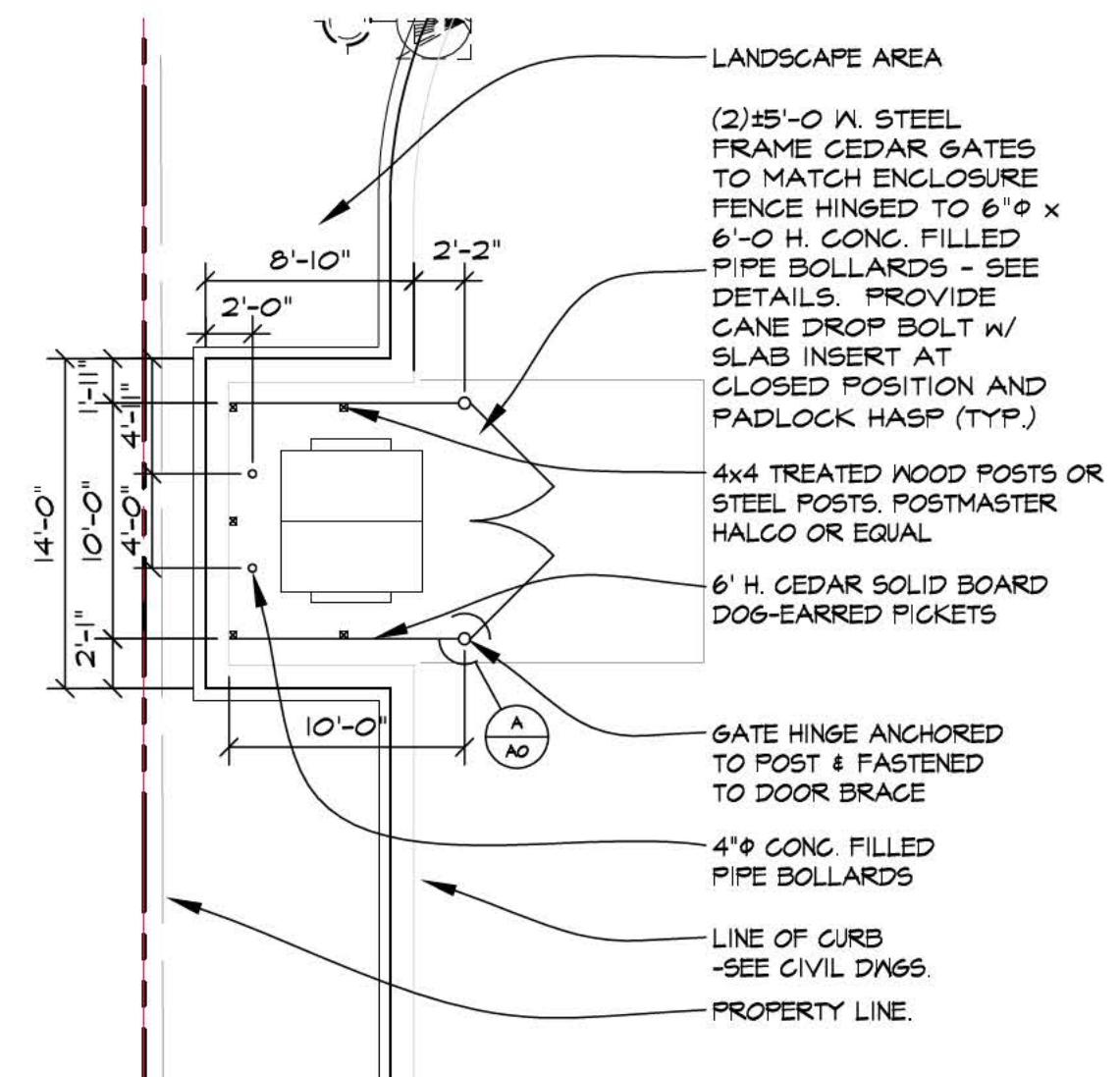
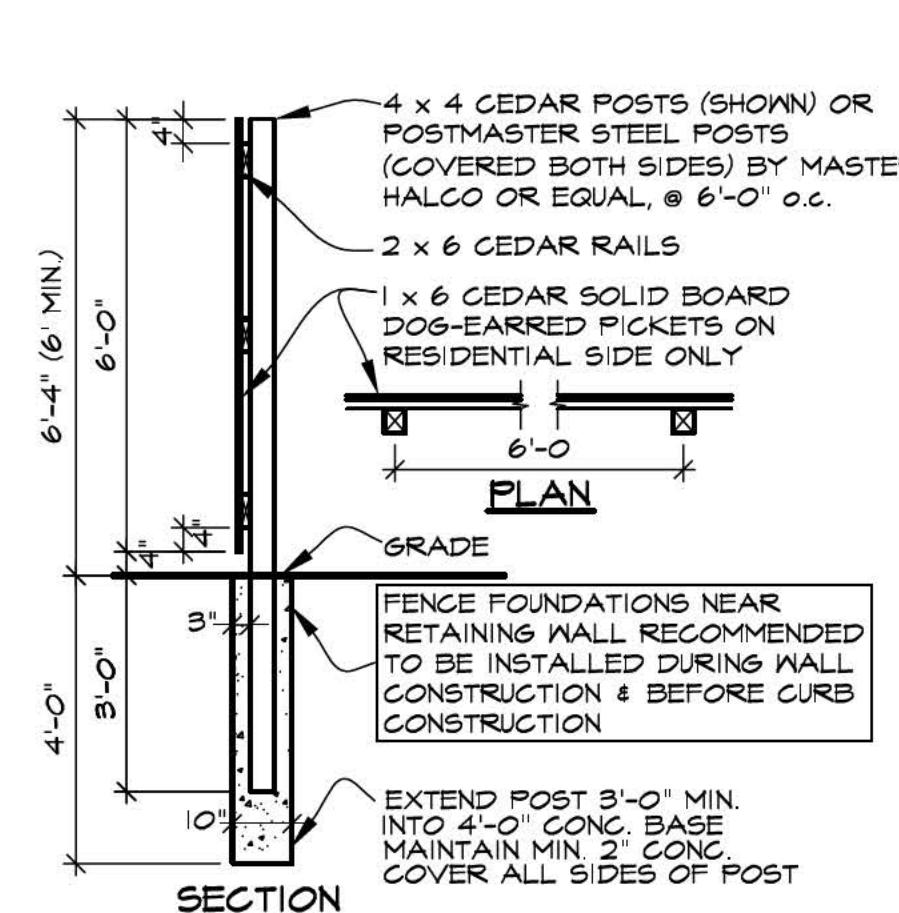


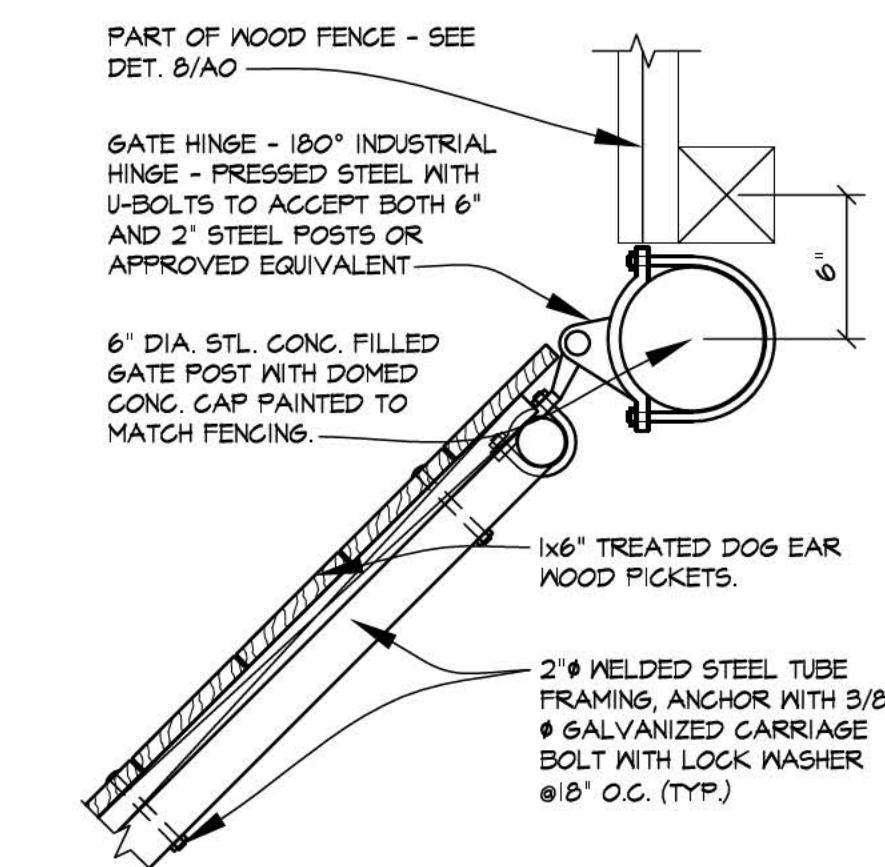
**TRANSFORMER PAD DETAIL** 5 **TRASH ENCLOSURE PLAN**  
SCALE: 1/8" = 1'-0"



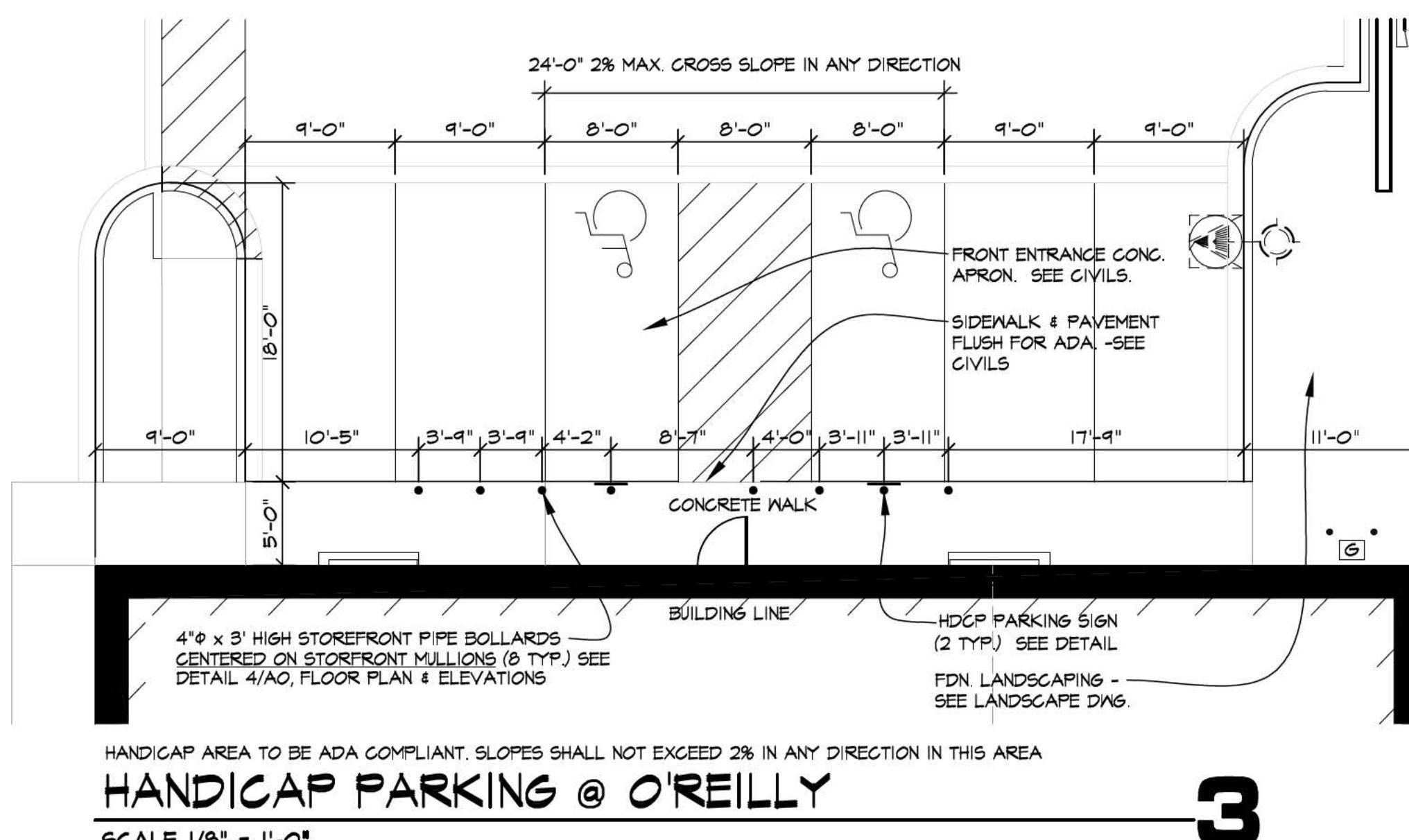
**NOT USED**  
SCALE: 1" = 1'-0"



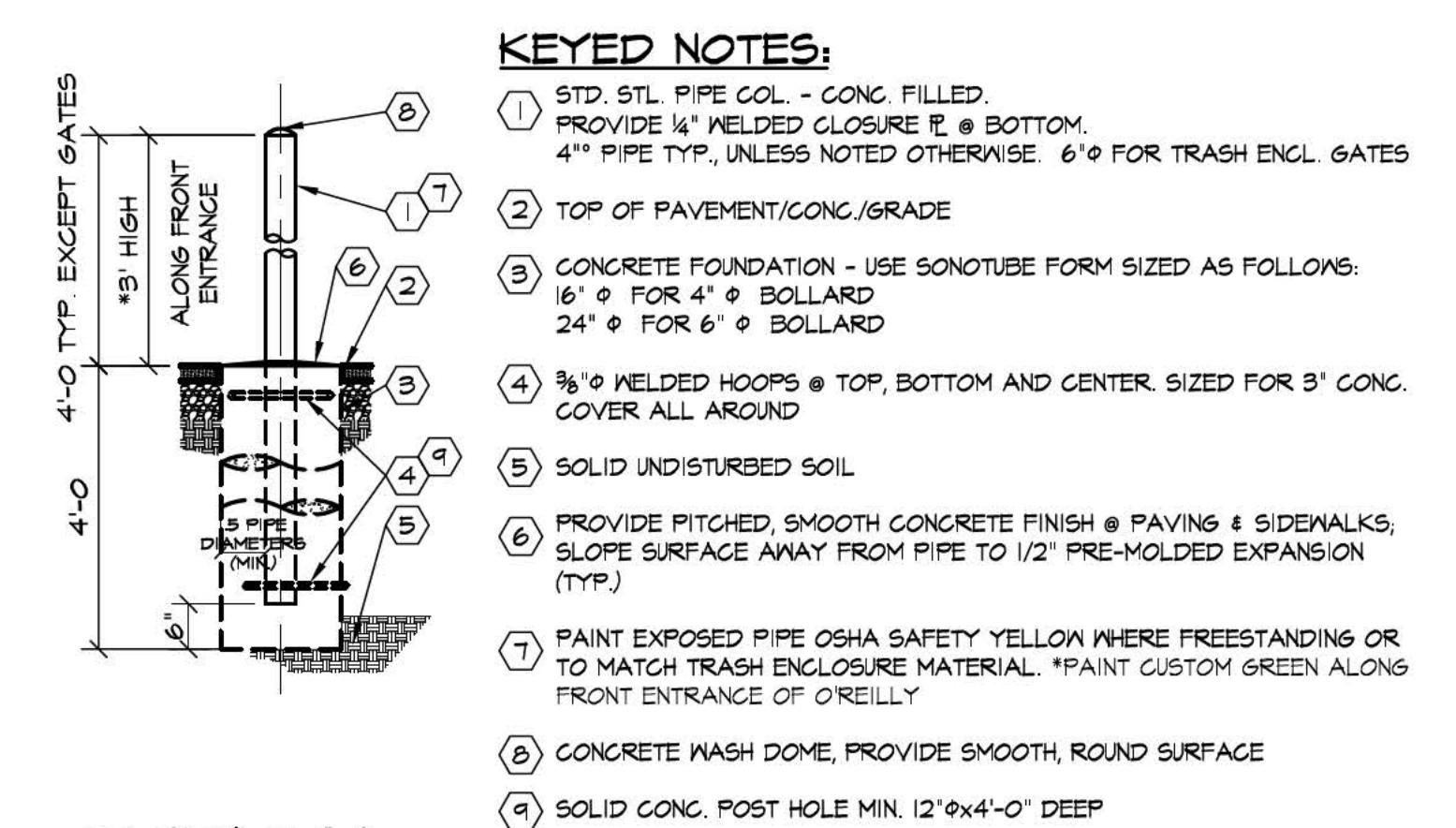
**TRASH ENCLSR. FENCE DETAIL** 7 **SECTION @ TRASH GATE POST**  
SCALE: 3/8" = 1'-0"



**A**



**3**

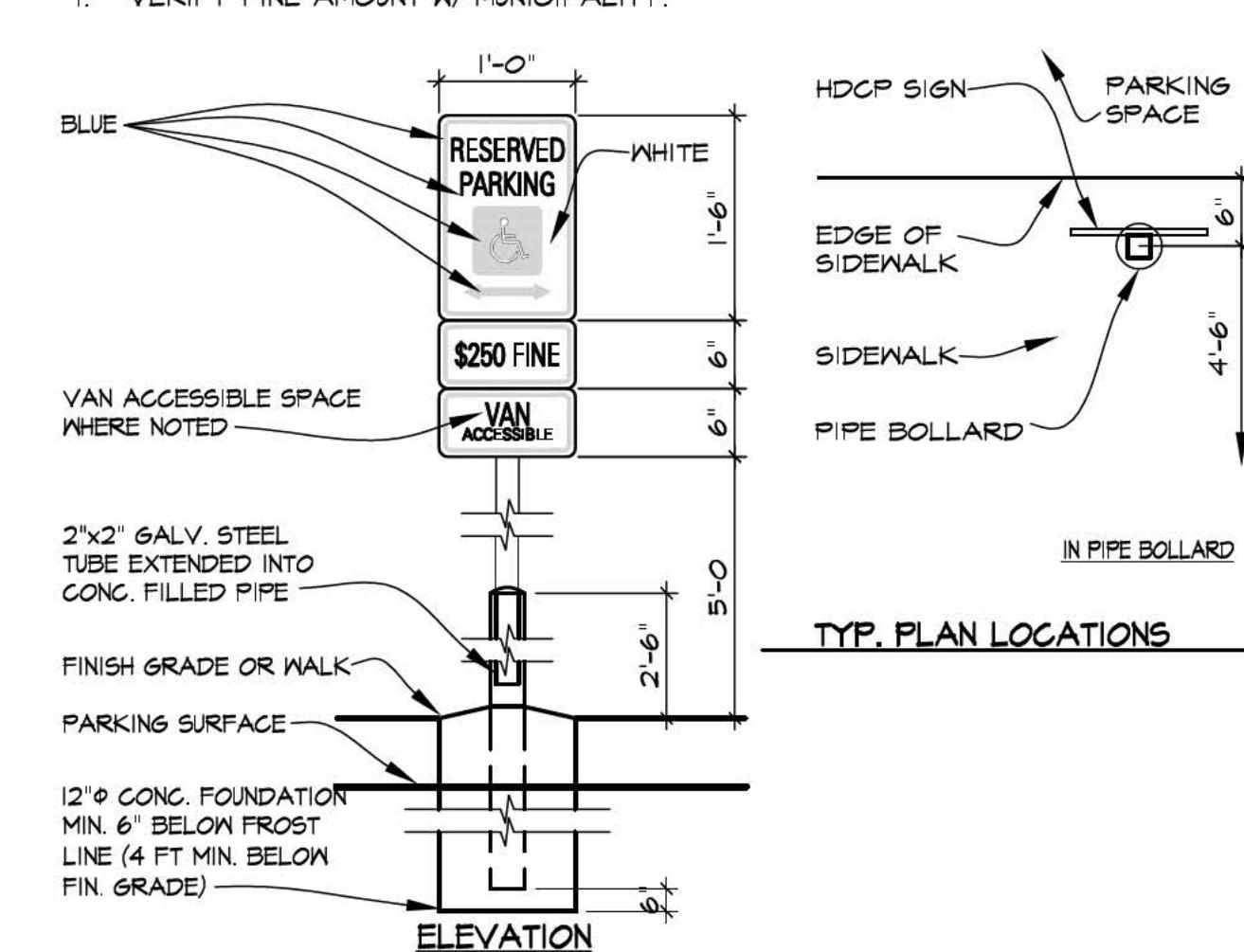


**TYPICAL PIPE BUMPER GUARDS** 4  
SCALE: 1/2" = 1'-0"

**HANDICAPPED PARKING SIGN**  
Each parking space designated as reserved for environmentally limited persons shall be equipped with a sign which complies with Section 464 Signage of the Federal Register (Department of Justice Rules and Regulations, 28 CFR Part 36) and meets the requirements of Sign RT-8 (U.S. Department of Transportation Standard). At least one of such required signs shall have an additional sign "Van - Accessible" mounted below the symbol of accessibility. Signs shall be located on post within 5' of parking stall w/ bottom of 18" sign @ 6'-0" above top of pvtnt.

Provide a 6"x12" fine sign which complies with all applicable codes to be mounted directly below each handicapped parking sign. Verify fine amount with local authority.

