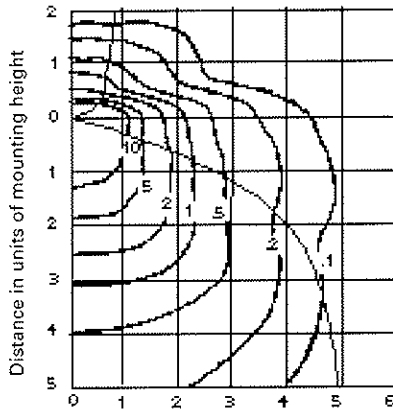
Coefficients of utilization



400W, metal halide, E-18 lamp, horizontal lamp orientation, 12' mounting height, 36,000 rated lumens. Total fixture efficiency: 70%

TWH 250S Test report no. 94121002

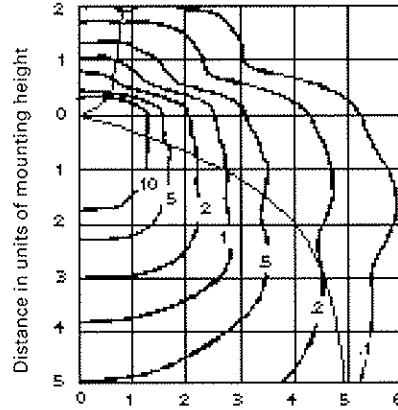
Coefficients of utilization



250W, high pressure sodium lamp, horizontal lamp orientation, 12' mounting height, 27,500 rated lumens. Total fixture efficiency: 70.9%

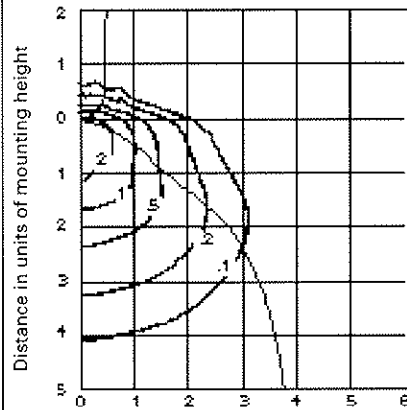
TWH 400S Test report no. 94121001

Coefficients of utilization



400W, high pressure sodium lamp, horizontal lamp orientation, 12' mounting height, 50,000 rated lumens. Total fixture efficiency: 70.9%

TWH 35L Test report no. 94121902



35W, low pressure sodium lamp, horizontal lamp orientation, 12' mounting height, 4,800 rated lumens. Total fixture efficiency: 54.6%

Mounting Height Correction Factor

(Multiply the fc level by the correction factor)

15 ft. = .64

20 ft. = .36

25 ft. = .23

$$\left(\frac{\text{Existing Mounting Height}}{\text{New Mounting Height}} \right)^2 = \text{Correction Factor}$$

NOTES:
 1 Photometric data for other distributions can be accessed from the Lithonia Lighting Web site. (www.lithonia.com)