**NOTE:**  
1. VERIFY FINE AMOUNT w/ MUNICIPALITY.



**HDCP. PARKING SIGN**  
SCALE: 3/4" = 1'-0"

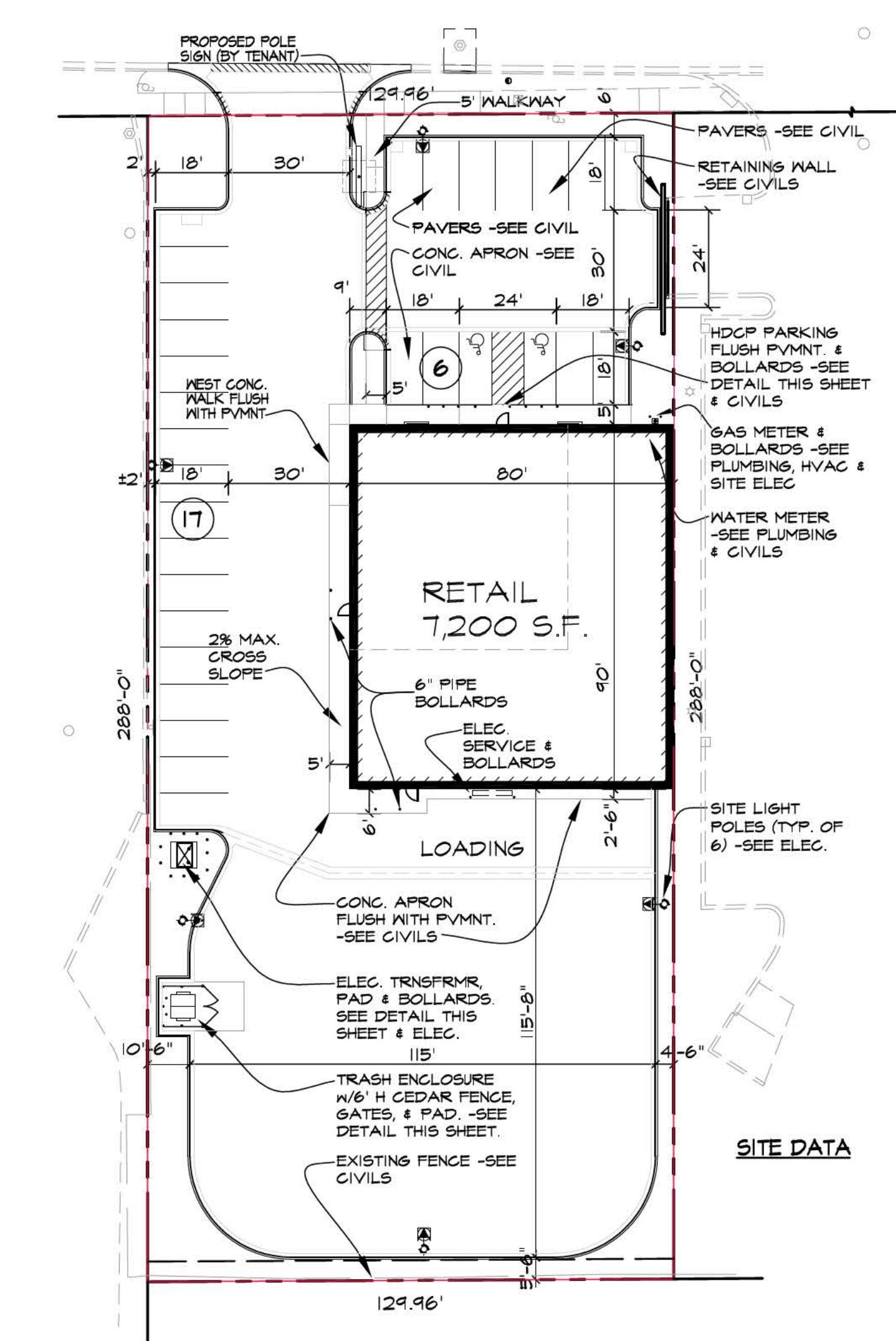


**POLE SIGN ELEVATION**  
SCALE: 1/4" = 1'-0"

**1**

ZONING DISTRICT: BUSINESS DISTRICT LIMITED RETAIL  
31429 SF.  
3200 SF.  
24 CARS (1 CAR/250)  
30

E. SIBLEY BLVD. (IL ROUTE 83)



**SITE PLAN**  
SCALE: 1" = 30'-0"

**O'REILLY AUTO PARTS**  
DOLTON PLAZA  
1317 E. SIBLEY BLVD. DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

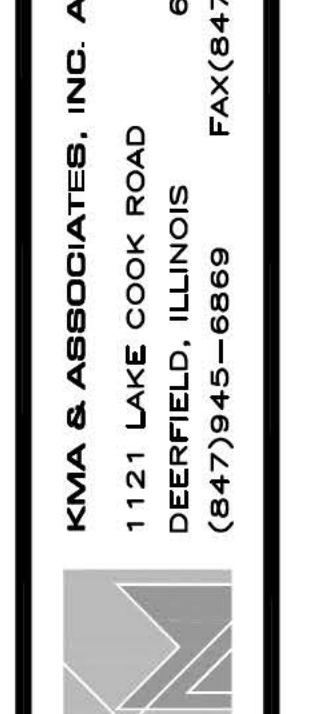
**SHEET TITLE**  
SPECIFIC SITE NOTES  
DETAILS &

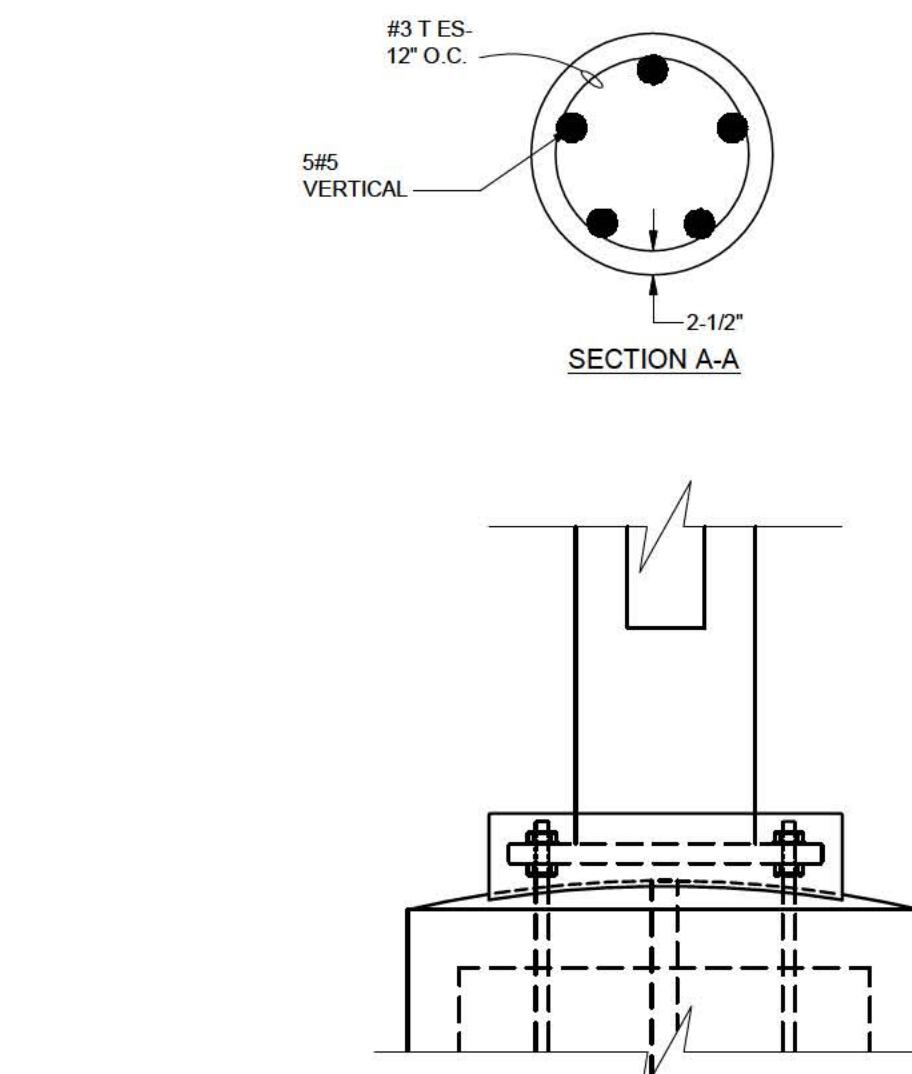
**1906**

**A**  
**O**

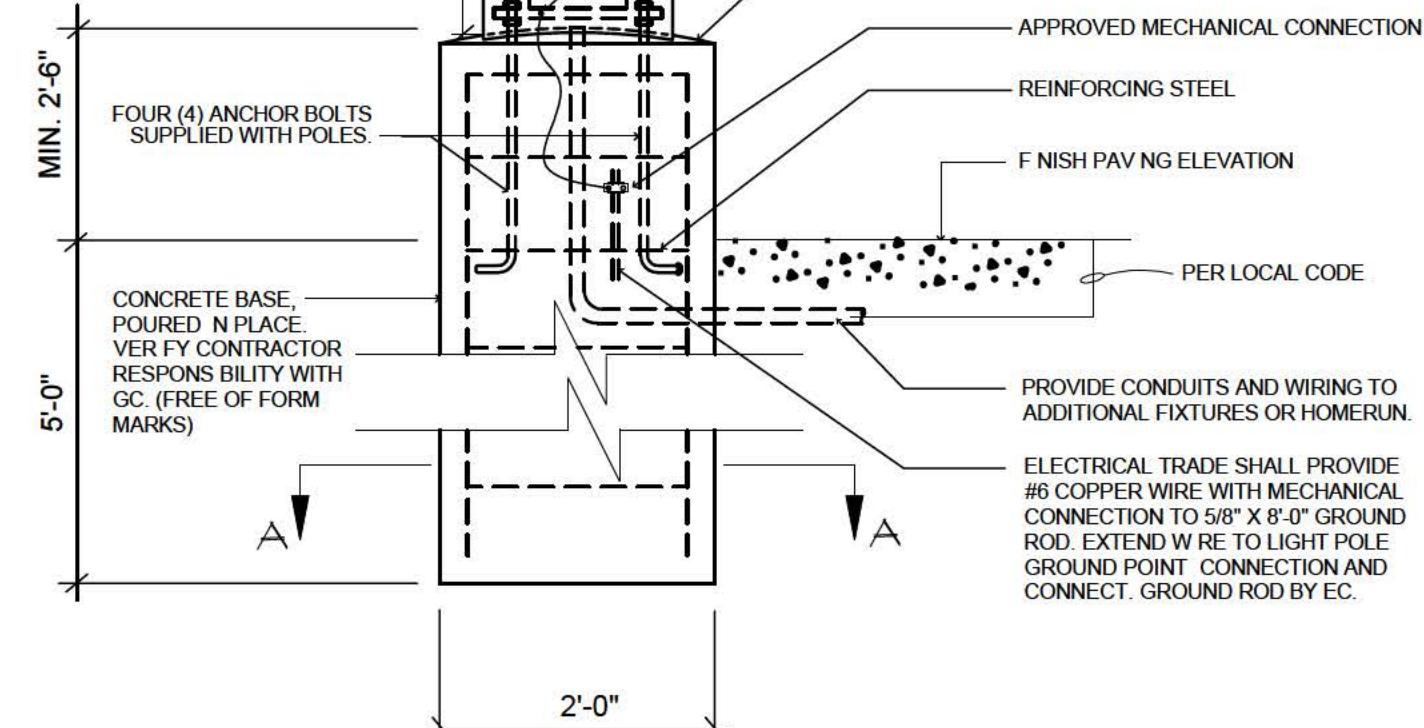
REVISIONS	
7-H18 DRAWING	NOT FOR CONSTRUCTION
	FOR BIDDING
	FOR CONTRACTING
	NOT FOR CONSTRUCTION
	NOT FOR CONSTRUCTION

KMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
60015-5235  
FAX(847)945-6869





ENLARGED CROWN DETAIL



LIGHTING STANDARD ELEVATION

SCALE: NONE

SITE NOTE:  
ELECTRICAL TRADE SHALL COORDINATE  
THE INSTALLATION OF ALL NEW SITE & EXISTING  
WORK WITH CIVIL DRAWINGS AND PER  
APPROVAL OF POWER ENTRY DIAGRAM

#### GENERAL NOTES:

A. FOR UTILITY TRANSFORMER, TELEPHONE SERVICE, GAS, WATER, AND SANITARY SEWER LOCATIONS REFER TO CIVIL PLANS.

B. ALL ELECTRICAL WIRING SHOWN ON THIS SHEET TO BE FED WITH #10 CU. MINIMUM U.O. VERIFY ACTUAL LENGTH WITH LOCAL CODE #10 CU.

C. ALL PVC CONDUIT MUST HAVE A MINIMUM OF #12 CU. GROUND CONDUCTOR.

D. ALL UNDERGROUND CONDUIT ROUTING, SIZES AND QUANTITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO COORDINATE EXACT REQUIREMENTS WITH THE SERVING UTILITY COMPANIES.

E. ALL CONDUIT EXTENDED UNDER DRIVEWAYS OR AREAS OF VEHICULAR USAGE SHALL BE GALVANIZED HEAVY WALL STEEL CONDUIT OR SCHEDULE 80 PVC NONMETALLIC CONDUIT, MINIMUM OF 36" BELOW GRADE OR PER UTILITY STANDARDS.

ALL CONDUITS IN CONCRETE OR DIRECT BURIAL THAT ARE RIGID PVC TYPE, MUST HAVE COMPRESSION CONNECTORS AND COUPLING FOR ALL OUTDOOR CONDUITS.

CONSTRUCTION NOTE:  
A METAL IDENTIFICATION TAG SHALL BE INSTALLED WHERE THE GROUNDED CONDUCTOR IS CONNECTED TO THE GROUNDING ELECTRODE WITH A APPROVED GROUND STRAP. ALL GROUNDING ELECTRIC CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING, RIGID HEAVY WALL CONDUIT, TYPICAL.

#### KEYED NOTES:

1. 1-1/4" PRIMARY CONDUIT TO POWER COMPANY POINT OF PRESENCE TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE UNDERGROUND CONDUIT INSTALLATION, PER UTILITY STANDARD WITH NYLON PULL-STRNG. REFER TO ONE-LINE DIAGRAM. POWER COMPANY PRIMARY SERVICE, EXTEND CONDUIT TO NEW PAD MOUNTED TRANSFORMER T1 AND TERM NATE AS PER STANDARDS. REFER TO POWER ENTRANCE DIAGRAM FOR ADDITIONAL REQUIREMENTS. ELECTRICAL CONTRACTOR COORDINATE WITH POWER COMPANY ENGINEER FOR EXACT LOCATION AND FINAL CONNECTIONS. CONDUIT TO BE INSTALLED 36" BELOW FINISHED GRADE. CONDUITS TO BE Routed TO NEAREST ATT.

2. PROPOSED LOCATION D-MARK MOUNTED POWER COMPANY LINE, REFER TO ONE-LINE. PROVIDED CONDUIT TO PAD AND GROUND NYLON PULL-STRNG. LOCATION PER POWER COMPANY REQUIREMENTS. MAINTAIN 10'-0" FRONT CLEARANCE, 5'-0" CLEARANCE ON SIDES. INSTALLATION TO BE LOCALLY APPROVED. ELECTRICAL SHALL PROVIDE SECONDARY SIDE CONNECTION TO TRANSFORMER. PROVIDE PROPER GROUNDING PER POWER COMPANY REQUIREMENTS. SEE APPROVED TRANSFORMER PAD SPECIFICATIONS PROVIDED BY POWER COMPANY. PROVIDE PROTECTIVE BALLARDS PER COMED STANDARDS.

3. ALL ASSOCIATED CONDUIT BENDS AT TRANSFORMER PAD FOR POWER COMPANY PRIMARY CABLES SHALL BE 4" Dia., 90 DEGREES, 30' MINIMUM RADIUS. HOT GALVANIZED STEEL BENDS WITH GROUND BUSHINGS. TERMINATE PRIMARY AND SECONDARY CONDUITS FLUSH WITH TOP OF FOUNDATION. TOP OF FOUNDATION SHALL BE LEVEL.

4. SECONDARY CONDUIT AND FEEDER, REFER TO ONE-LINE DIAGRAM.

5. SERVICE ENTRANCE SECTION IN NEMA 3R ENCLOSURE. COORDINATE EXACT LOCATION WITH ARCHITECT, OWNER AND POWER COMPANY ENGINEER. MAINTAIN 3'-0" CLEARANCE IN FRONT OF SERVICE. REFER TO ONE-LINE DIAGRAM.

6. EXTERIOR RATED FOR SERVICE ENTRY A 120/208V, 3PH, 4W, 400A MAIN DISCONNECT ASSEMBLY WITH ASSOCIATED C/T CAB NET AND 400A MAIN DISCONNECT. REFER TO ONE-LINE DIAGRAM.

7. FURNISH AND INSTALL WALL MOUNTED LIGHTING FIXTURES AT 16'-6" ABOVE GRADE. REFER TO ARCHITECTURAL PANS FOR ELEVATIONS. PROVIDE 2x12' W/ FULL SIZE GROUND TO PANEL MP23. REFER TO BUILD-OUT PLANS FOR ADDITIONAL INFORMATION.

8. PROVIDE WP BOX FOR SITE LIGHTING FIXTURE. COORDINATE EXACT REQUIREMENTS WITH APPROVED VENDOR. EC SHALL FURNISH AND COORDINATE THE INSTALLATION OF THE BASE WITH ALL UNDERGROUND CONDUITS AND ADJUST AS REQUIRED.

9. EXISTING LOCATION OF UTILITY POLE POINT OF SERVICE. COORDINATE FINAL INSTALLATION WITH CIVIL UNDERGROUND UTILITIES AND MAINTAIN PROPER CLEARANCE. EC SHALL EXTEND NEW CONDUITS TO POLE LOCATION AND STUB UP WITH NYLON PULL STRINGS.

10. PROPOSED LOCATION FOR INTERIOR 24'x20' ATT TELEPHONE MAIN TERMINAL D-MARK BOX LOCATION. COORDINATE LOCATION AND INSTALLATION REQUIREMENTS WITH ATT ENGINEER FOR ADDITIONAL WORK REQUIRED BY ELECTRICAL CONTRACTOR. EC SHALL PROVIDE REQUIRED ATT GROUND WIRE.

#### INSTALLATION NOTES:

1. ELECTRICAL FACILITIES SHALL BE INSTALLED PURSUANT TO SECTION OF THE CITY MUNICIPAL CODE. CONSTRUCTION FEE TO BE PAID BY THE LANDLORD.

2. A MINIMUM 5'-0" OF SEPARATION BETWEEN ELECTRICAL FACILITIES AND ANY FIRE HYDRANT, STORM DRAINS, STORM SEWERS, WATER MAINS, GAS MAINS, ETC.

3. ELECTRICAL CONTRACTOR SHALL PROVIDE PVC CONDUITS FOR GROUND MONUMENT SIGNS AND LOT LIGHTING. APPROVAL OF PVC USAGE SHALL BE CONFIRMED WITH THE LOCAL OFFICIAL AND INSPECTORS DURING BIDDING. HW CONDUITS TO BE STUBBED UP TO EXIT OR ENTER J-BOXES. PROVIDE MINIMUM #12 CU GROUND IN ALL PVC PIPING.

4. ELECTRICAL CONTRACTOR SHALL PROVIDE AS PART OF THE BASE B-D, VERIFICATION OF ALL SITE UTILITIES. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND LOCATE THE EXISTING UTILITY COMPANY POWER SOURCE AND TELEPHONE. EXTEND UTILITY TO NEW EXTERIOR BU LD NG METER SYSTEM.

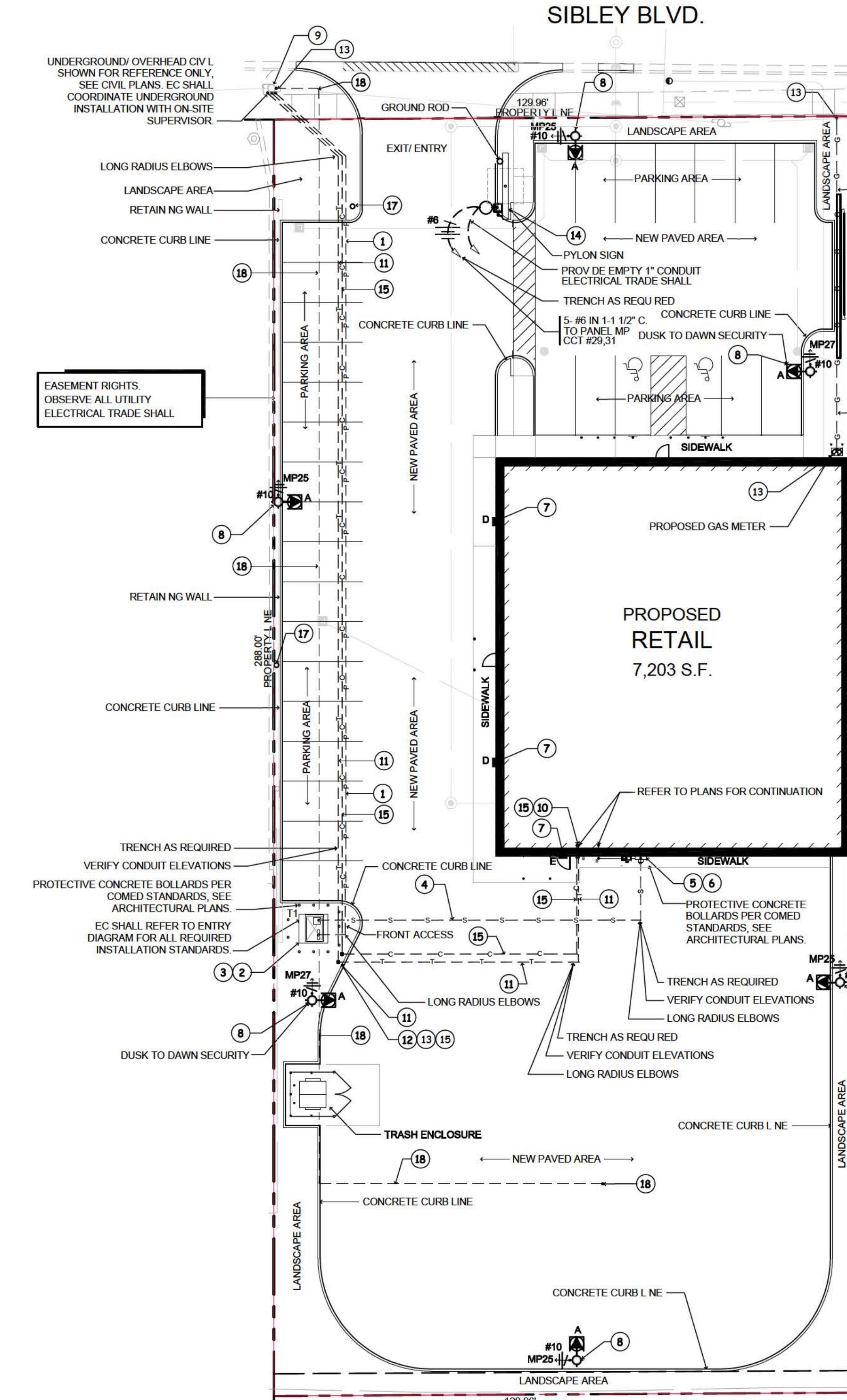
5. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH LOCAL CITY OFFICIALS, THE BUILDING OWNER, COMED, TELEPHONE AND CABLE SERVICES FOR ANY EXISTING SERVICE RENOVATIONS REQUIRED HEREIN. BEFORE RENOVATION, NOTIFICATION SHALL BE GIVEN TO INSPECTORS.

6. EC SHALL FURNISH AND INSTALL ALL CONCRETE POLE BASES AS NOTED.

7. ALL POLES AND LIGHTING HEADS SHALL HAVE A SMOOTH FINISH.

8. EC SHALL PROVIDE ALL REQUIRED LIGHTING POLES AS MANUFACTURED BY LSI INDUSTRIES. POLE SHALL BE 5" SQUARE STRAIGHT STEEL, 25'-0" IN HEIGHT, #5SQB3-S11G-25-S-BRZ-LAB-5BC WARM MOUNT AS PER MFGR.

9. FINAL SITE LIGHTING FIXTURE/POLE LAYOUTS AND CONFIGURATIONS SHALL BE COORDINATED WITH LOCAL EXTERIOR LIGHTING AND WIND LOAD REQUIREMENTS AND RESTRICTIONS.



ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

#### EXTERIOR LUMINAIRE SCHEDULE

MARK	SYMBOL	MANUFACTURER	MODEL NUMBER	LAMPS PER FIXTURE					COLOR	MOUNTING	REMARKS
				TOTAL	HEADS	TYPE	WATTS	VOLTAGE			
A		LSI INDUSTRIES	MRM-LED-18L-SIL-FT-40-UNV-70CRI-BRZ-IL	6	1	LED	150	120	DARK BRONZE	POLE MOUNT	NOTES 1,2,3,4,5
D		LSI INDUSTRIES	XWM-3-LED-03L-40-UE-BRZ	2	1	LED	23	120	DARK BRONZE	WALL MOUNT	NOTES 1,5
E		LSI INDUSTRIES	XWM-FT-LED-06L-40-UE-BRZ	1	1	LED	45	120	DARK BRONZE	WALL MOUNT	NOTES 1,5

#### LUMINAIRE SCHEDULE NOTES:

1. EC SHALL FURNISH AND INSTALL ALL POLES, LUMINAIRES AND LAMPS AS SPECIFIED.
2. EC SHALL FURNISH AND INSTALL ALL CONCRETE POLE BASES AS NOTED.
3. ALL POLES AND LIGHTING HEADS SHALL HAVE A SMOOTH FINISH.
4. EC SHALL PROVIDE ALL REQUIRED LIGHTING POLES AS MANUFACTURED BY LSI INDUSTRIES. POLE SHALL BE 5" SQUARE STRAIGHT STEEL, 25'-0" IN HEIGHT, #5SQB3-S11G-25-S-BRZ-LAB-5BC WARM MOUNT AS PER MFGR.
5. FINAL SITE LIGHTING FIXTURE/POLE LAYOUTS AND CONFIGURATIONS SHALL BE COORDINATED WITH LOCAL EXTERIOR LIGHTING AND WIND LOAD REQUIREMENTS AND RESTRICTIONS.

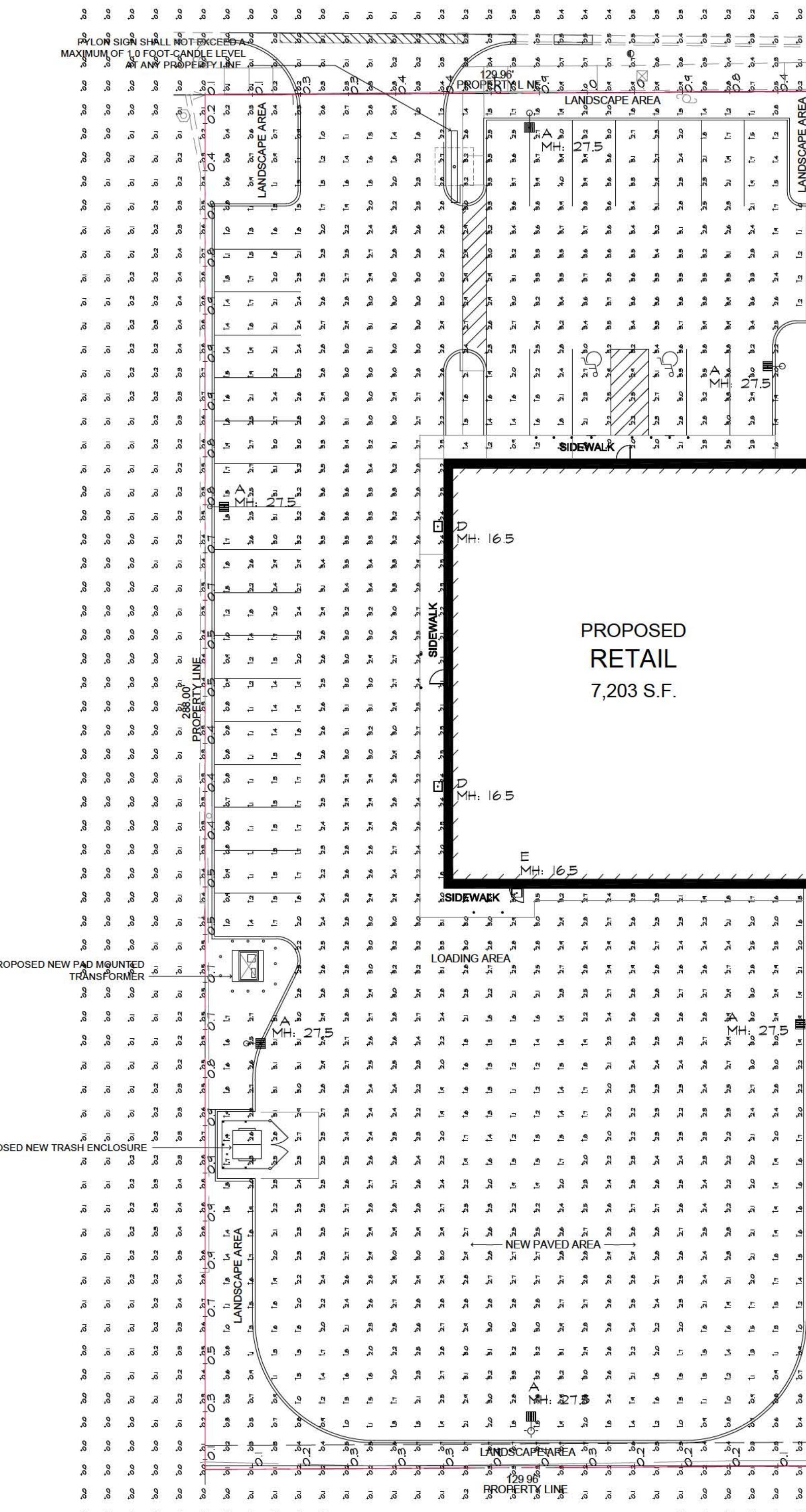
O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
ELECTRICAL SITE PLAN DETAILS  
1906

KMA & ASSOCIATES, INC. ARCHITECTS  
1121 LAKE COOK ROAD  
DEERFIELD, ILLINOIS 60015-5235  
(847)945-6869 FAX(847)945-0284+  
REVISIONS  
T-1B DRAWING  
NOT FOR CONSTRUCTION  
FOR BIDDING  
FOR PERMIT  
NOT FOR CONTRACTING  
NOT FOR CONSTRUCTION

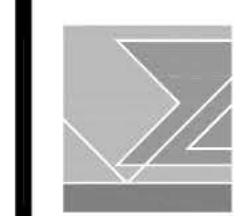
RACHEL BOEKELLO  
1309-161-5016  
NO SUBSTITUTES  
1906  
EO  
1

# SIBLEY BLVD.



**SHEET TITLE**  
ELECTRICAL SITE PLAN DETAILS  
ELECTRICAL SITE PLAN

**1906**



**KMA & ASSOCIATES, INC. ARCHITECTS**

1121 LAKE COOK ROAD

DEERFIELD, ILLINOIS

(847) 945-6869

FAX:(847) 945-0284

**REVISIONS**

1/1/2019

1/1/2019

NOT FOR CONSTRUCTION

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FOR PERMIT

FOR BIDDING

NOT FOR CONSTRUCTION

Calculation Summary							
Scene: L1							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING AREA	Illuminance	Fc	2.39	4.0	0.5	4.78	8.00
PROPERTY LINE	Illuminance	Fc	0.55	1.0	0.0	N.A.	N.A.

Luminaire Schedule							
Scene: L1							
Symbol	Qty	Label	Arrangement	Manufacturer	Description	Luminaire Watts	Arr. Lum. Lumens
	6	A	SINGLE	LSI INDUSTRIES	MRM-LED-18L-SIL-FT-40-UNV-70CRI-BRZ-IL	150	12149
	2	D	SINGLE	LSI INDUSTRIES	XWM-3-LED-03L-40-UE-BRZ	23	3144
	1	E	SINGLE	LSI INDUSTRIES	XWM-FT-LED-06L-40-UE-BRZ	45	6057

PARKING LOT DESIGN GUIDE		BASIC	BASIC ENHANCED SECURITY	SECURITY PUBLIC SPACES	HIGH SECURITY PUBLIC SPACES
MAXIMUM HORIZONTAL ILLUMINATION MEASURED ON PARKING SURFACE W/ NO SHADOW		2.0/ 0.2	5.0/ 0.5	10 0/ 1.0	30.0-60.0/ 3.0-6.0
UNIFORMITY RATIO MAXIMUM - TO - MINIMUM		20:1	15:1	15:1	4:1 - AVG/ MIN
MINIMUM VERTICAL ILLUMINATION MEASURED AT 5' ABOVE PARKING SURFACE FOR FACIAL RECOGNITION		1.0/ 0.1	2.5/ 0.25	5.0-8.0/ 0.5-0.8	12-60/ 1.2-6.0

RECOMMENDED BASED ON RP-33-99, RP20-98 IESNA LIGHTING HANDBOOK

**NOTES:**  
See schedule for luminaire specifications.  
Luminaire Symbols are not to scale.  
Varying the position, mounting height,  
or orientation from what is specified in this  
drawing will invalidate the calculation performed.

**REVISIONS**

1/1/2019

1/1/2019

NOT FOR CONSTRUCTION

NOT FOR CONTRACTING

NOT FOR BIDDING

FOR PERMIT

FOR BIDDING

NOT FOR CONSTRUCTION

# **Proposed Improvements for PROPOSED RETAIL DEVELOPMENT**

## STANDARD SYMBOLS

EXISTING	PROPOSED
—>— >—	STORM SEWER
—>— >—	SANITARY SEWER
—D— D—	COMBINED SEWER
→ —FM— — —	FORCEMAIN
>>— >>—	DRAINTILE
— W — —	WATER MAIN
— E — —	ELECTRIC
— G — —	GAS
— T — —	TELEPHONE
— OH — —	OVERHEAD WIRES
◎	SANITARY MANHOLE
◎	STORM MANHOLE
○	CATCH BASIN
□	STORM INLET
○	CLEANOUT
	HAY BALES
	RIP RAP
☒	VALVE IN VAULT
⊗	VALVE IN BOX
⊗	FIRE HYDRANT
⊖	BUFFALO BOX
↙	FLARED END SECTION
	STREET LIGHT
	SUMMIT / LOW POINT
795.20 790.25	RIM ELEVATION INVERT ELEVATION
—>	DITCH OR SWALE
—>— 764 — —	DIRECTION OF FLOW
====	OVERFLOW RELIEF SWALE
====	1 FOOT CONTOURS
====	CURB AND GUTTER
====	DEPRESSED CURB AND GUTTER
====	REVERSE CURB AND GUTTER
====	SIDEWALK
====	DETECTABLE WARNINGS
—	PROPERTY LINE
—	EASEMENT LINE
—	SETBACK LINE
—	MAIL BOX
—	SIGN
—	TRAFFIC SIGNAL
—	POWER POLE
—	GUY WIRE
—	GAS VALVE
—	HANDHOLE
E ◎ E	ELECTRICAL EQUIPMENT
T ◎ T	TELEPHONE EQUIPMENT
—○—○—	CHAIN-LINK FENCE
700.00	SPOT ELEVATION
~~~~~	BRUSH/TREE LINE
16"	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)
25'	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)
S	SILT FENCE
	RETAINING WALL
	WETLAND

## ABBREVIATIONS

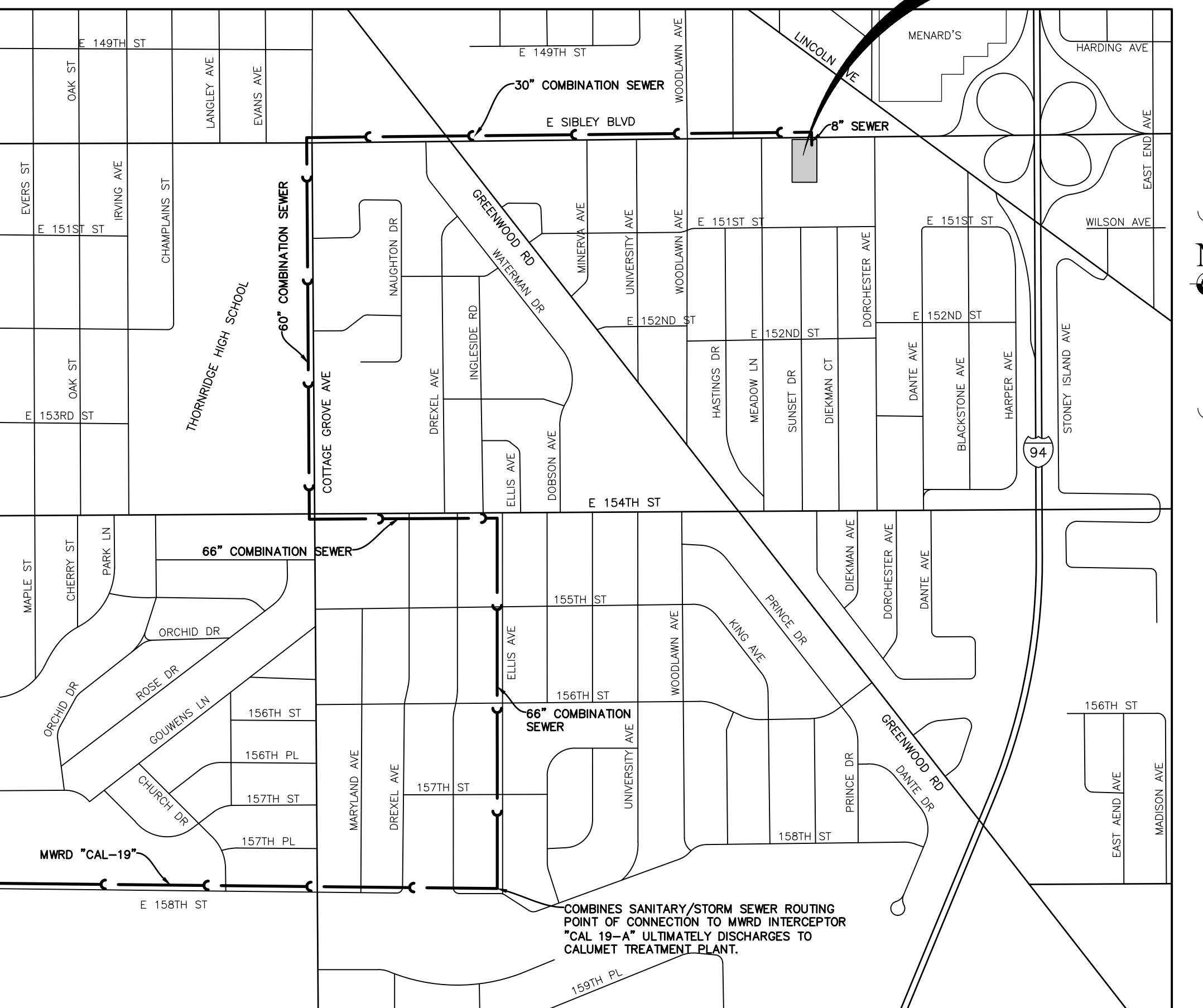
ADJ	ADJUST	F/L	FLOW LINE	R.O.W.	RIGHT-OF-WAY
AGG.	AGGREGATE	FM	FORCE MAIN	RCP	REINFORCED CONCRETE
ARCH	ARCHITECT	G	GROUND	REM	REMOVAL
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	G/F	GRADE AT FOUNDATION	REV	REVERSE
B-B	BACK TO BACK	GW	GUY WIRE	RR	RAILROAD
B/C	BACK OF CURB	HDWL	HEADWALL	RT	RIGHT
B/P	BOTTOM OF PIPE	HH	HANDHOLE	SAN	SANITARY
B/W	BACK OF WALK	HWL	HIGH WATER LEVEL	SF	SQUARE FOOT
B-BOX	BUFFALO BOX	HYD.	HYDRANT	SHLD.	SHOULDER
BIT.	BITUMINOUS	INL	INLET	SL	STREET LIGHT
BM	BENCHMARK	INV.	INVERT	SMH	SANITARY MANHOLE
B.O.	BY OTHERS	IP	IRON PIPE	ST	STORM
C.E.	COMMERCIAL ENTRANCE	LT	LEFT	STA.	STATION
CB	CATCH BASIN	MAX.	MAXIMUM	STD	STANDARD
CL	CENTERLINE	MB	MAILBOX	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	M/E	MEET EXISTING	SY	SQUARE YARDS
CNTRL	CONTROL	MH	MANHOLE	TBR	TO BE REMOVED
C.O.	CLEANOUT	MIN.	MINIMUM	T	TELEPHONE
CONC.	CONCRETE	NWL	NORMAL WATER LEVEL	T-A	TYPE A
CY	CUBIC YARD	P.E.	PRIVATE ENTRANCE	T/C	TOP OF CURB
D	DITCH	PC	POINT OF CURVATURE	T/F	TOP OF FOUNDATION
DIA.	DIAMETER	PCC	POINT OF COMPOUND CURVE	T/P	TOP OF PIPE
DIP	DUCTILE IRON PIPE	PGL	PROFILE GRADE LINE	T/W	TOP OF WALK
DIWM	DUCTILE IRON WATER MAIN	PI	POINT OF INTERSECTION	T/WALL	TOP OF WALL
DS	DOWNSPOUT	P	PROPERTY LINE	TEMP	TEMPORARY
DT	DRAIN TILE	PP	POWER POLE	TRANS	TRANSFORMER
E	ELECTRIC	PROP.	PROPOSED	V.B.	VALVE BOX
E-E	EDGE TO EDGE	PT	POINT OF TANGENCY	VCP	VITRIFIED CLAY PIPE
ELEV.	ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	V.V.	VALVE VAULT
E/P	EDGE OF PAVEMENT	PVC	POINT OF VERTICAL CURVATURE	WL	WATER LEVEL
EX.	EXISTING	PVI	POINT OF VERTICAL INTERSECTION	WM	WATER MAIN
F.E.	FIELD ENTRANCE	PVT	POINT OF VERTICAL TANGENCY		
F-F	FACE TO FACE	P	PAVEMENT		
F.F.	FINISHED FLOOR	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT		
FES	FLARED END SECTION	R	RADIUS		

# **Proposed Improvements**

for

# **1317 EAST SIBLEY BOULEVARD VILLAGE OF DOLTON, ILLINOIS**

# PROJECT LOCATION



## LOCATION MAP

N

DEPARTMENT PROPERTY GROUP, LLC  
200 W. MADISON ST, SUITE 4200  
CHICAGO, ILLINOIS 60606  
(312) 332-4172



# **Manhard** CONSULTING LTD.

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

# INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	ALTA-NSPS LAND TITLE SURVEY
3	EXISTING CONDITIONS AND DEMOLITION PLAN
4	SITE DIMENSIONAL AND PAVING PLAN
5	GRADING PLAN
6	UTILITY PLAN
7	MWRD EXHIBIT
8	SOIL EROSION AND SEDIMENT CONTROL PLAN
9	CONSTRUCTION DETAILS
10	CONSTRUCTION DETAILS
11	CONSTRUCTION DETAILS
12	CONSTRUCTION DETAILS
13	CONSTRUCTION SPECIFICATIONS

## DRAINAGE NARRATIVE:

I, Kris Cohn, HEREBY CERTIFY THAT ADEQUATE STORMWATER STORAGE AND DRAINAGE CAPACITY HAS BEEN PROVIDED BY THIS DEVELOPMENT, SUCH THAT SURFACE WATER FROM THE DEVELOPMENT WILL NOT BE DIVERTED ONTO AND CAUSE DAMAGE TO ADJACENT PROPERTY FOR STORMS UP TO AND INCLUDING THE ONE HUNDRED (100) YEAR EVENT, AND THAT THE DESIGN PLANS ARE IN COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY, AND CITY LAWS AND ORDINANCES.

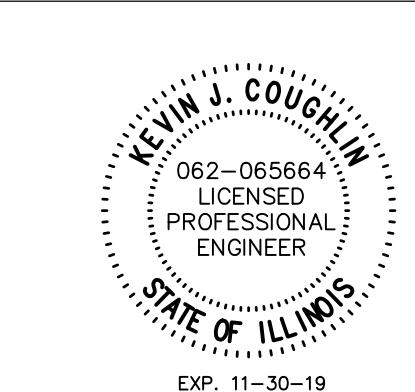
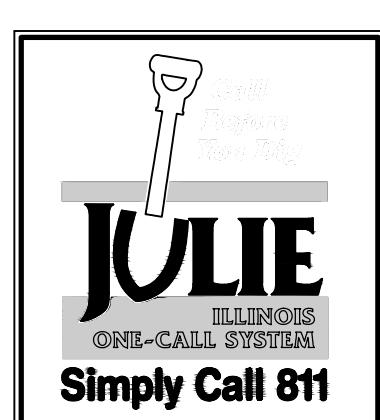
## NOTES:

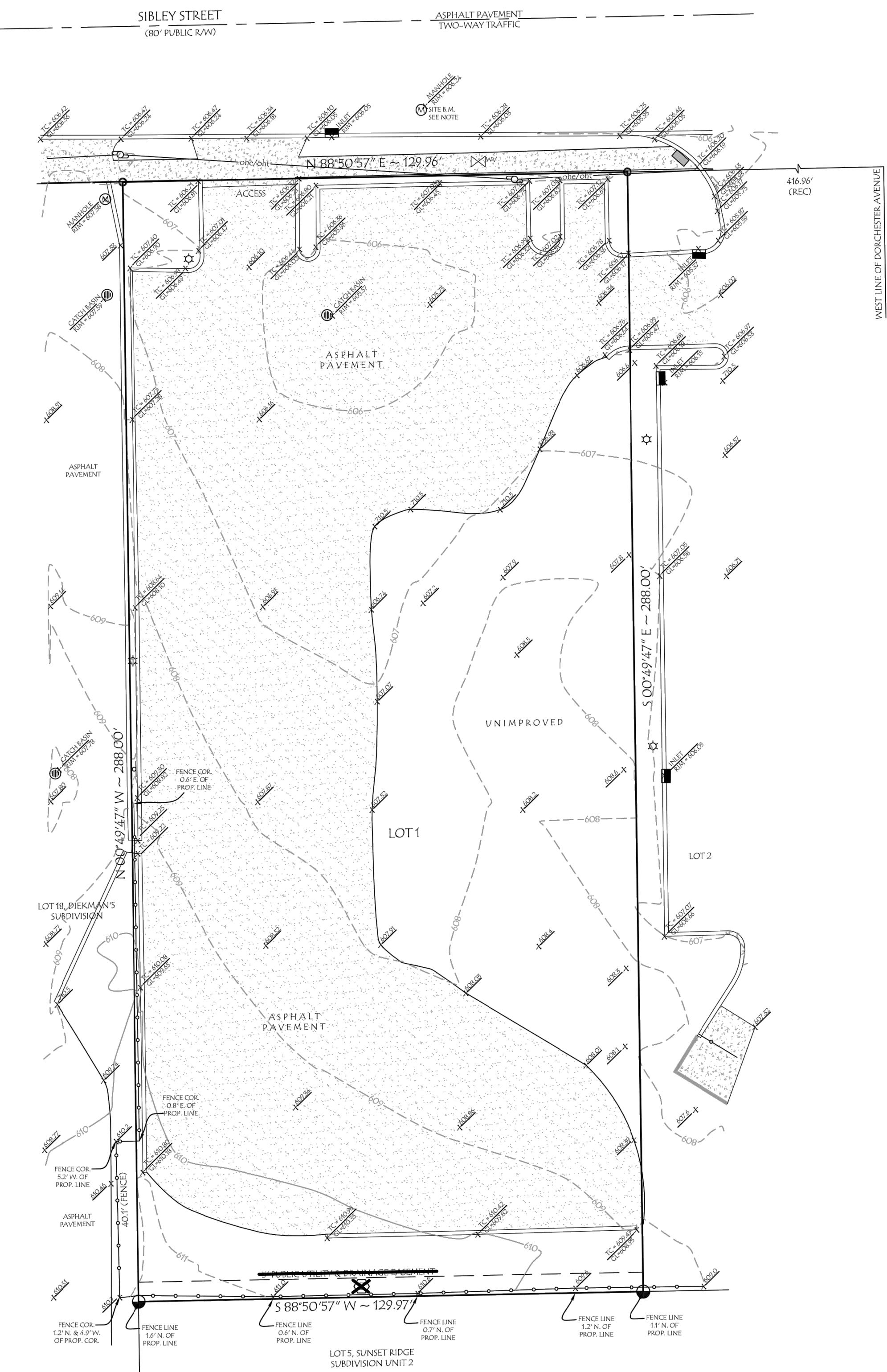
- 1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 9, 2019. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.

## BENCHMARKS:

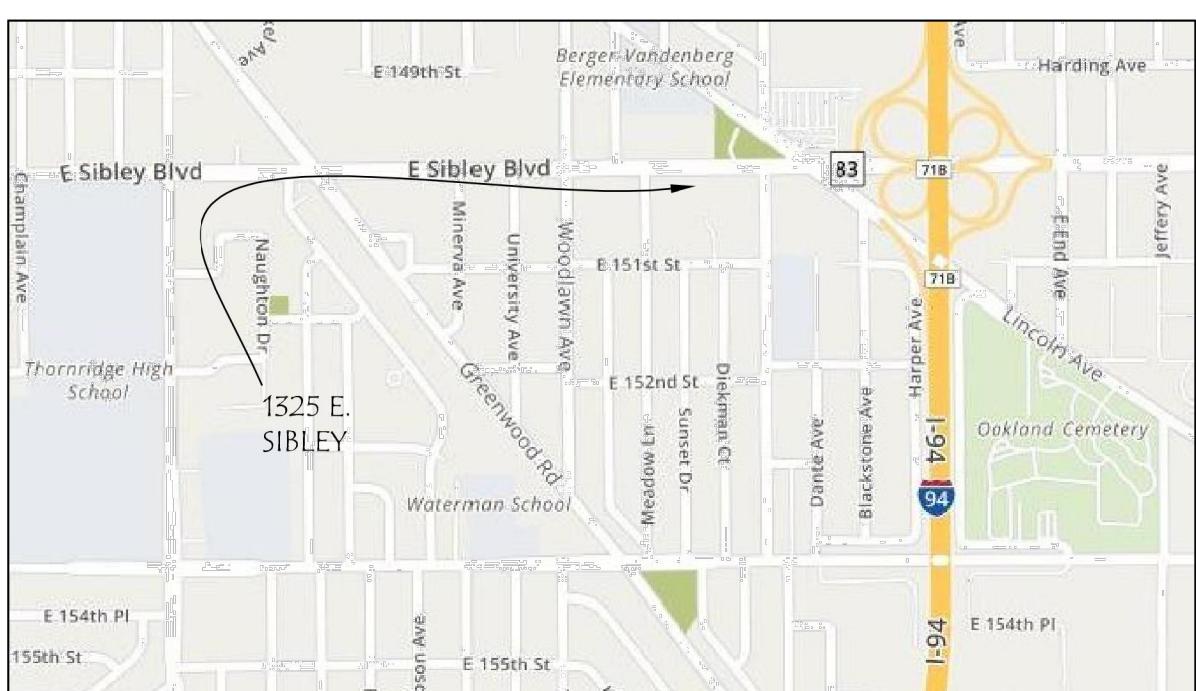
SITE BENCHMARK IS RIM OF MANHOLE IN SIBLEY BOULEVARD AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION = 606.24

<u>UTILITY CONTACTS</u>	
<u>ELECTRIC</u> COMED 4401 W 135TH STREET CRESTWOOD, IL. 60445 (800) 334-7661	<u>WATER</u> VILLAGE OF DOLTON 401 E 144TH STREET DOLTON, IL. 60419 (708) 201-3280 CONTACT: MATHEW STACEY
<u>GAS</u> NICOR 19199 GLENWOOD ROAD GLENWOOD, IL. 60507 (888) 642-6748	<u>TELEPHONE</u> AT&T 236 E 159TH STREET HARVEY, IL. 60426 (708) 222-2222
<u>STORM SEWER</u> VILLAGE OF DOLTON 401 E 144TH STREET DOLTON, IL. 60419 (708) 201-3280 CONTACT: MATHEW STACEY	<u>SANITARY SEWER</u> MWRDGC – CALUMET WRP 100 E ERIN STREET CHICAGO, IL. 60611 (773) 266-3538





Graphic Scale



VICINITY MAP  
no scale

LEGEND	
	= Set Iron Rod
	= Found Iron Rod
	= Set Survey Nail
	= Water Valve
	= Catch Basin
	= Manhole
	= Curb Inlet
	= Curb
	= ADA Textured Pad
	= Schedule "B" Item
	= Area Light
	= Bollard
	= Utility Pole
	= Sign
	= Spot Grade = Top of Curb Elevation Gutter Line Elevation
	= Concrete Walks & Pads
	Chain Link Fence

**PROPERTY DESCRIPTION:**

LOT 1 IN FINAL PLAT OF RESUBDIVISION OF LOT 2 IN DIEKMAN'S SUBDIVISION BEING A RESUBVISION OF PART OF LOT 2 IN DIEKMAN'S SUBDIVISION, LOCATED IN THE SOUTHEAST 1/4 OF SECTION 11, TOWNSHIP 36 NORTH, RANGE 14, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF RESUBDIVISION RECORDED JUNE 2, 2016 AS DOCUMENT 1615429064, IN THE VILLAGE OF DOLTON, COOK COUNTY, ILLINOIS.

ITEMS CORRESPONDING TO SCHEDULE "B:"

CHICAGO TITLE INSURANCE COMPANY  
COMMITMENT No. 19GSC006242LP  
EFFECTIVE DATE: MARCH 18, 2019

- N 16. Subject to matters of record as shown on plat of resubdivision recorded June 2, 2016 as document 1615429064. (For further particulars, see record.)  
PLATTED BOUNDARY AND OTHER PARTICULARS SHOWN BUT NOT OTHERWISE LABELED – SEE DRAWING

C 17. Rights of the public, the State of Illinois and the municipality in and to that part of the Land, if any, taken or used for road purposes.  
ROADWAY SHOWN BUT NOT OTHERWISE LABELED – SEE DRAWING

O 18. Rights of Way for drainage tiles, ditches, feeders, laterals and underground pipes, if any.  
SURFACE DRAINAGE STRUCTURES SHOWN BUT NOT OTHERWISE LABELED – SEE DRAWING

E 19. Easement for public utilities and drainage over the South 5 feet of the Land as depicted on the Survey by L.P. Page & Associates, LLC, # 97081205, dated August 26, 1997  
AFFECTS PARCEL AND IS SHOWN – SEE DRAWING  
NOTE: SURVEYOR IS NOT IN POSSESSION OF THIS DOCUMENT

**\*NO RECORD OF EXISTING EASEMENT FOUND\***

ZONING NOTE:

PROPERTY CURRENTLY ZONED "BUSINESS DISTRICT LIMITED RETAIL"

FOR BULK RESTRICTIONS REFER TO:  
BUILDING DEPARTMENT  
VILLAGE OF DOLTON  
14122 CHICAGO ROAD, DOLTON, IL 60419  
PHONE: 708-849-4000  
[https://vdolton.org/departments/building\\_department](https://vdolton.org/departments/building_department)

**FLOOR NOTE:**

---

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 17031C, COMMUNITY PANEL 0752J EFFECTIVE DATE AUGUST 19, 2008, THE PARCEL SHOWN HEREON APPEARS TO BE LOCATED IN ZONE "X." ZONE "X" IS DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN." THIS DETERMINATION WAS MADE BY GRAPHICAL PLOTTING AND SCALED MAP MEASURE ONLY. NO FIELD MEASUREMENTS WERE TAKEN CONCERNING THIS DETERMINATION, AND BASE FLOOD ELEVATIONS WERE NOT ESTABLISHED IN PERFORMANCE OF THIS SURVEY.

## BENCHMARK AND DATUM NOTES

- - 1) ELEVATIONS ARE ADJUSTED TO STATE PLANE COORDINATE DATUM.
  - 2) SITE BENCHMARK IS RIM OF MANHOLE IN SIBLEY STREET AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION = 606.24

**ENCROACHMENT NOTE:**

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SUBJECT PROPERTY FENCE APPEARS TO ENCROACH OVER AND UPON WEST ADJOINER'S PROPERTY BY THE AMOUNT SHOWN ON THE DRAWING.

#### MISCELLANEOUS NOTES:

- 1) PARCEL P.I.N.: 29-11-400-049-0000
  - 2) PARCEL AREAS: 37,429.33 sq. ft./0.859 ac±
  - 3) NO STRIPED PARKING STALLS WERE OBSERVED ON THE DAY THE FIELD WORK WAS PERFORMED
  - 4) BEARINGS SHOWN HEREON ARE BASED UPON THOSE RECITED IN THE RECORDED PLAT
  - 5) UTILITIES AND OTHER IMPROVEMENTS SHOWN HEREON ARE BASED ON DIRECT OBSERVATION OF ABOVE-GROUND APPURTENANCES ONLY. THE SURVEYOR HAS NOT BEEN PROVIDED WITH UTILITY PLANS OR ATLASES RELATED TO THE SUBJECT PROPERTY OR ADJOINING PROPERTIES OR RIGHTS-OF-WAY.
  - 6) SUBJECT PARCEL IS 416.96 FEET WEST OF THE SOUTHWESTERLY INTERSECTION OF SIBLEY BOULEVARD AND DORCHESTER AVENUE, BOTH PUBLIC RIGHTS-OF-WAY. PARCEL HAS DIRECT VEHICULAR ACCESS TO SIBLEY BOULEVARD AS SHOWN AND LABELED ON THE DRAWING.
  - 7) THE PROPERTY DESCRIPTION SHOWN HEREON IS THE SAME AS, AND DESCRIBES THE SAME PARCEL, AS THAT REFERRED TO IN CHICAGO TITLE INSURANCE COMPANY COMMITMENT No. 19GSC006242! P BEARING AN EFFECTIVE DATE OF MARCH 18, 2019.

SURVEYOR'S CERTIFICATION

---

To:  
AETNA DEVELOPMENT CORPORATION, AN ILLINOIS CORPORATION  
CHICAGO TITLE INSURANCE COMPANY

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 7(a), 7(b)(1), 8, 9 and 14 of Table A thereof. The field work was completed on April 9, 2019.

A large, handwritten signature of "RUSSELL WAID DILLON" is written across a grid background. The signature is in black ink and is highly stylized, with the letters "R" and "W" being particularly prominent. The background grid consists of small squares, some of which contain smaller handwritten numbers and letters, such as "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100". To the right of the main signature, there is a red, cursive, spiral-style signature that reads "RUSSELL WAID DILLON" and "PROFESSIONAL LAND SURVEYOR".

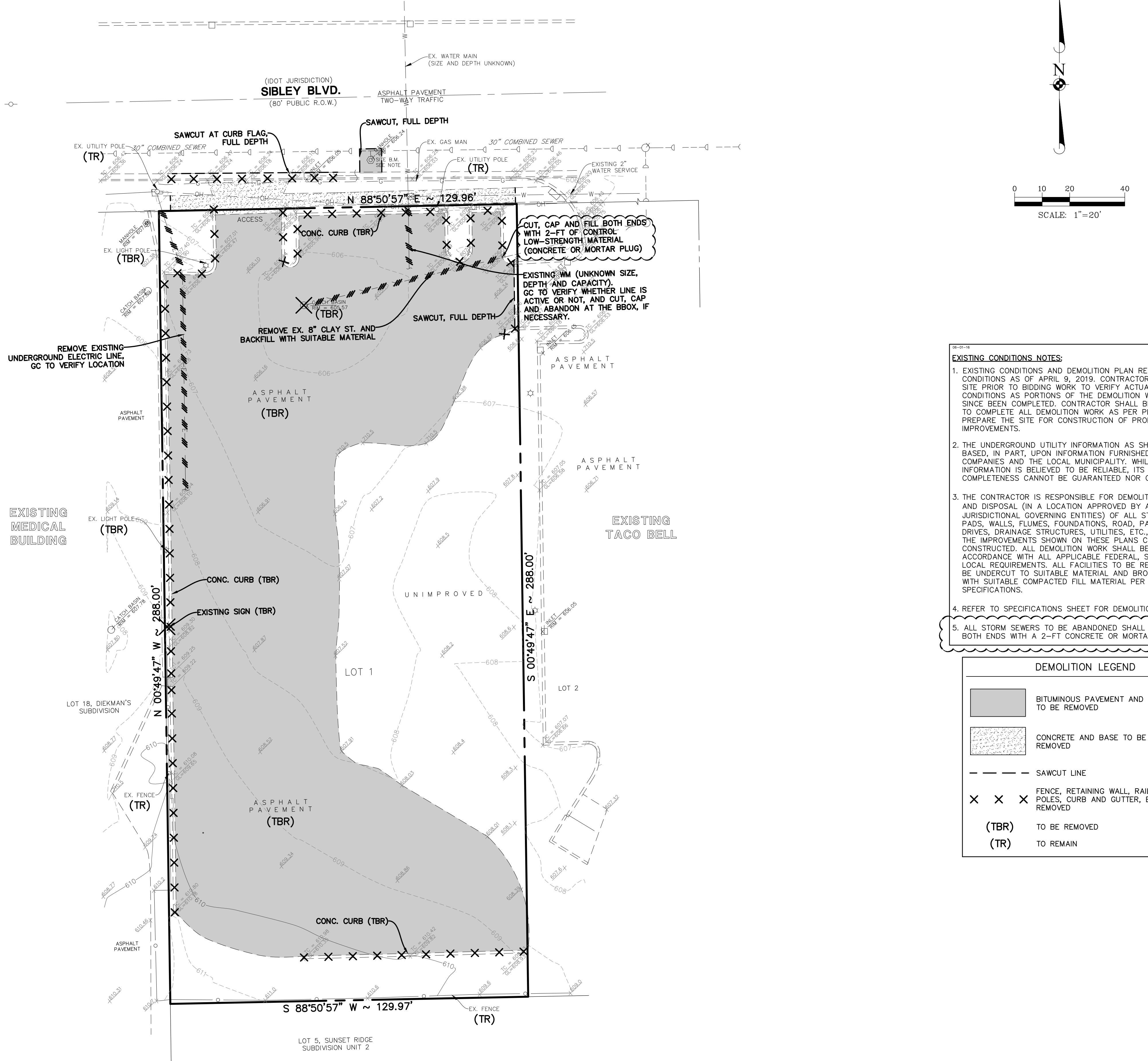
No dimensions should be assumed by scale measurements upon plat. Contractor should verify and compare all points before beginning any construction and at once report any discrepancies to the surveyor. Surveyor should be contacted for construction layout of any improvements.

For building restrictions and/or easements refer to your deed, contract, title policy, and/or zoning regulations. This plat is valid only if it contains the original signature and seal of the surveyor. If you have any questions regarding this plat do not hesitate to contact us.

ALTAA/NSPS LAND TITLE SURVEY		ZARKO SEKEREZ & ASSOCIATES, INC.	
Denzin Soltanzadeh, LLC 190 S. LaSalle Street Suite 2160 Chicago, Illinois		Land Surveyors & Land Planners	
SHEET 1 OF 1	1323 East Sibley Boulevard Dolton, Illinois	DRAWN BY: PS	CHECKED BY: RWD
		DATE: April 25, 2019	ORDER NO.: 11060
<p style="text-align: right;">116 WEST CLARK STREET CROWN POINT, INDIANA 46307 ILL. PHONE: (312) 726-1315 IND. PHONE: (219) 663-3344 ILL. FAX: (312) 236-9506 IND. FAX: (219) 663-7282</p>			

LTD. ALL RIGHTS RESERVED		
PROJ. MGR.:	TTR	
PROJ. ASSOC.:	JRC	
DRAWN BY:	PS	
DATE:	08-05-19	

2 OF 13  
AETDOIL01



06-01-16

## EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF APRIL 9, 2019. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
3. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL (IN A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, ROAD, PARKING LOTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPAKTED FILL MATERIAL PER THE SPECIFICATIONS.
4. REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.
5. ALL STORM SEWERS TO BE ABANDONED SHALL BE PLUGGED AT BOTH ENDS WITH A 2-FT CONCRETE OR MORTAR PLUG

DEMOLITION LEGEND	
	BITUMINOUS PAVEMENT AND BASE TO BE REMOVED
	CONCRETE AND BASE TO BE REMOVED
— — — —	SAWCUT LINE
×	FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
(TBR)	TO BE REMOVED
(TR)	TO REMAIN

## **PROPOSED RETAIL DEVELOPMENT**

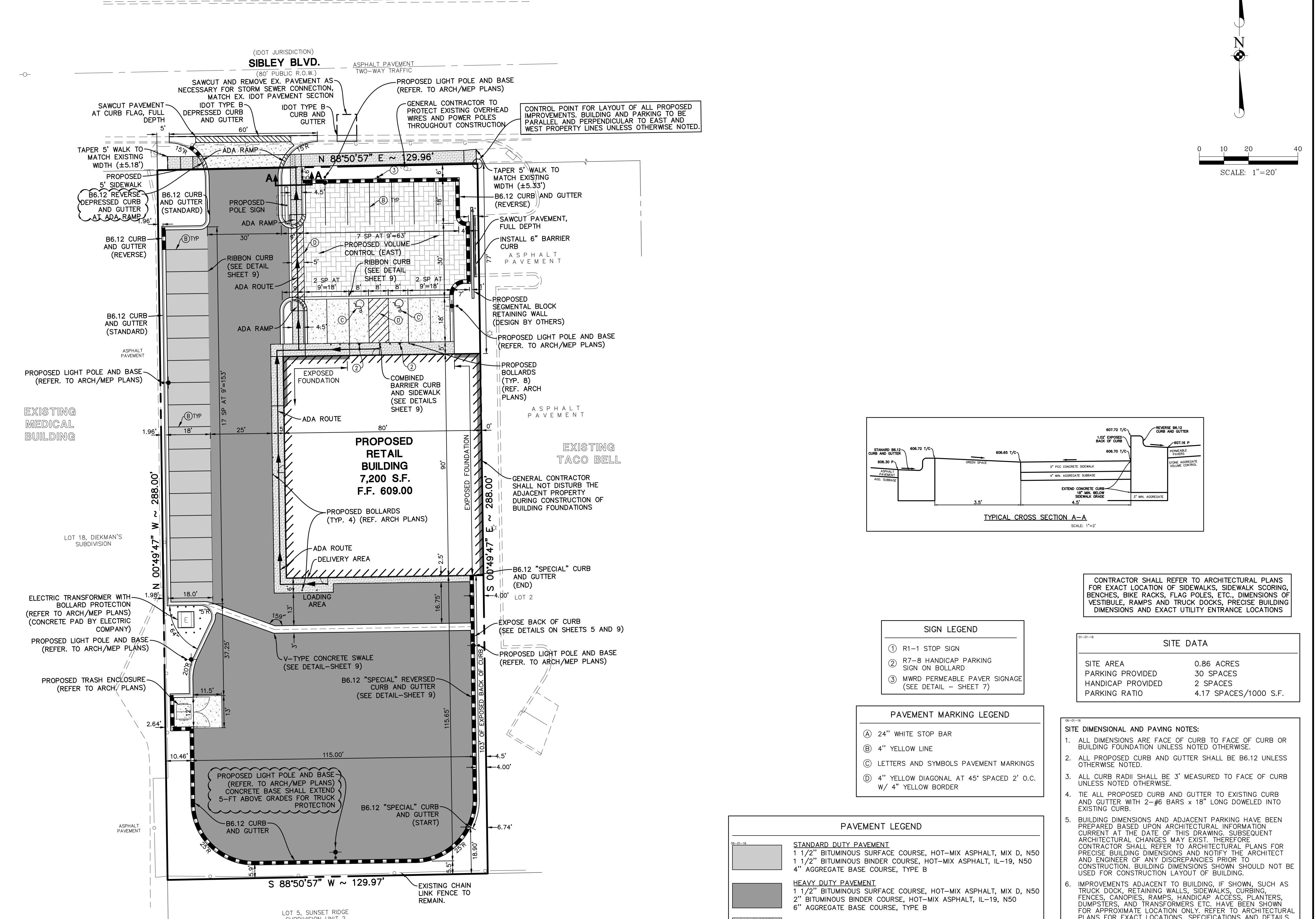
# VILLAGE OF DOLTON, ILLINOIS

# EXISTING CONDITIONS AND DEMOLITION PLAN

**Manhird  
CONSULTING LTD**

**One Outlook Point, Suite 290, Lincolnshire, IL 60069** ph:847-634-5550 fx:847-634-0095 [manhard.com](http://manhard.com)  
**Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers  
Construction Managers • Environmental Scientists • Landscape Architects • Planners**

DATE	REVISIONS	DRAWN BY
		JRC
		JRC
		JRC
12-10-19	REVISED PER MWRD REVIEW	JRC
10-30-19	REVISED PER INTERNAL REVIEW	JRC
10-15-19	REVISED PER VILLAGE REVIEW	JRC



## VILLAGE OF DUELION, ILLINOIS TITLE DIMENSIONAL AND DRAWING BY AN

## **PROPOSED RETAIL DEVELOPMENT VILLAGE OF DOLTON ILLINOIS**

VILLAGE OF DUELION, ILLINOIS  
117E DIMENSIONAL AND DRAWING BY AN

**CONSULTING LTD**  
One Overlook Point, Suite 280, Lincolnshire, IL 60069  
ph: 847-634-5550 fax: 847-634-0085  
[manhard.com](http://manhard.com)

**PROPOSED RETAIL DEVELOPMENT  
VILLAGE OF DOLTON, ILLINOIS**

## **VILLAGE OF DEERFIELD, ILLINOIS TRENDIMENSIONAL AND DRAWING BY AN**

J. MGR.: TTR  
J. ASSOC.: JRC  
WN BY: MH  
E: 08-05-  
LE: 1"=20'

**SHEET**

**4** OF **1**

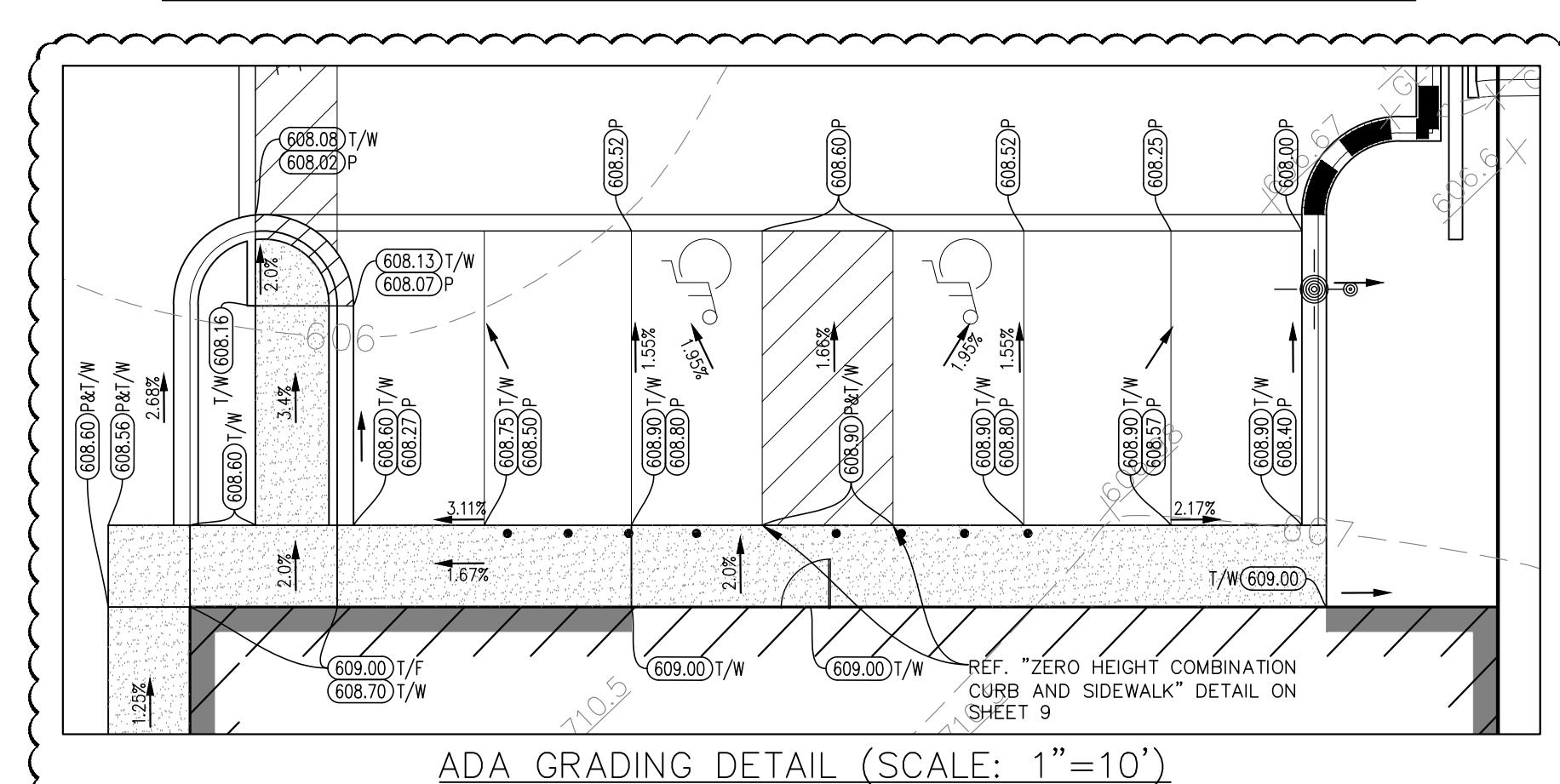
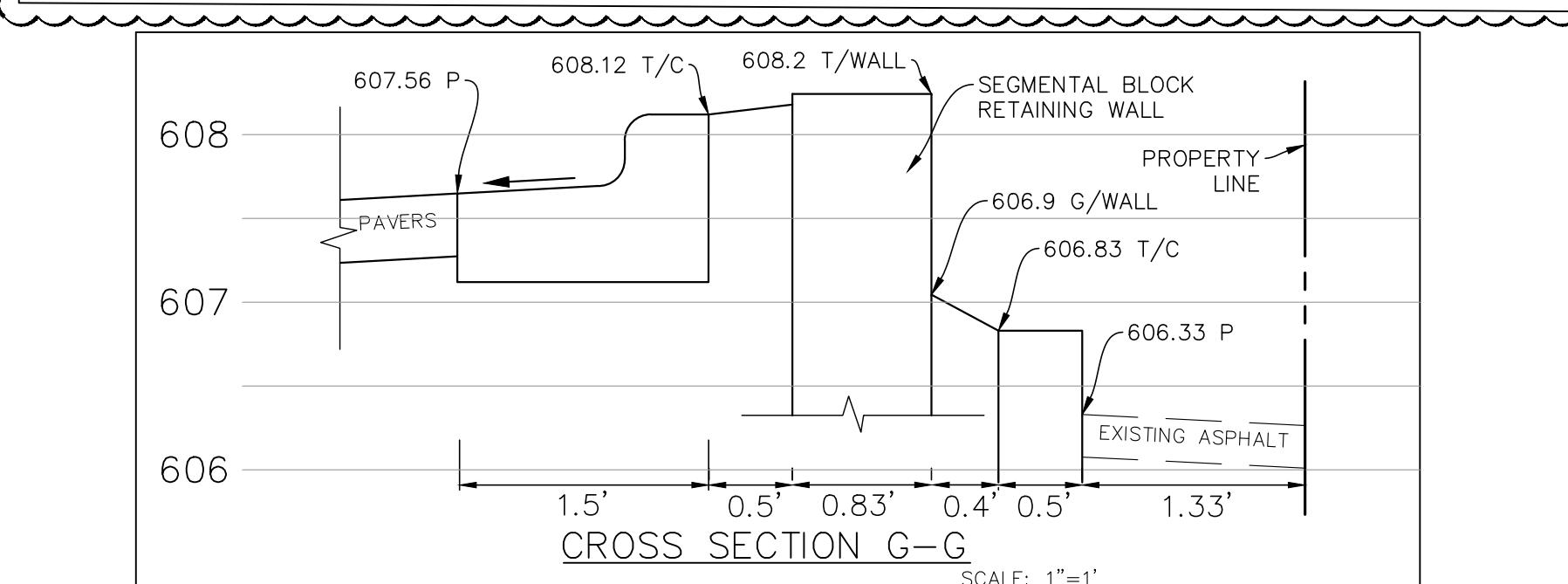
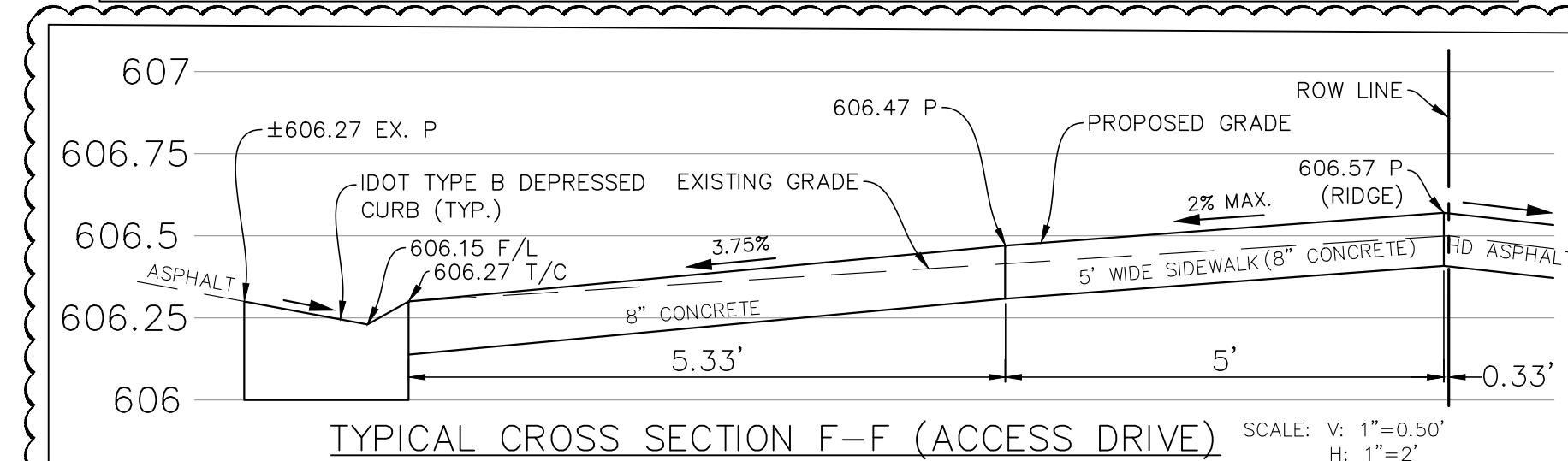
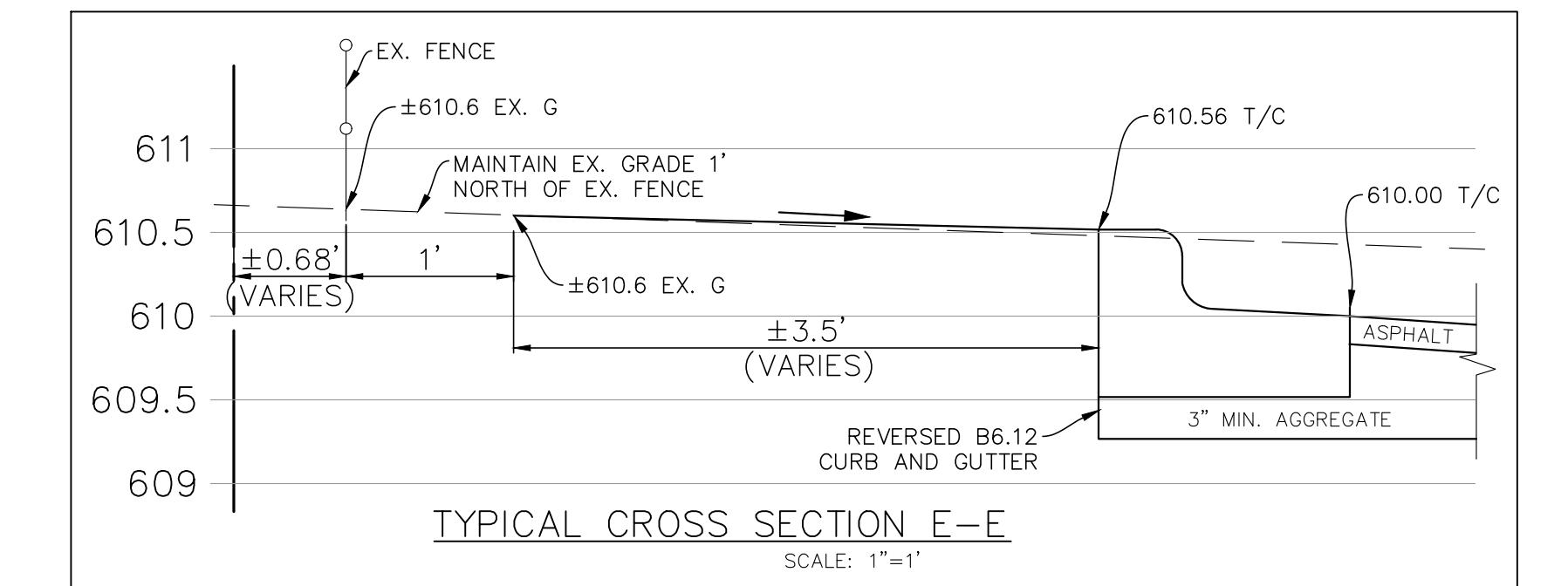
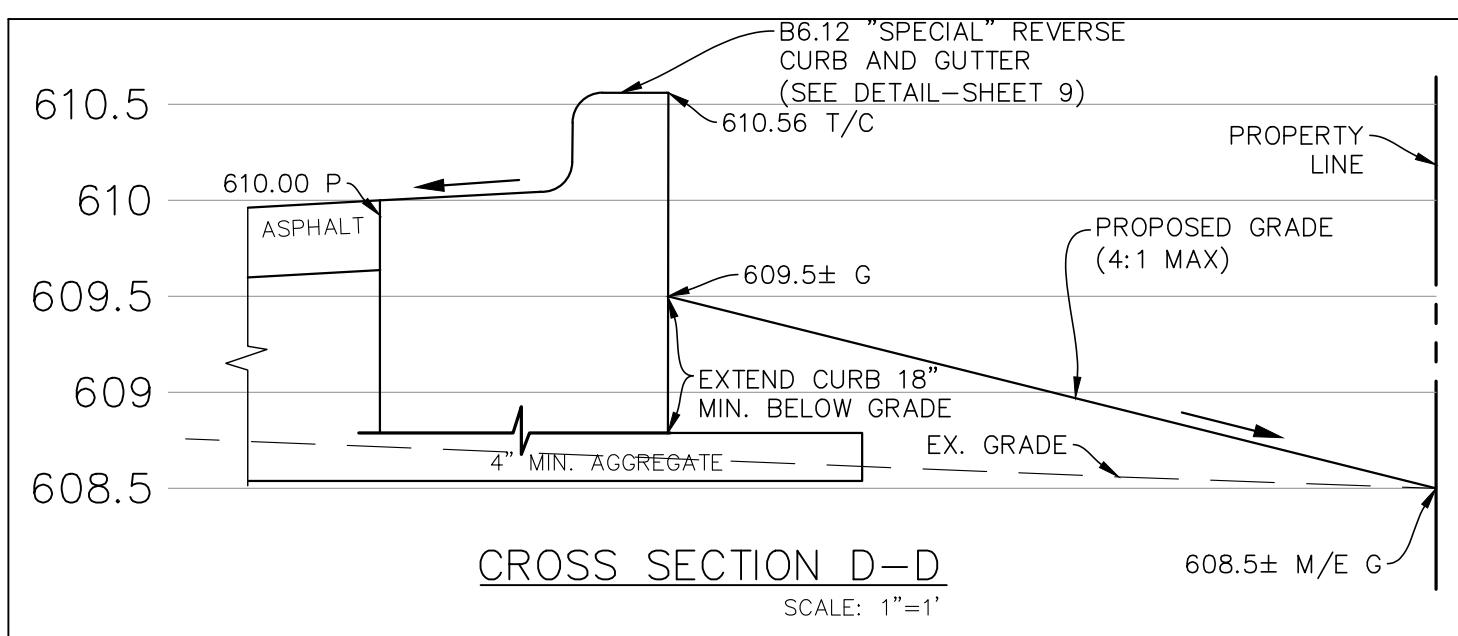
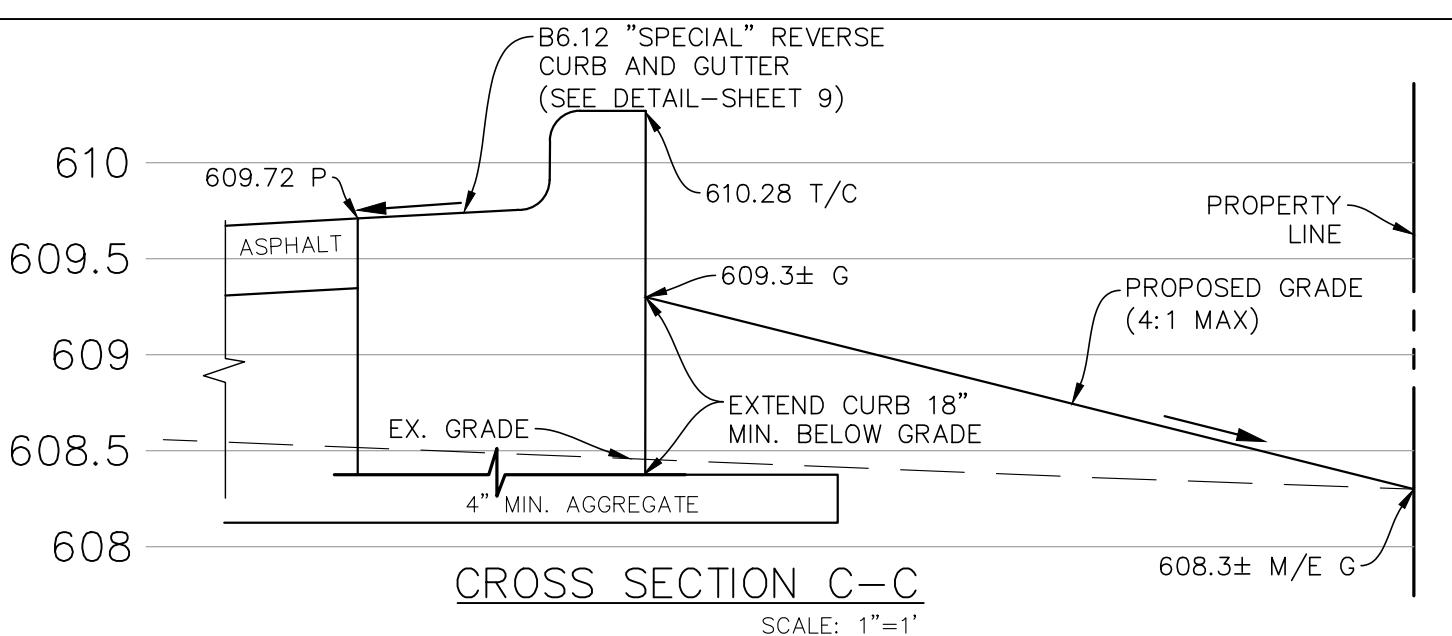
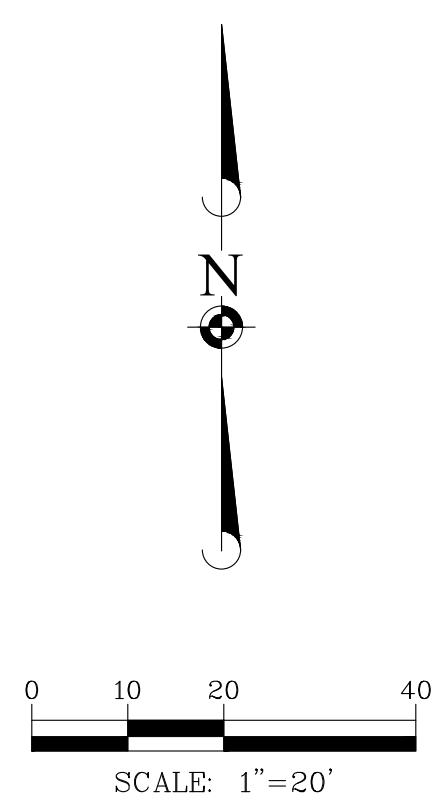
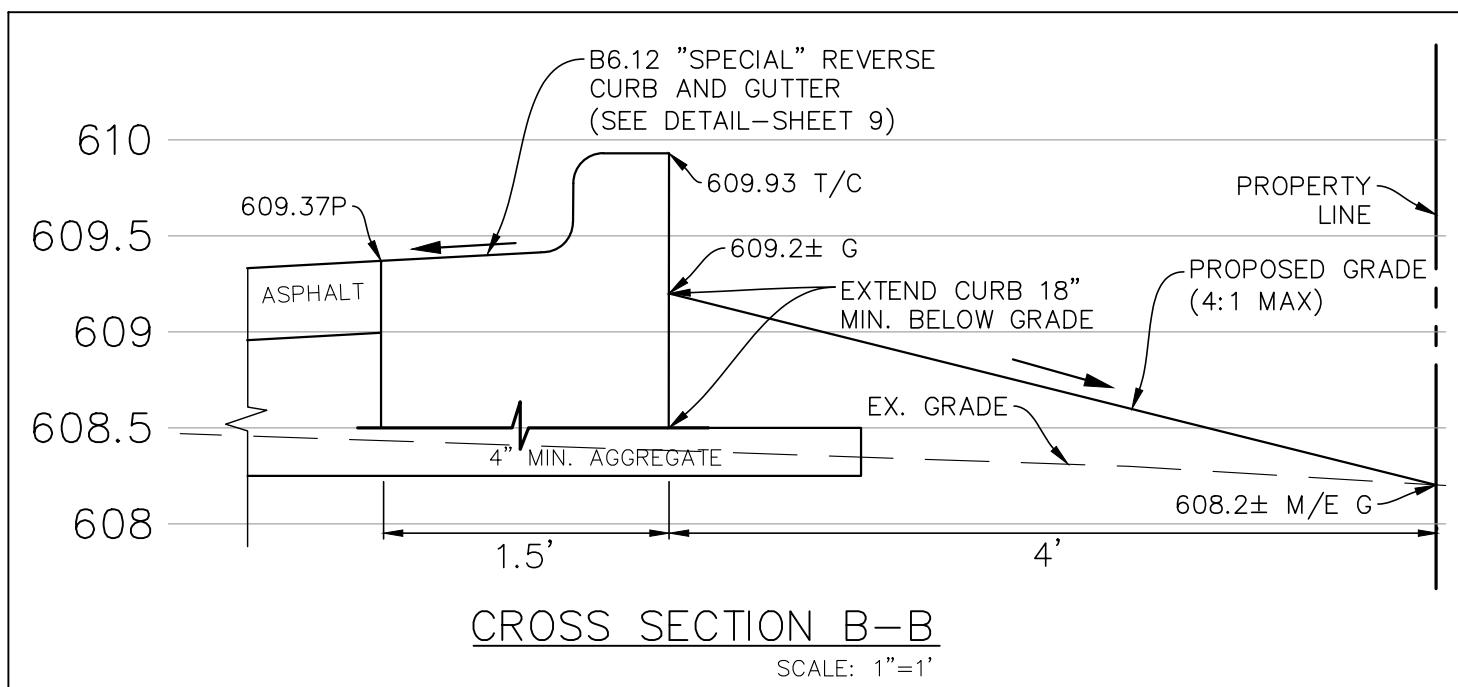
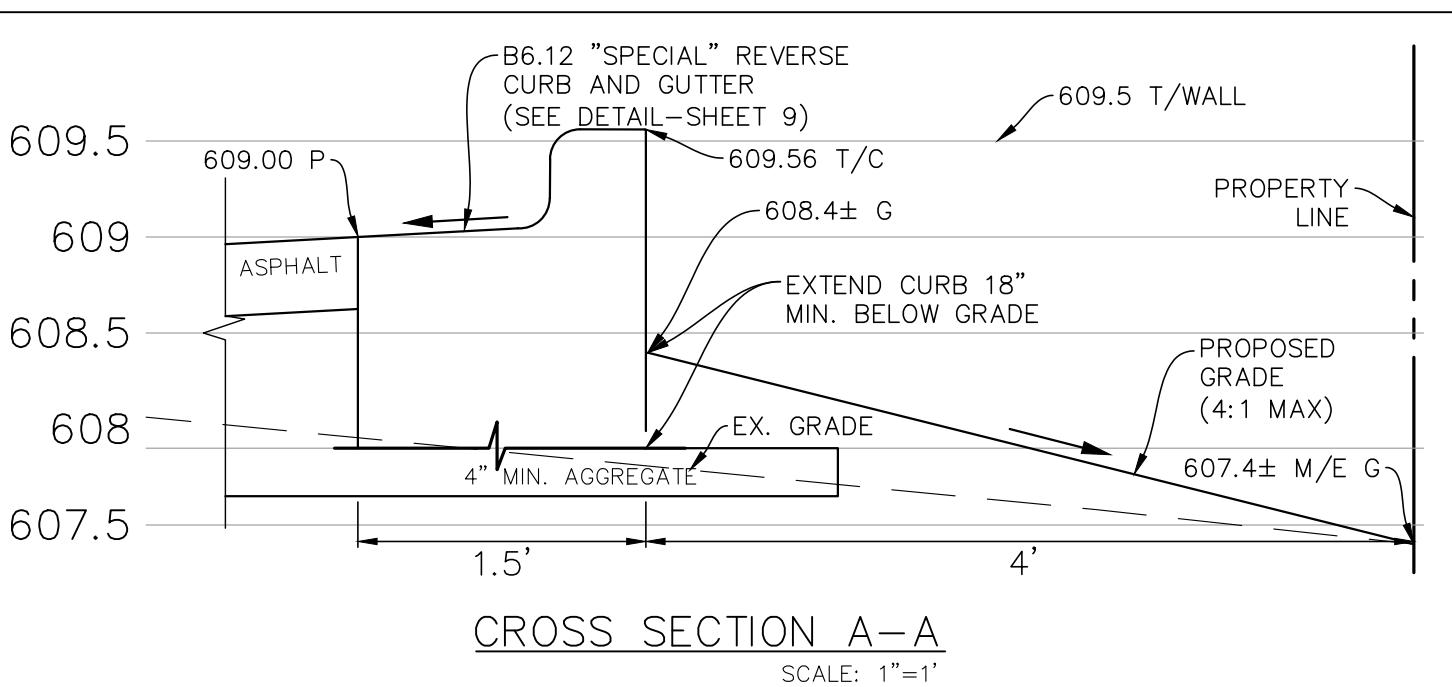
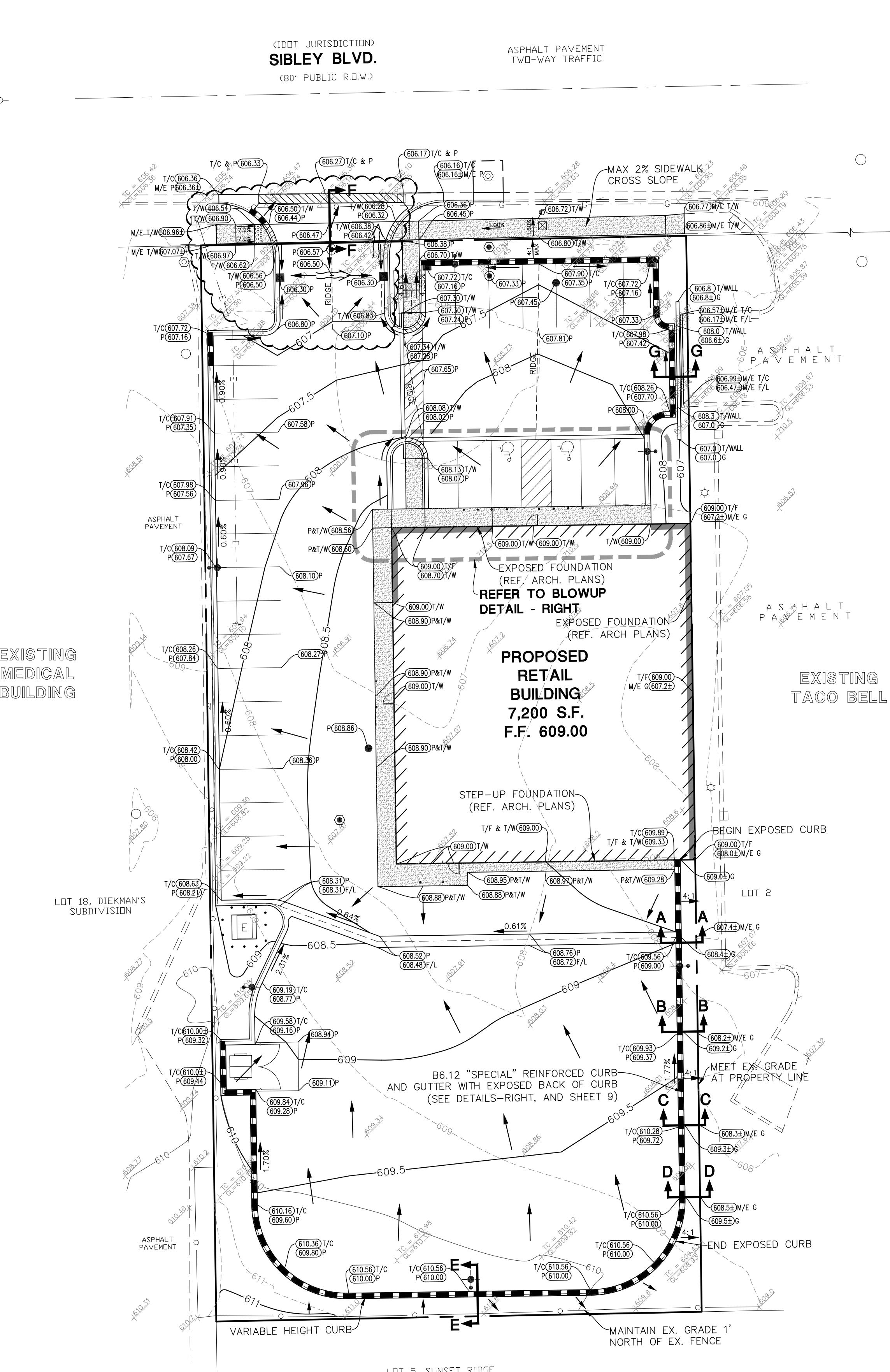
**AETDOIL01**

TTR  
JRC  
MH  
08-05-  
1"=20'  
EET  
F 1  
OIL01

## PROPOSED RETAIL DEVELOPMENT

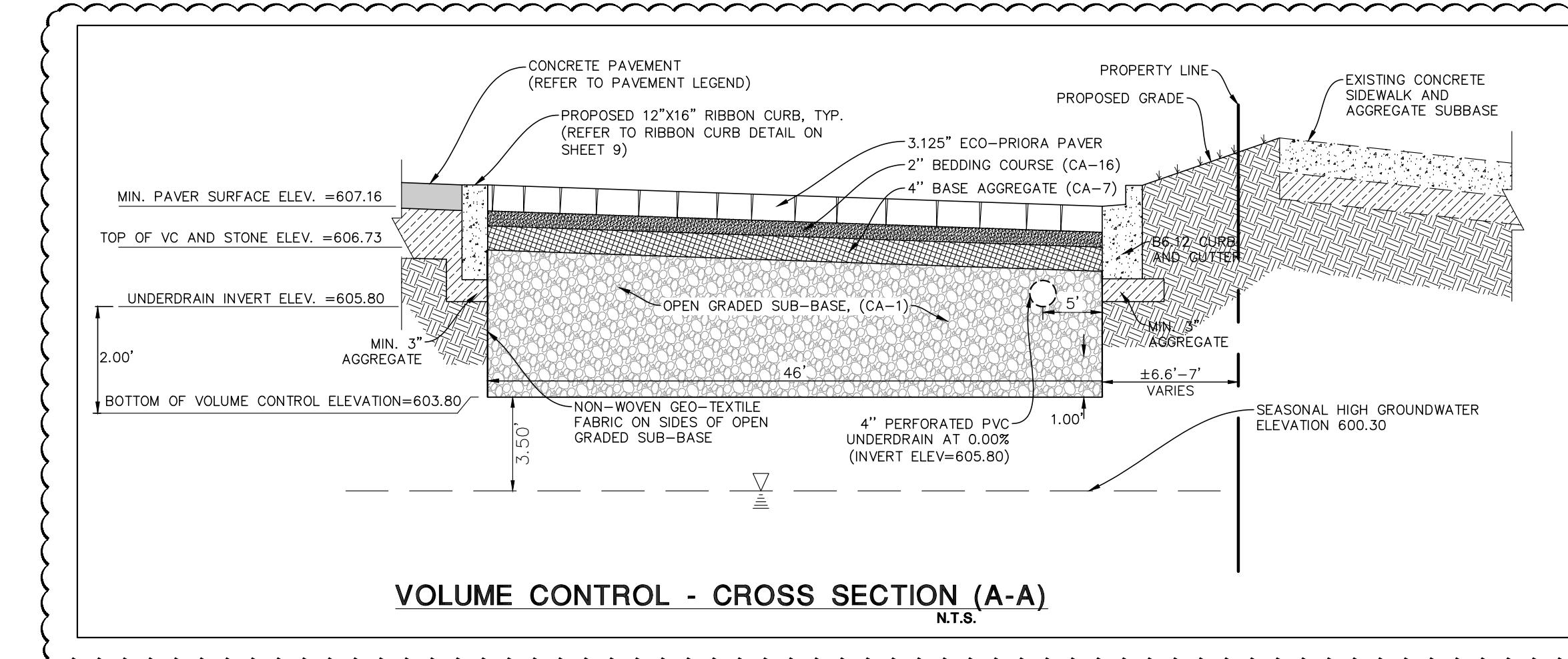
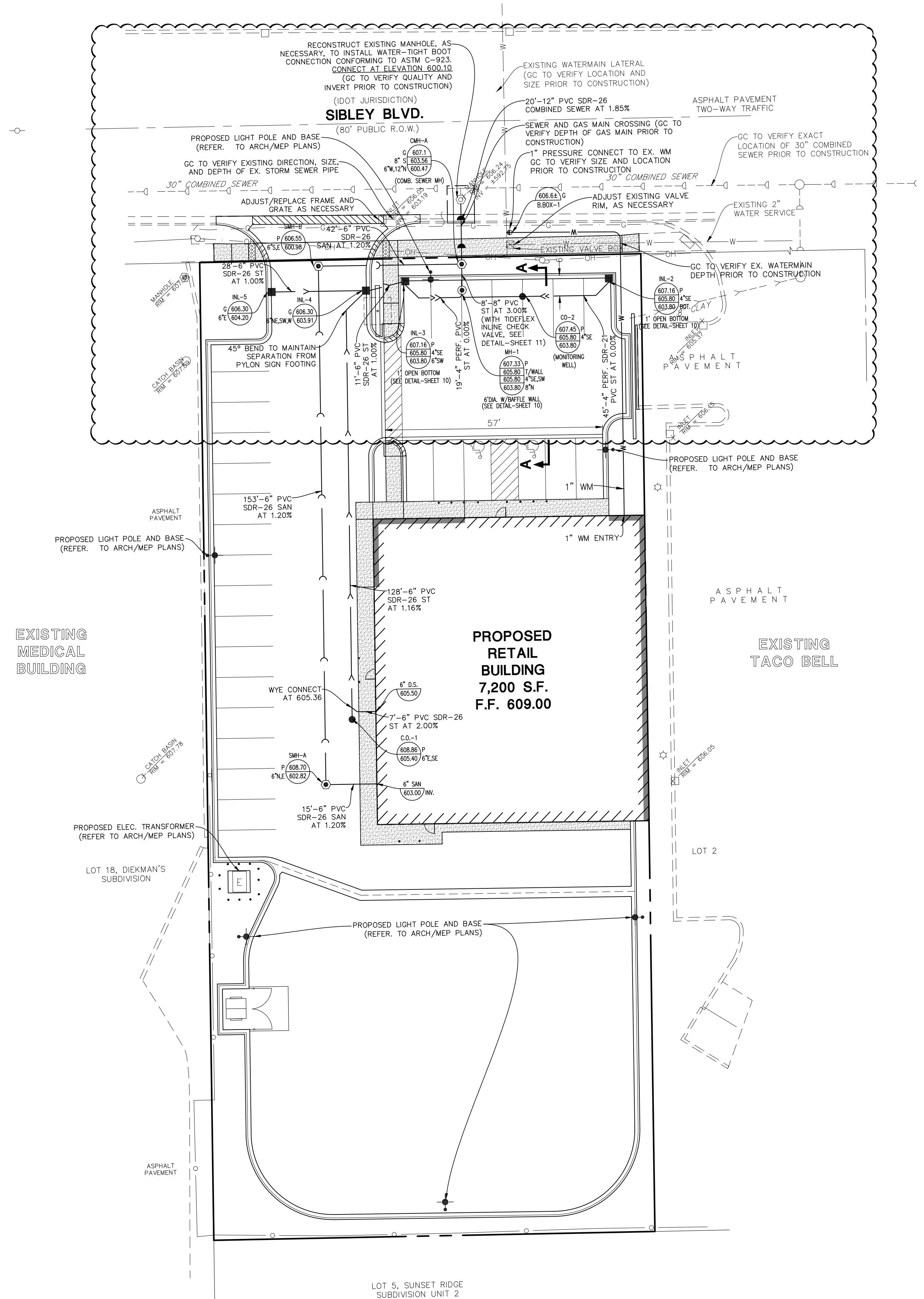
### VILLAGE OF DOLTON, ILLINOIS

#### GRADING PLAN



- GRADING NOTES:**
- RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
  - PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
  - ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
  - MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
  - CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
  - THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN BY THE CONTRACTOR. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
  - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
  - ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
  - EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 20, 2019. CONTRACTOR SHALL CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
  - TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

GRADING PLAN LEGEND	
792.0	PROPOSED 1 FOOT CONTOURS
F.F.	PROPOSED SPOT ELEVATION
G/F	PROPOSED FINISHED FLOOR ELEVATION
P	PROPOSED GRADE AT FOUNDATION
T/C	PROPOSED PAVEMENT ELEVATION
T/W	PROPOSED TOP OF CURB
T/WALL	PROPOSED TOP OF WALK
M/E	PROPOSED TOP OF WALL
G	MEET EXISTING
	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
P & T/W	PAVEMENT FLUSH WITH SIDEWALK GRADE
T/F	PROPOSED TOP OF FOUNDATION
	PROPOSED DITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	OVERFLOW RELIEF SWALE
	PROPOSED RIDGE LINE
	PROPOSED DEPTH OF PONDING
	RETAINING WALL
	PROPOSED SWALE LOW POINT
	PROPOSED SWALE SUMMIT



## VOLUME CONTROL - CROSS SECTION (A-A)

SCALE:  $1'' = 20'$

## **PROPOSED RETAIL DEVELOPMENT**

**Manhard**

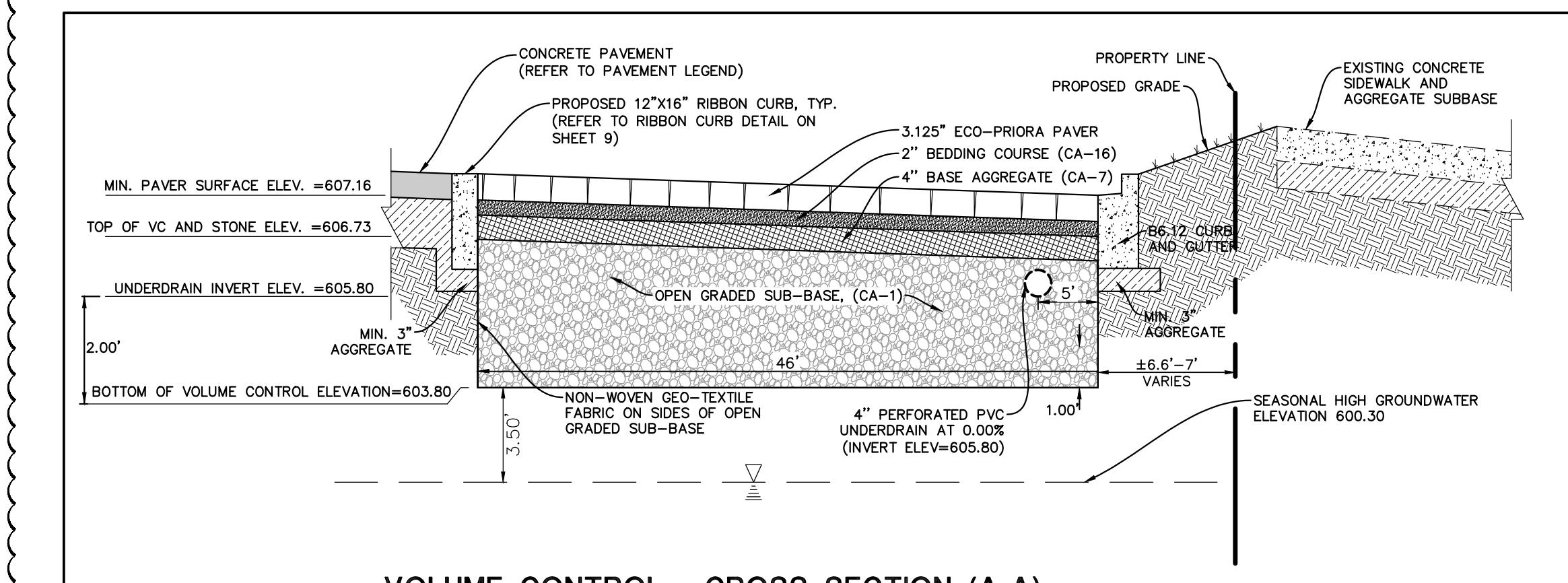
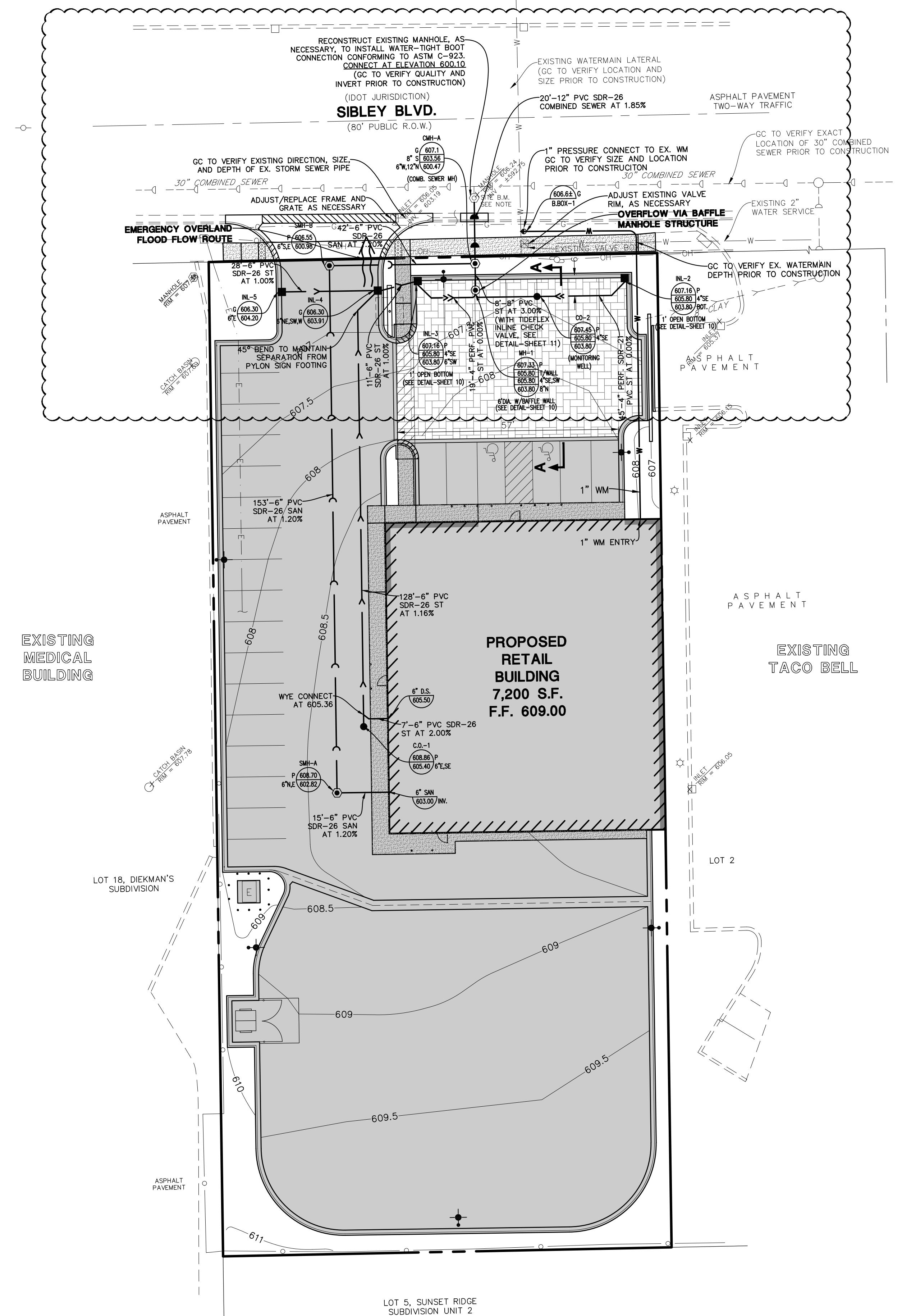
אנו למדנו

<u>STORM MANHOLE TABLE</u>			
MANHOLE LABEL	SIZE (IN.)	TYPE	FRAME AND GRATE
MH-1	72"	PRECAST CONCRETE OUTLET CONTROL STRUCTURE WITH BAFFLE WALL	(2) NEENAH R-1772 CLOSED LID
INL-2	24"	PRECAST CONCRETE W/ 1' DIA. OPEN BOTTOM	NEENAH R-2502-C
INL-3	24"	PRECAST CONCRETE W/ 1' DIA. OPEN BOTTOM	NEENAH R-2502-C
INL-4	24"	PRECAST CONCRETE	NEENAH R-2502-C
INL-5	24"	PRECAST CONCRETE	NEENAH R-2502-C

1. REFER TO SHEET 12—CONSTRUCTION DETAILS FOR NYOPLAST CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. CLEANOUTS IN PAVEMENT SHALL HAVE PANELLA-TYPE HEAVY DUTY LID

- UTILITY NOTES:**

  1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
  2. BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
  3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
  4. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
  5. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
  6. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
  7. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
  8. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
  9. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
  10. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
  1. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
  2. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
  3. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
  4. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
  5. PROVIDE CONCRETE COLLAR FOR ALL DRAINAGE STRUCTURES IN PAVEMENT, NOT ADJACENT TO CURB. SEE CONCRETE COLLAR DETAIL ON DETAIL SHEET.
  6. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
  7. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
  8. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
  9. ALL D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.



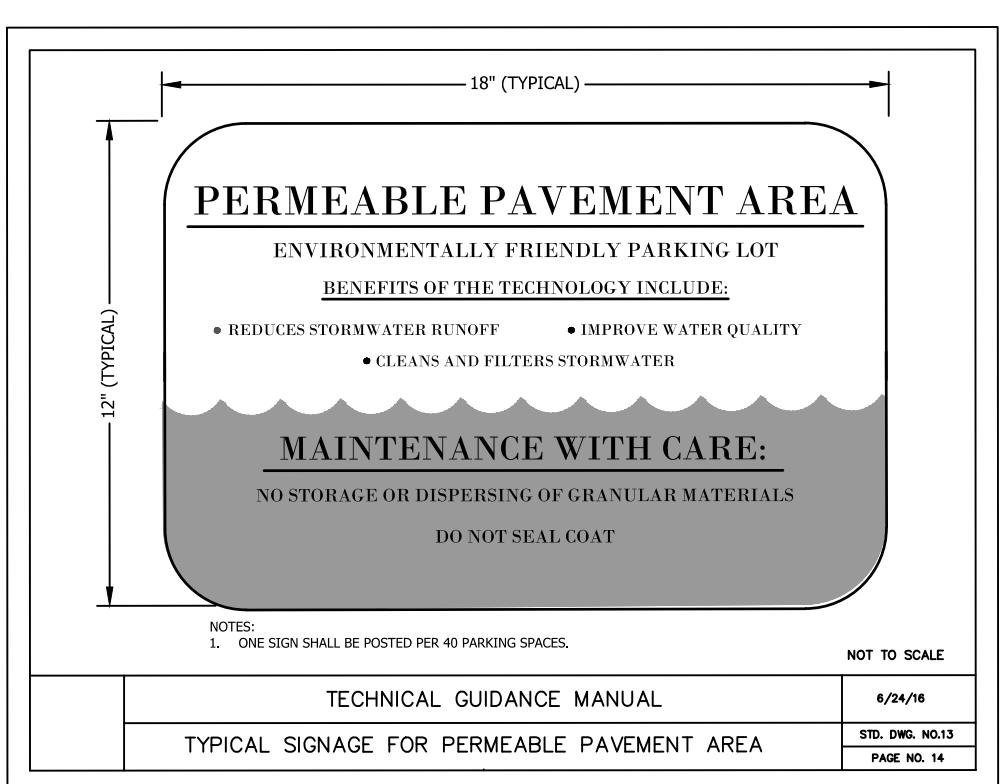
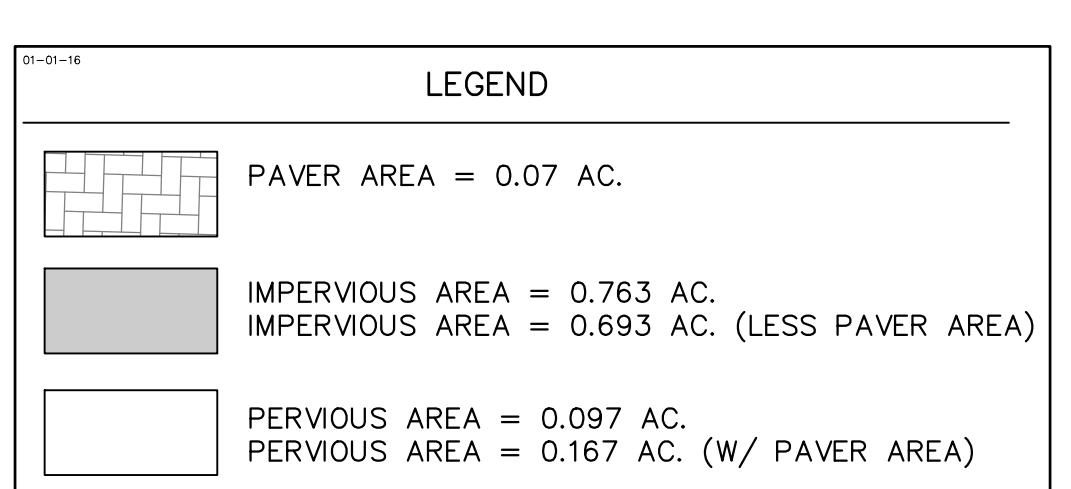
## **PROPOSED RETAIL DEVELOPMENT**

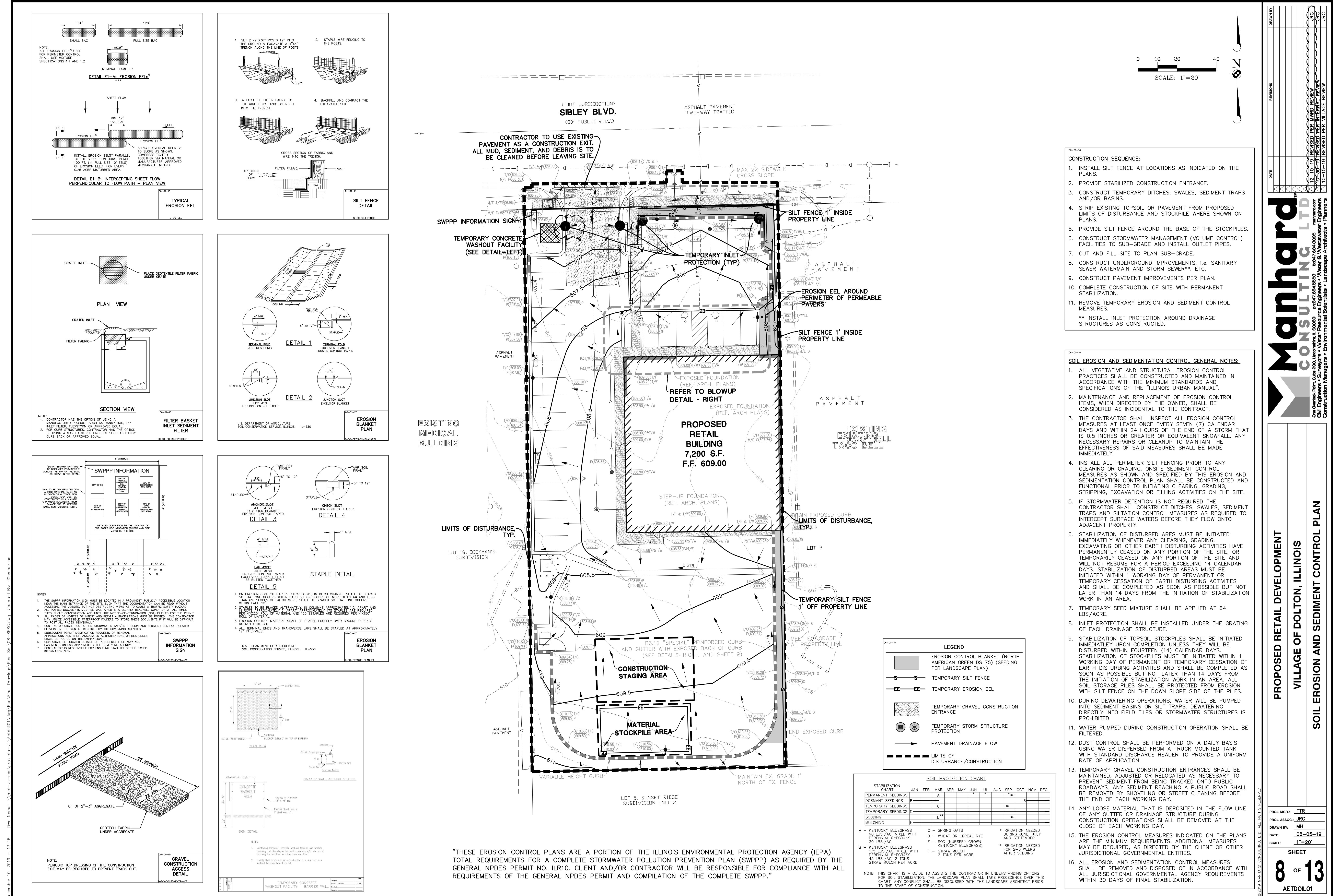
## MWRRD EXHIBIT

## **PROPOSED RETAIL DEVELOPMENT**

01-01-16	
<b>VOLUME CONTROL REQUIREMENT</b>	
SITE AREA	0.86 ACRES
SITE IMPERVIOUS AREA	0.693 ACRES
VOL CONTROL REQUIRED	$\begin{aligned} &= (0.693) * (0.083) \\ &= 0.0575 \text{ AC-FT} \\ &= 2,504.44 \text{ CF} \end{aligned}$
VOL CONTROL PROVIDED	$= 2,716.33 \text{ CF}$

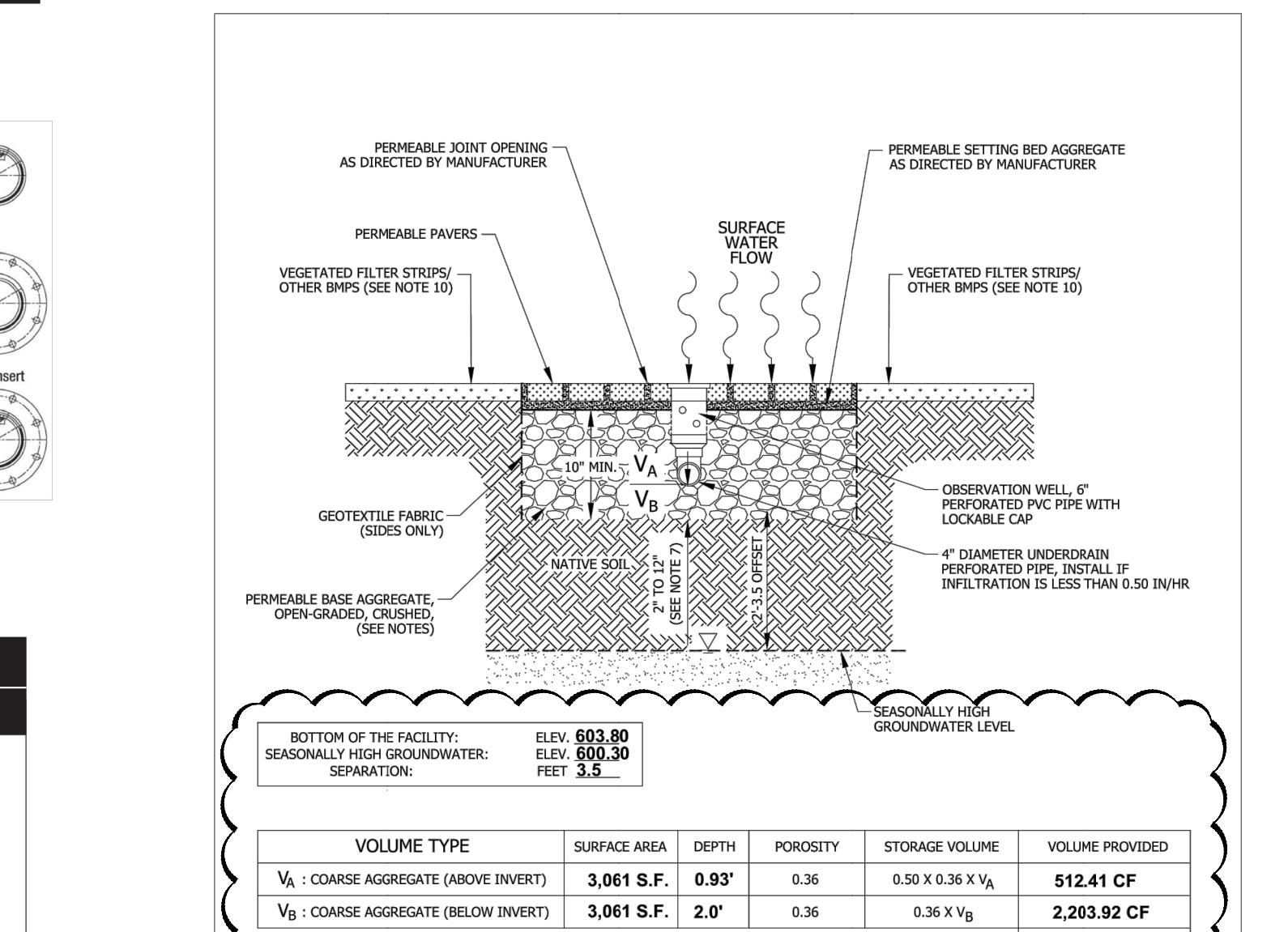
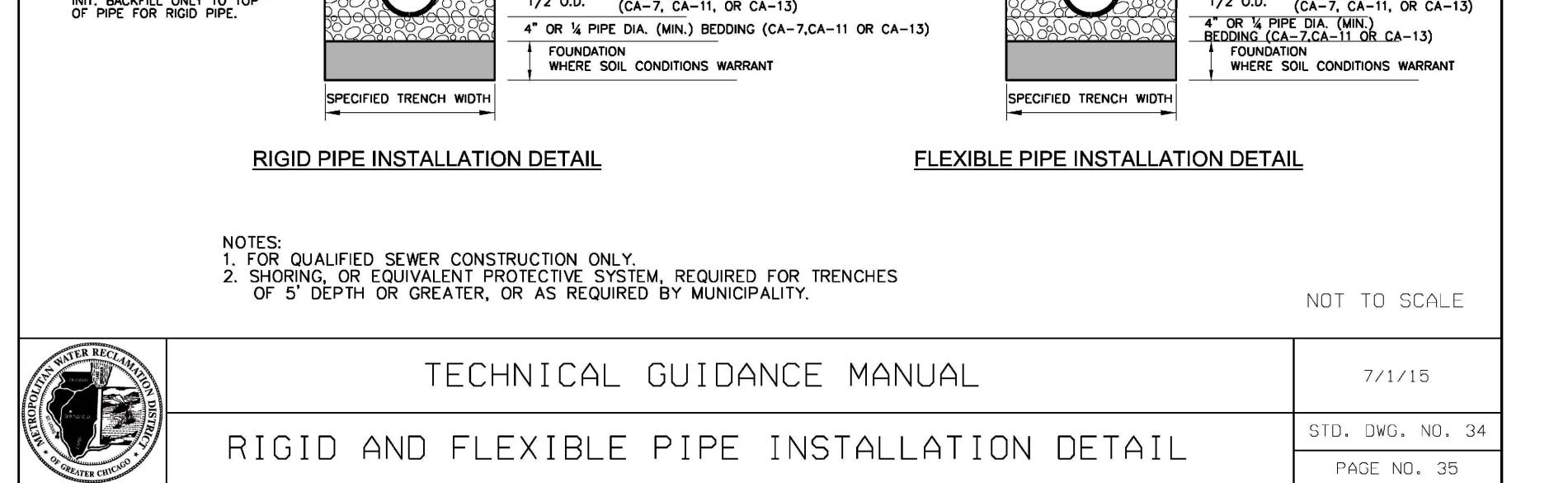
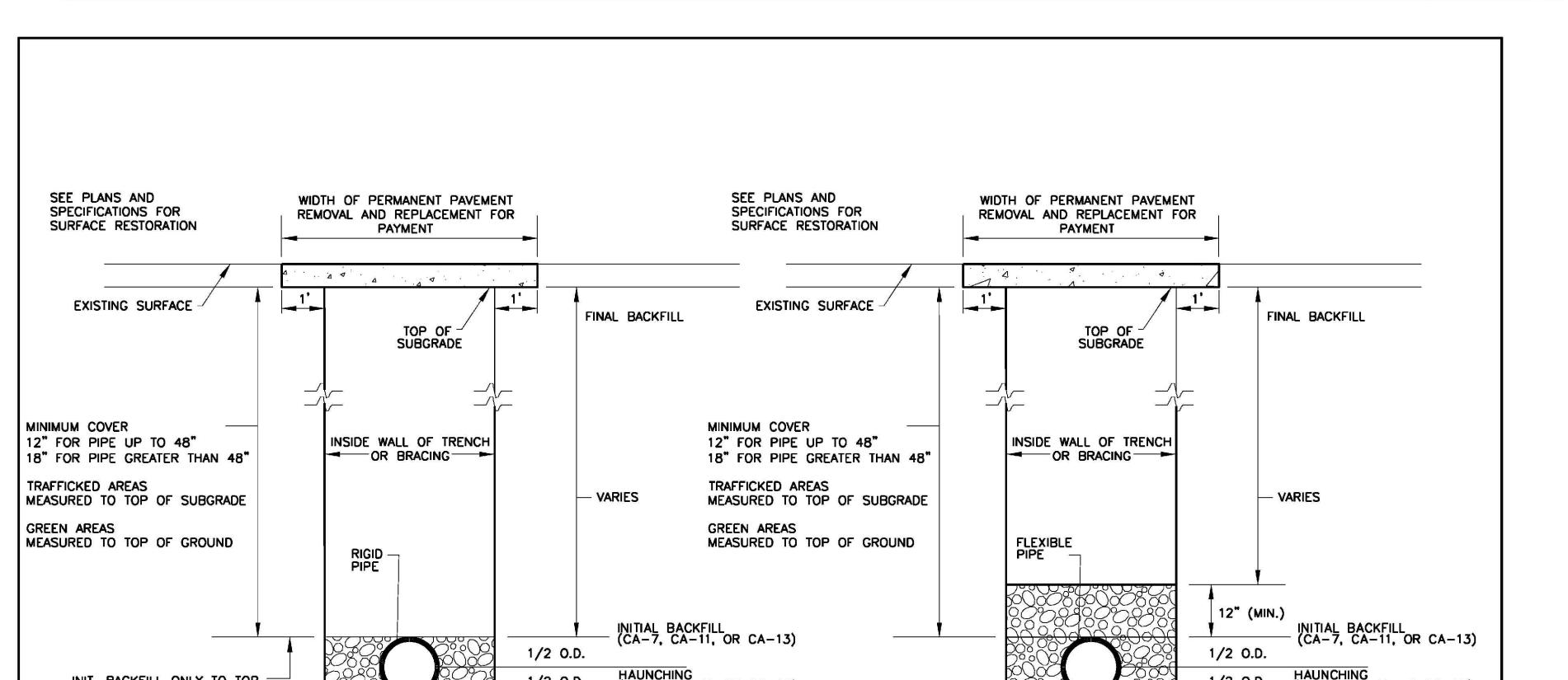
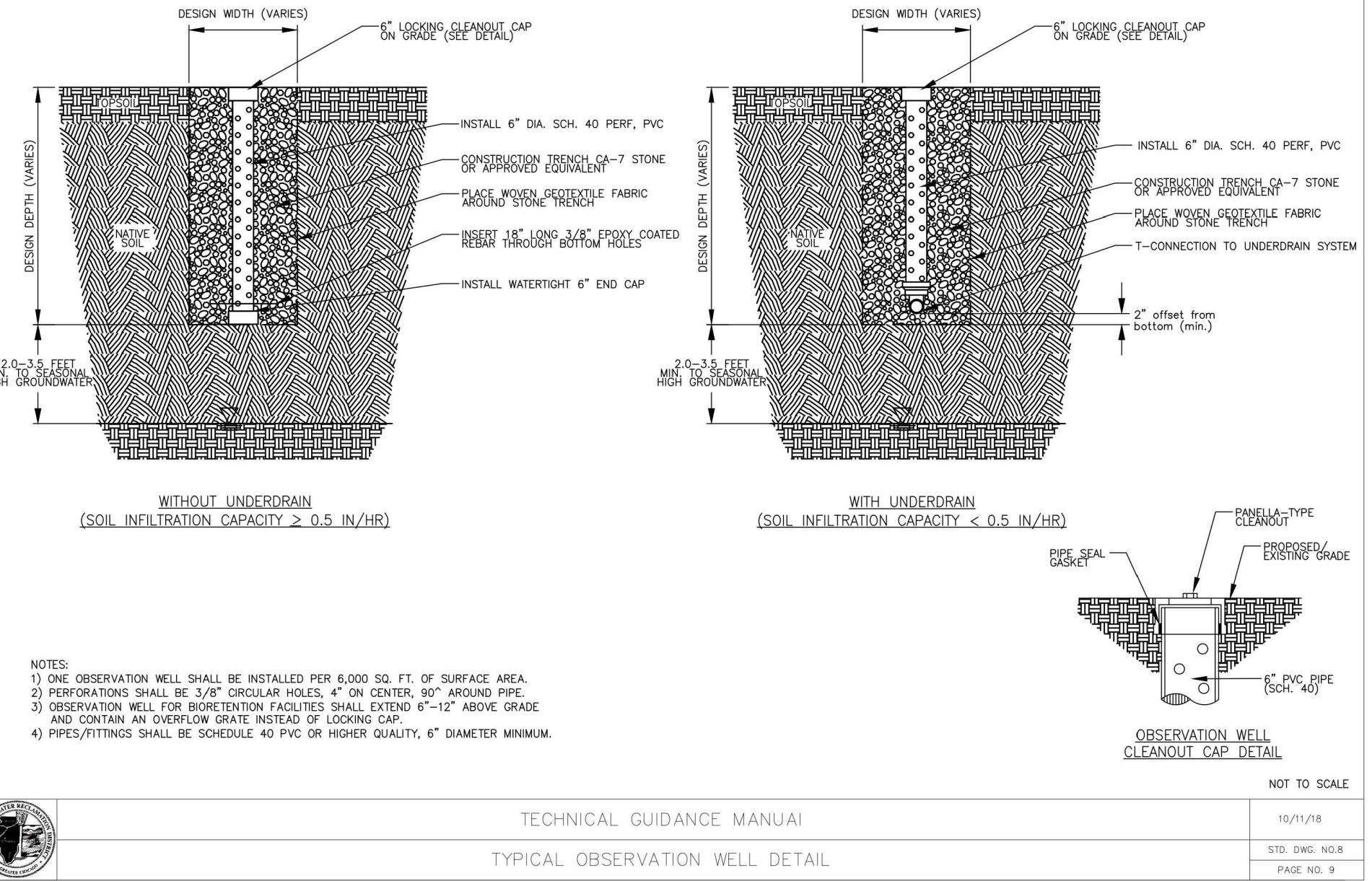
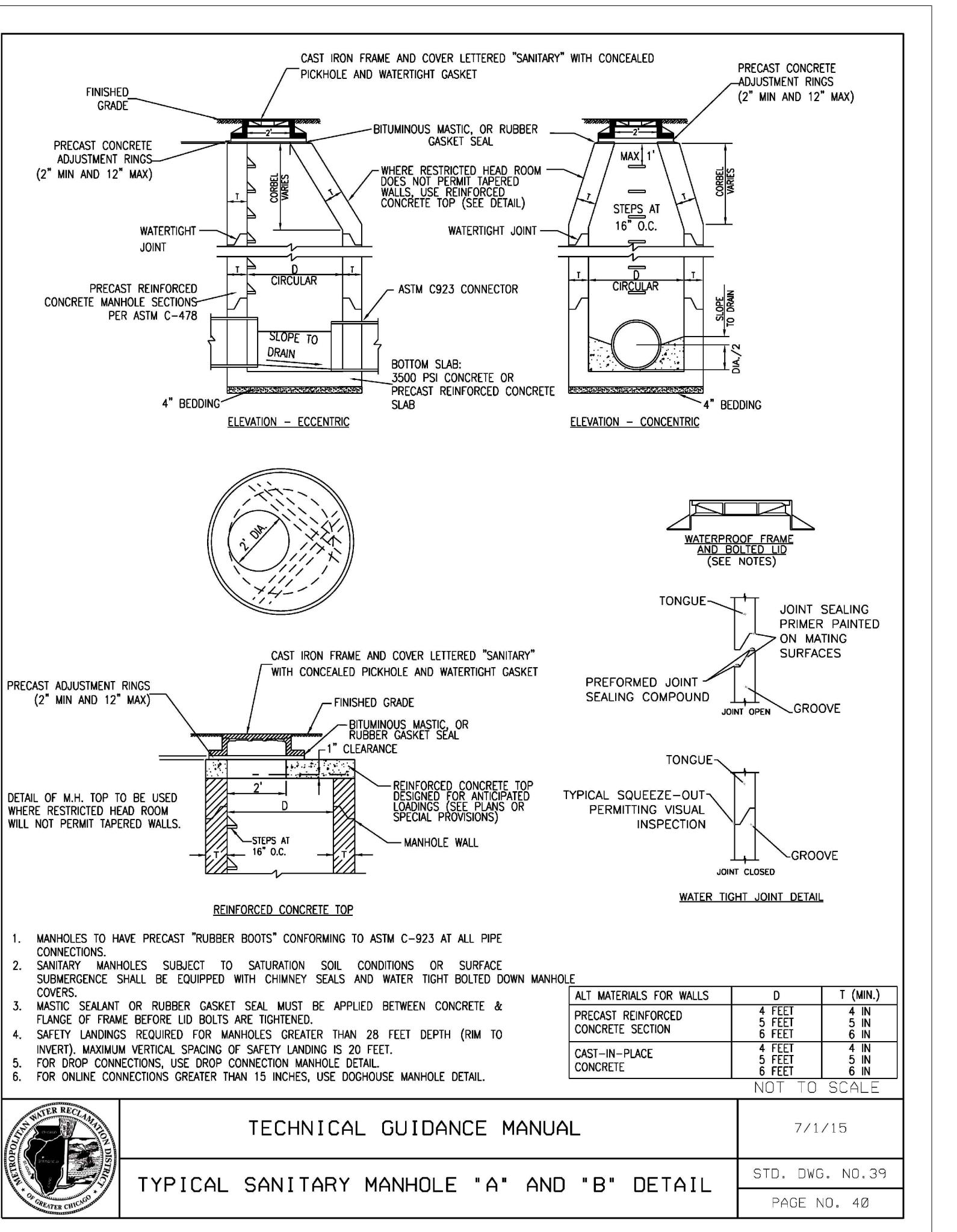
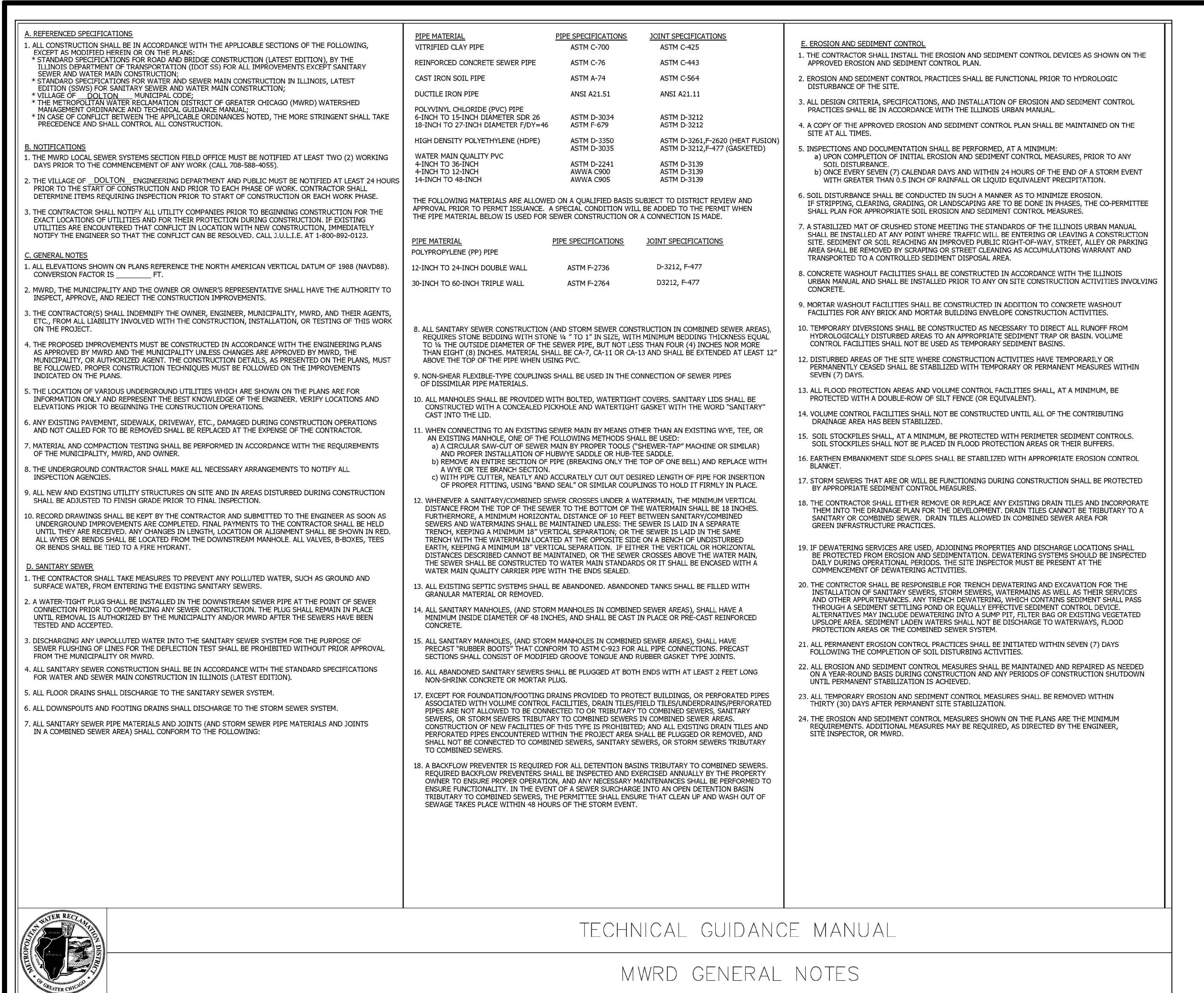
# MAINTENANCE SUMMARY



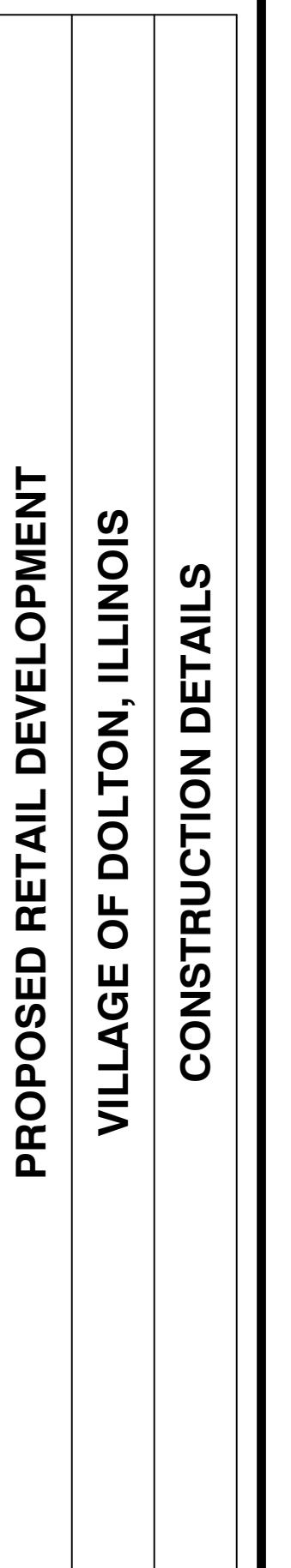
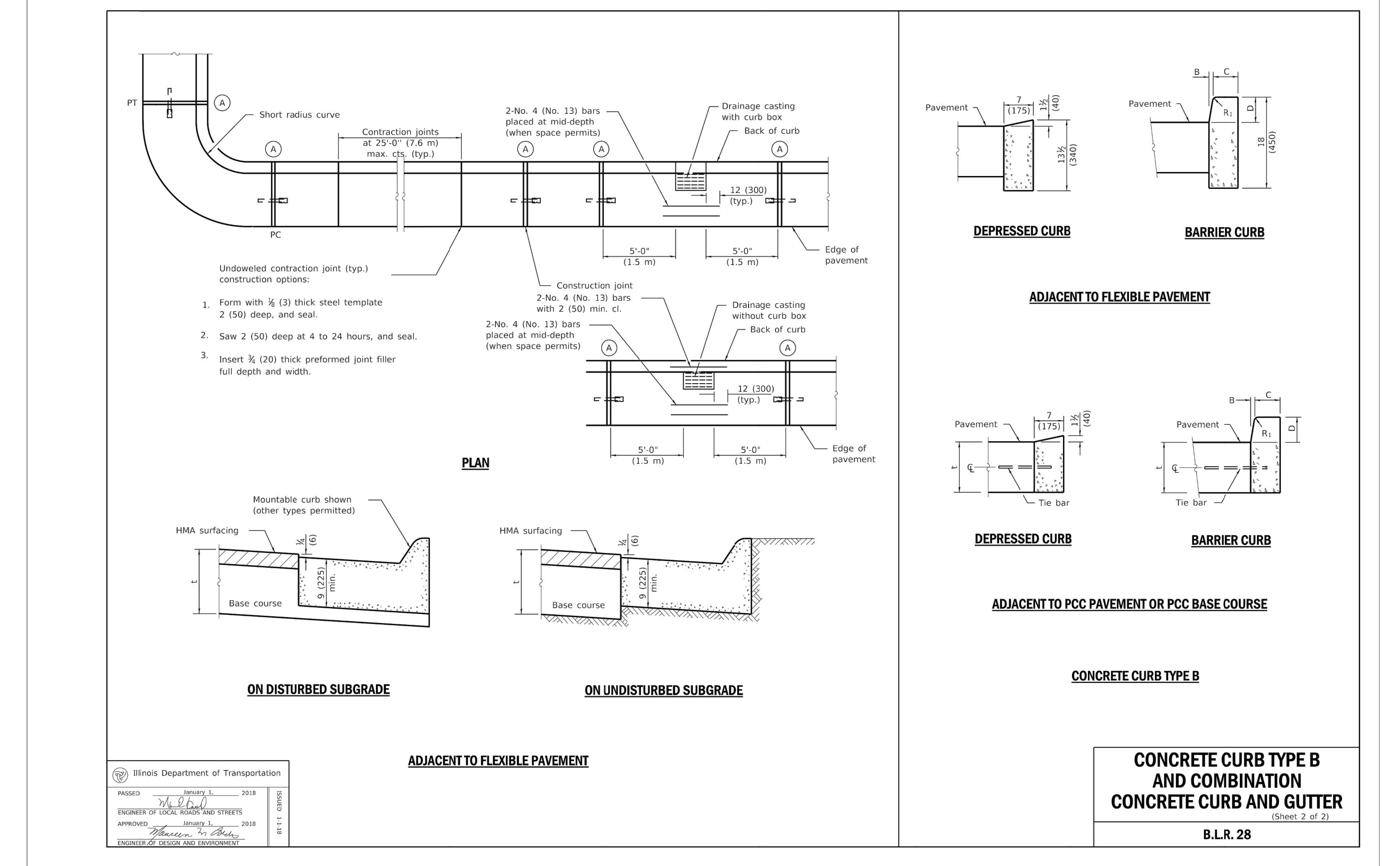
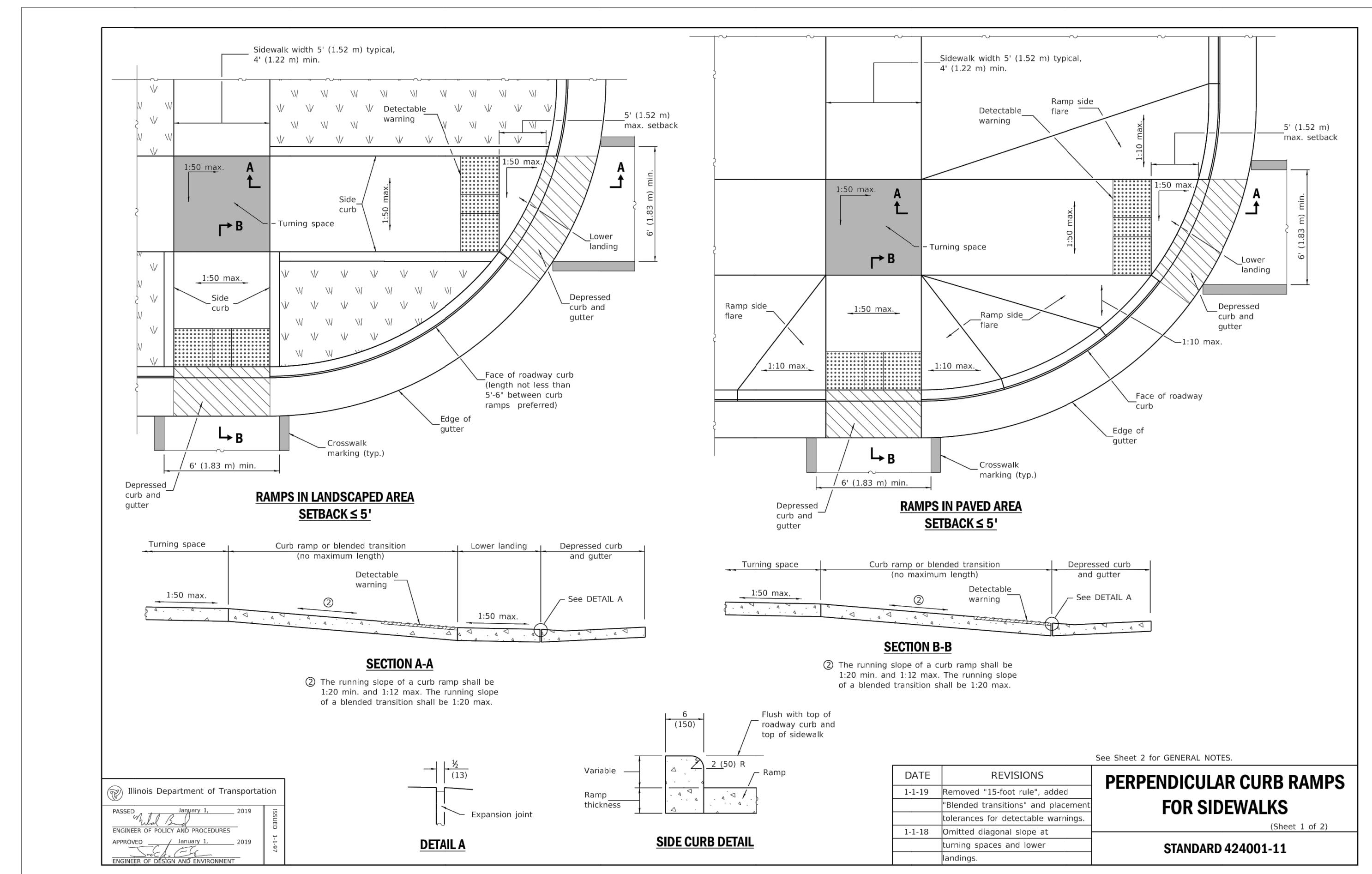
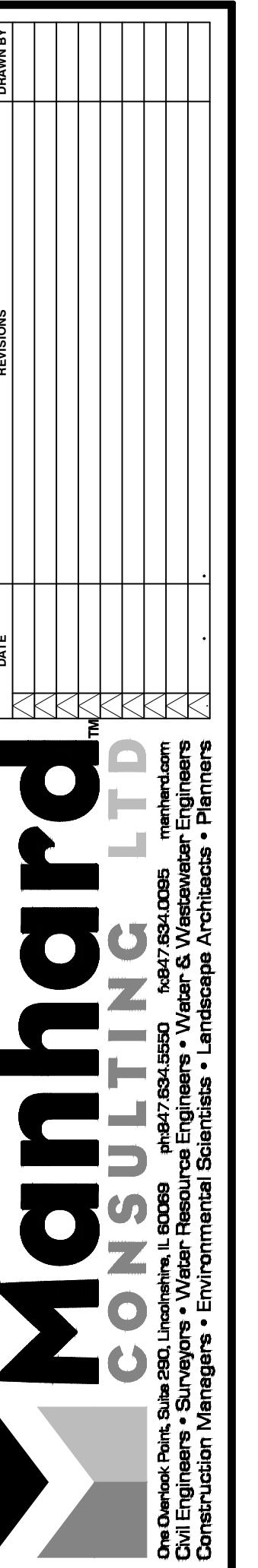
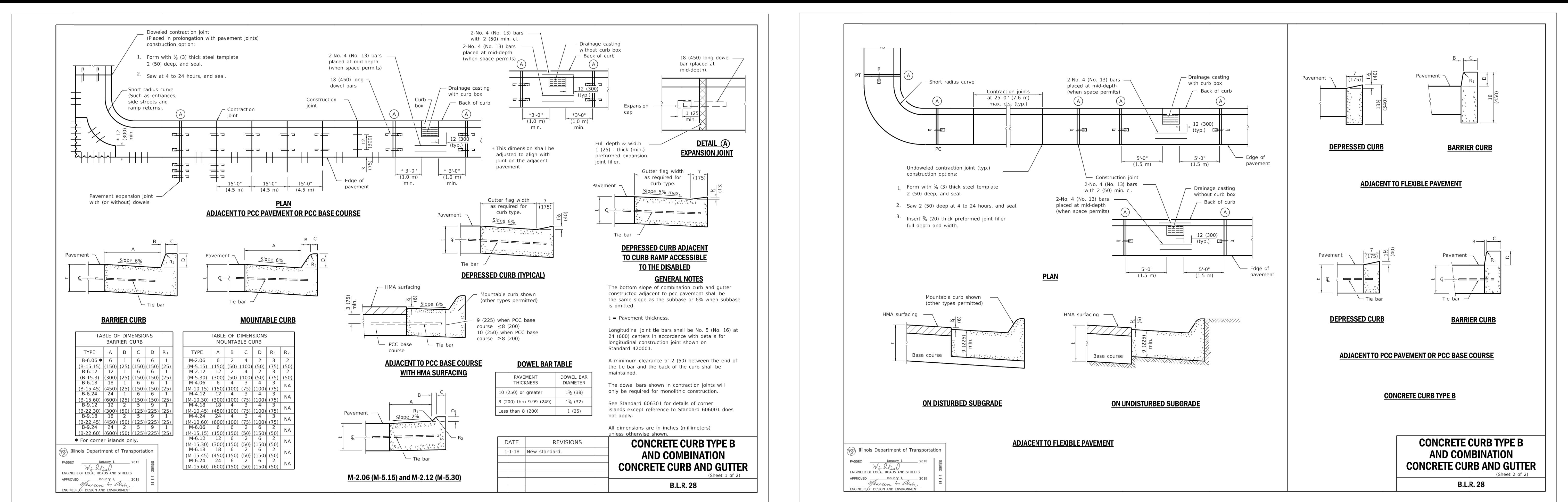








SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PREFERENCE



## MANHARD CONSULTING, LTD. STANDARD SPECIFICATIONS

### GENERAL CONDITIONS

- CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR's covenants stated herein.
- TERMS OF CONTRACT**
- a. "CLIENT" shall mean AETNA DEVELOPMENT CORP., which is the person or entity with whom Manhard Consulting, Ltd. has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.
  - b. "ENGINEER" shall mean Manhard Consulting, Ltd., a Civil Engineering consultant on the subject project.
  - c. "PPC" or "SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.
  - d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.
  - e. "JURISDICTIONAL GOVERNING ENTITY" shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or review is required for any aspect of the subject project.

### INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determinate so as to include minor items usually required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component parts. It is the intent of the CONTRACTOR that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied under subcontracted work. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be referred to such recognized standards.

### INTERPRETATION OF PLANS AND SPECIFICATIONS

- a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.
- b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.
- c. Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER's attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omission in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

### GOVERNING BODIES

All work to be performed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNING ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNING ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

### LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and nature of such facilities and utilities. All locations where detailed positions of these facilities and utilities have been noted on the PLANS and SPECIFICATIONS shall be determined by the CONTRACTOR and located to the best of his ability, the horizontal location, elevation, size and material (if appropriate) of the facility and utility. The CONTRACTOR shall notify the ENGINEER at least 48 hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER reserves no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.

It shall be the CONTRACTOR's responsibility prior to construction, to notify all Utility Companies of the intent to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

### UNSUITABLE SOILS

The soils to be used shall be selected by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements shown. The CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

### PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage. Trees shall not be removed unless requested to do so in writing by the CLIENT.

### NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or utility companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

### TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNING ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, request the CONTRACTOR to furnish traffic control under these circumstances in which it is necessary for the protection of life and property. Emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT's construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

### WORK AREA

The CONTRACTOR, his agents and employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or work area specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

### UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of the contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT and CONTRACTOR.

### RESTORATION

It is the intent of these SPECIFICATIONS that cleanup and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the Project, or when directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drains, tiles, water mains, etc.

### CLEANING UP

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR's trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

### SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. The CONTRACTOR shall also be responsible for the safety of his employees and the safety of the public. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR's or the general public's safety in, or near the construction site.

### HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby waives any right of common law or statutory action to indemnify, release, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes, losses, damages, expenses, including but not limited to, attorney fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used, include but not be limited to (1) injury or damage occurring by reason of the failure or use or misuse of any rigging, blocking, scaffolding or any and all other kinds of items of equipment, whether or not caused by the CONTRACTOR or by another party, (2) all attorneys' fees and costs incurred in bringing an action to enforce the terms of this indemnity, (3) all expenses incurred by the indemnified party, its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, the indemnification obligation shall be limited in any way by limitation on the amount of type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

### INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and his consultants, agents and representatives as additional insureds under such insurance policy; provided that any party using or relying on these plans having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER's other applicable coverage is considered secondary. Such insurance shall not limit any liability of any party providing work or services or providing materials.

### THIRD PARTY BENEFICIARY

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

Note: These Specifications are for Northern Illinois.

## DETAILED SPECIFICATIONS

### I. DEMOLITION

The CONTRACTOR shall coordinate with the utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company for their service. The CONTRACTOR is responsible for the removal of all utility lines.

Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials to be retained to be relocated on this plan, all other construction materials shall be new.

Prior to demolition occurring, all erosion control devices are to be installed.

All existing utility lines and conduits located under proposed buildings shall be removed and properly backfilled. All utility lines and conduits located under drives, on-site roads, parking lots or walkways shall be filled with a flexible backfill and end plugged. All existing structures shall be removed. All existing utility lines located under landscape areas shall be left in place and plaged at all structures.

The CONTRACTOR is responsible for demolition, removal and disposal in a location approved by all JURISDICTIONAL GOVERNING ENTITIES of all structures, pads, walls, flumes, foundations, road, parking facilities, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All demolition shall be in accordance with all applicable federal, state and local requirements. All facilities to be removed shall be undercut to suitable material and brought to grade with suitable compacted fill material per the specification.

The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

Electrical, telephone, cable, water, fiber optic cable and/or gas line needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company. CONTRACTOR must protect the ASTC at all times with fencing, barricades, enclosures, and other appropriate best management practices.

Continuous access shall be maintained for surrounding properties at all times during demolition.

All fire access lanes within the project area shall remain in service, clean of debris, and accessible for use by emergency vehicles.

The CONTRACTOR shall coordinate water main with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate/phase all construction activity within proximity of the building and utility interruptions with the facility manager to minimize disturbance and inconvenience to facility operations.

CONTRACTOR may limit saw-cut and pavement removal to only those areas where it is required as shown on these construction plans, however if any damage is incurred on any of the surrounding pavement, etc. the CONTRACTOR shall be responsible for its removal and repair.

Any existing wells encountered shall be exposed and sealed '3' below proposed grade by the CONTRACTOR in accordance with Section 920.120 (latest edition) of the Illinois Water Construction Code, Department of Public Health, and all applicable local rules and regulations. CONTRACTOR is responsible for obtaining all permits required by the JURISDICTIONAL GOVERNING ENTITIES for abandoning existing wells.

Any existing tanks and grease traps encountered shall have all liquids and solids removed and disposed of by a licensed commercial hauler in accordance with JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable materials or removed from the site and disposed of by the CONTRACTOR.

Voids left by any item removed under any proposed building, pavement, walk, etc. or within 24" thereof shall be filled and compacted with suitable materials by the CONTRACTOR.

The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

Any material containing asbestos found within existing structures shall be removed from the site and disposed of by the CONTRACTOR in accordance with County, State and Federal regulations.

CONTRACTOR shall remove and/or relocate daily a program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control measures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNING ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water lines as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

The locations of all existing utilities shown on this plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be taken as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for any damage to any structures or property unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor components. It is the intent of the CONTRACTOR to not affect any materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS. CONTRACTOR shall supply any missing information as required.

The CONTRACTOR is responsible for removing the existing irrigation system in the areas of proposed improvements. The contractor shall cap the existing irrigation system to remain such that the remaining system shall continue to function properly.

The parking lot shall be completed in sections such that it does not interrupt the facility operations. The CONTRACTOR shall coordinate with the construction manager for work to be performed.

**II. EARTHWORK**

### STANDARDS

This work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

**SOIL BORING DATA**

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the borehole locations, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

### EARTHWORK CALCULATIONS AND CROSS SECTIONS

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigations as necessary and his own calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction to tolerances and construction methods that are beyond the control of the ENGINEER.

### CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

### TOPSOIL STRIPPING

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

### TOPSOIL READING

Upon completion of topsoil removal, the CONTRACTOR shall apply seed and fertilizer to all stripped areas in accordance with the landscape drawings and specifications provided by the CLIENT.

### SEEDING

Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of six inches (6") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

### SODDING

Upon completion of topsoil respread, the CONTRACTOR shall install sod to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

### EXCAVATION AND EMBANKMENT

Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed (moisture conditioned if necessary) and compacted in the embankment areas. The CONTRACTOR shall include all dewatering, temporary ditching and culverts necessary to complete the excavation and embankment.

Specifically included in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches; handling of seep soil, etc., and all work required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling of roads, building pads and parking lots with the work to limits of 10' & grades as shown on the plans. He shall be responsible for obtaining permission in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soils report or are approved by the CLIENT, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any underdraining that may be required).

### EXCAVATION AND EMBANKMENT

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the substrate and replaced with an impermeable clay liner, including adjacent to and under stone sewer lines and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof such that the lakes will maintain the proposed normal water level and that leakage does not exceed 1/8 inch per week.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the construction of the embankments shall be used in the backfill.

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils test firm employed by the CLIENT shall determine which soils are unsuitable. Materials in their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site. For purposes of definition

**PROPOSED RETAIL DEVELOPMENT**

**VILLAGE OF DOLTON, ILLINOIS**

**LANDSCAPE PLAN AND PLANTING DETAILS**

**MANHARD CONSULTING LTD.**

**PLANT SCHEDULE**

CATEGORY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES	1	Ginkgo biloba Autumn Gold TM	Maidenhair Tree	2.5" Cal.	B&B
EVERGREEN TREES	10	Thuja occidentalis Holmstrup	Holmstrup Cedar	6 ft.	B&B
ORNAMENTAL TREES	1	Amelanchier canadensis Autumn Brilliance	Autumn Brilliance Serviceberry	6 ft.	B&B
VIB BLA	2	Viburnum prunifolium	Blackhaw Viburnum	6 ft.	B&B
DECIDUOUS SHRUBS	8	Cephaelanthus occidentalis Sugar Shack	Buttonbush	5 gal.	
FOT GAR	3	Fothergilla gardenii	Dwarf Fothergilla	5 gal.	
RIB GRE	10	Ribes alpinum Green Mound	Green Mound Alpine Currant	5 gal.	
SOR SEM	14	Sorbaria sorbifolia Sem	Sem Ash Leaf Spirea	5 gal.	
SPI FLA	13	Spiraea japonica Neon Flash	Neon Flash Spirea	5 gal.	
VIB BLU	16	Viburnum dentatum Christs TM	Blue Muffin Arrowwood	5 gal.	
EVERGREEN SHRUBS	14	Juniperus chinensis Kallays Compact	Kallay Compact Pfitzer Juniper	5 gal.	
JUN AND	6	Juniperus horizontalis Compacta	Andorra Compact Juniper	5 gal.	
TAX EVE	9	Taxus x media Everlow	Yew	5 gal.	
ORNAMENTAL GRASSES	9	Calamagrostis x acutiflora Karl Foerster	Feather Reed Grass	3 gal.	
PEN HAM	6	Pennisetum alopecuroides Hameln	Hameln Fountain Grass	3 gal.	
SHRUB AREAS	88	Euonymus fortunei Emerald Gaiety TM	Emerald Gaiety Euonymus	flat	
GER CIN	63	Geranium cinereum Ballerina	Ballerina Hardy Geranium	flat	
HEM HAP	111	Hemerocallis x Happy Returns	Happy Returns Daylily	1 gal.	

**NOTE:**  
There are no planting requirements listed in the Village ordinance for the Village of Dolton.  
However, the landscaping complies with the Village Comprehensive Plan for the Sibley Corridor including the following:  
1) Landscaping provided to soften the building facades  
2) Screening buffering parking lot areas

**PLANTING DETAILS**

**1 DECIDUOUS TREE PLANTING** 1/4" = 1'-0" 32 9343.33-20

**2 CONIFER TREE PLANTING** 1/4" = 1'-0" 32 9343.46-01

**3 SHRUB PLANTING DETAIL** 3/4" = 1'-0" 32 9333.16-05

**4 ORNAMENTAL GRASS PLANTING** 1" = 1'-0" 32 9313-01

**5 PERENNIAL / ANNUAL PLANTING** 1" = 1'-0" 32 9313-02

**6 CONTINUOUS MULCH EDGING** 1" = 1'-0" 32 9113.26-01

**REVISIONS**  
**DATE**  
**10-25-19 REVISED PER SITE PLAN ADJUSTMENTS**

**DRAWN BY**  
**JBD**

**PROJ. MGR.: JRC**  
**PROJ. ASSOC.: JBD**  
**DRAWN BY: JBD**  
**DATE: 9-13-19**  
**SCALE: 1"-20'**

**SHEET**  
**L1 OF L2**  
**AETDOL01**

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# GENERAL PLANTING SPECIFICATIONS:

## PART 1 - GENERAL

### 1-01 DESCRIPTION:

- A. Provide trees, shrubs, perennials and groundcovers as shown and specified. This work includes:
  - 1. Spreading of topsoil or soil preparation
  - 2. Trees, shrubs, perennials and groundcovers
  - 3. Planting mixes
  - 4. Mulch and planting accessories
  - 5. Fertilizer and herbicide
  - 6. Maintenance
  - 7. Warranty of plant material
- B. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the Owner or his/her representative.

### 1-02 QUALITY ASSURANCE:

- A. Comply with site work requirements
- B. Plant names indicated must comply with 'Standardized Plant Names' as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties which are not listed should conform with those generally accepted by the nursery trade. Stock should be legibly tagged.
- C. All plant materials shall conform to the 'American Standards for Nursery Stock' (ASNS), latest edition, published by the American Association of Nurserymen, Washington, D.C.
- D. All plant material shall be grown and supplied within a 50 mile radius of the project for a minimum of two full growing seasons.
- E. Adhere to sizing requirements as listed in the plant list and/or bid form for the project. A plant shall be measured in its natural standing position.
- F. Stock that is furnished shall be at least the minimum size shown. With permission of the landscape architect, substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the landscape architect, showing that the plant specified is not available. Requests for approval of substitute plant material shall include common and botanical names and size of substitute material. Only those substitutions of at least equivalent size and character to that of the specified material will be approved. Stock which is larger than that which is specified is acceptable with permission of the landscape architect, providing there is no additional cost and that the larger plant material will not be cut down in order to conform to the size indicated.
- G. All shrubs shall be dense in form. Shrub liners do not meet these specifications. Shrubs specified by height shall have a spread that is equal to the height measurement. Shrubs which are specified by spread shall exhibit the natural growth habit of the plant by having a greater spread than height.
- H. All plant materials are subject to inspection and approval. The landscape architect and Owner reserve the right to select and tag all plant material at the nursery prior to planting. The landscape architect and Owner reserve the right to inspect plant material for size and condition of root systems, the presence of insects and diseases, injuries and latent defects (due to Contractor negligence or otherwise), and to reject unacceptable plant material at any time during progress of the project.
- I. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements of plant list.

### 1-03 DELIVERY, STORAGE & HANDLING:

- A. Fertilizer shall be delivered in original, unopened and undamaged packaging. Containers shall display weight, analysis and manufacturer's name. Store fertilizer in a manner that will prevent wetting and deterioration.
- B. Take all precautions customary concerning proper trade practice in preparing plants for transport. Plants shall be dug, packed and transported with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the landscape architect. All plants must be protected from drying out. If plant material cannot be planted immediately upon delivery, said material should be properly protected in a manner that is acceptable to the landscape architect. Heeled-in plants must be watered daily. No plant shall be bound with rope or wire in a manner that could strip bark or break or shear branches.
- C. Plant material transported on open vehicles should be covered with a protective covering to prevent wind burn.
- D. Dry, loose topsoil shall be provided for planting bed mixes. Muddy or frozen topsoil is unacceptable as working with medium in this condition will destroy its structure, making root development more difficult.

### 1-04 PROJECT CONDITIONS:

- A. Notify landscape architect at least seven (7) working days prior to installation of plant material.
- B. It shall be the Contractor's responsibility to locate and protect all existing above and below ground utilities. Utilities can be located and marked (in Illinois) by calling J.U.L.I.E. at (800)892-0123.
- C. The Contractor shall provide, at his/her own expense, protection against trespassing and damage to seeded areas, planted areas, and other construction areas until the preliminary acceptance. The Contractor shall provide barricades, temporary fencing, signs, and written warning or policing as may be required to protect such areas. The Contractor shall not be responsible for any damage caused by the Owner after such warning has been issued.
- D. The Contractor shall be responsible for the protection of crowns, trunks and roots of existing trees, plus shrubs, lawns, paved areas and other landscaped areas that are to remain intact. Existing trees, which may be subject to construction damage, shall be boxed, fenced or otherwise protected before any work is started. The Owner desires to preserve those trees within and adjacent to the limits of construction except those specifically indicated to be removed on the Drawings. The contractor shall erect protective fencing and tree armor at locations indicated on the drawings and around all trees on site which are to be preserved. Protective fencing shall be erected between the limits of construction and any tree preservation areas shown on the Drawings.
- E. A complete list of plants including a schedule of sizes, quantities and other requirements is shown on the Drawings and on the bid form. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

### 1-05 PRELIMINARY ACCEPTANCE:

- A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include, but is not limited to: mowing and edging turf, pulling weeds, watering turf and plant material and annual flower maintenance.

### 1-06 WARRANTY:

- A. All plant material (excluding annual color), shall be warranted for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative. Plant materials will be warranted against defects including death and unsatisfactory growth, except for defects resulting from abuse or damage by others, or unusual phenomena or incidents which are beyond the control of the Contractor. The warranty covers a maximum of one replacement per item.

## PART 2 - PRODUCTS

### 2-01 PLANT MATERIALS:

- A. Plants: Provide typical of their species or variety, with normal, densely developed branches and vigorous, fibrous root systems. Only sound, healthy, vigorous plants which are free from sunscald injuries, disfiguring knots, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation shall be provided. All plants shall have a fully developed form without voids and open patches.
  - 1. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass a root system necessary for a full recovery of the plant. Root ball sizes shall comply with the latest edition of the 'American Standards for Nursery Stock' (ASNS). Root balls that are cracked or mushroomed are unacceptable.
  - 2. Container grown stock should be grown for an amount of time that is of sufficient length for the root system to have developed enough to hold its soil together, firm and whole. Plants will not be loose in their containers, nor shall they be pot-bound and all container grown stock will comply with the sizes stated on the plant list.
  - 3. No evidence of wounds or pruning cuts shall be allowed unless approved by the Landscape Architect.
  - 4. Evergreen trees shall be branched to the ground. The height of evergreen trees are determined by measuring from the ground to the first lateral branch closest to the top. Height and/or width of other trees are measured by the mass of the plant not the very tip of the branches.
  - 5. Shrubs and small plants shall meet the requirements for spread and/or height indicated in the plant list. The height measurement shall be taken from ground level to the average height of the top of the plant, not the longest branch. Single stem or thin plants will not be accepted. Side branches shall be flushed with growth and have good form to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

### 2-02 ACCESSORIES:

- A. Topsoil:
  - 1. Topsoil shall be fertile, natural topsoil of a loamy character, without admixture of subsoil material. Topsoil shall be reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks and other foreign materials with a pH between 6.5 to 7.0.
- B. Topsoil for seed areas shall be a minimum of 6".
- C. Soil amendments shall be as follows:
  - 1. For trees and shrubs the plant pit will be backfilled with pulverized black dirt.
  - 2. For perennials and ornamental grasses the soil mixture will be as follows: CM-63 General Purpose Peat Based Mix as supplied by Midwest Trading. Top beds with 8" of CM-63 and till into existing beds to a depth of 8". Soil mixtures are available from Midwest Trading. Midwest Trading, St. Charles, IL 60174 (630) 365-1990
- D. Fertilizer:
  - 1. For trees and shrubs use: 14-4-6 briquettes 17 g or equivalent available from Arthur Clesen, Inc. Follow manufacturer's recommendation for application. Arthur Clesen, Inc. 543 Diens Drive, Wheeling, IL 60090 (847)537-2177
  - 2. For turf areas use 6-24-16 Clesen Fairway with micronutrients with minor elements 3.0 % S, .02% B, .05% Cu, 1.0% Fe, .0006% Mo, .10% Mn available from Arthur Clesen or approved equal.
- E. Herbicide:
  - 1. Round-Up or approved equal
- F. Mulch:
  - 1. Bark mulch shall be finely shredded hardwood bark which has been screened and is free of any green foliage, twigs, rocks, sawdust, wood shavings, growth or germination inhibiting ingredients, or other foreign materials. Bark mulch is available from Midwest Trading.
  - 2. Mushroom compost as available from Midwest Trading.
- G. Water:
  - 1. Water service will be available on the site, with the cost of water being paid by the Owner. Transporting of the water from the source to the work areas shall be the responsibility of the Landscape Contractor. All necessary hose, piping, tank truck, etc. shall be supplied by the Landscape Contractor.
- H. Guying:
  - 1. Stakes: 5/8" x 40" steel eye anchor with 4" helix
  - 2. Cable:
    - a. Trees under 5": flex ble 1/8" galvanized aircraft cable, 7x7 strand or approved equal
    - b. Trees 5" and over: flex ble 3/16" galvanized aircraft cable, 7x7 strand or approved equal.
  - 3. Turnbuckles: 5/16", eye and eye, with 4" take-up.
  - 4. Hose: new two-ply reinforced rubber hose, minimum 1/2" I.D.
- I. Tree wrap: Burlap tree wrap 4" wide.
- J. Twine: Soft nursery jute.

## PART 3 - INSTALLATION OF PLANT MATERIAL

### 3-01 FIELD VERIFICATION:

- A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

### 3-02 PREPARATION:

- A. All planting techniques and methods shall be consistent with the latest edition of 'Horticulture Standards of Nurseries, Inc.' and as detailed on these Drawings.
- B. Planting shall be performed by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.
- C. All underground utilities must be located and marked clearly.
- D. Apply Round-Up or approved equivalent to kill any existing vegetation in all areas to be planted. Confirm length of waiting period between chemical application and plant installation with manufacturer. Do not begin planting operations until prescr bed post-application waiting period has elapsed. Take extreme care to avoid chemical drift to adjoining properties of landscape plantings.

- E. Prior to all planting, rototill all areas to be landscaped to prepare for plant installation to a minimum depth of 12". Eliminate uneven areas and low spots. Maintain lines, levels, profiles and contour. Changes in grade are to be gradual. Blend slopes into level areas. Remove all debris, weeds and undesirable plants and their roots from areas to be planted. Remove all concrete slag larger than 2" in diameter.

- F. Topsoil shall be spread over the site at a minimum depth of 6". Those areas which are indicated as prairie or natural areas on the Drawings shall have a minimum topsoil depth of 18".

- G. It shall be the responsibility of the landscape contractor to prepare all seeded areas by disk and raking prior to planting seed. Soil shall be loosened and scarified to a minimum depth of 6". Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

- H. Locate all plant material as indicated or as approved in the field by the Landscape Architect. If obstructions are encountered which are not shown on the drawings, then do not proceed with planting operations until alternate plant locations have been selected.

- I. Planting holes shall be constructed as shown on the planting details. Holes shall be hand dug or machine dug. Great care will be taken to not excavate the hole deeper than the root ball and the diameter shall be a minimum of two times the root ball width. Remove any materials encountered in excavation that may be injurious to plant growth, including stones larger than 2" in diameter or other debris. Soil to be used as backfill should be pulverized.

- J. Provide pre-mixed planting mixture for use around root systems and root balls of the plants. The mixtures are outlined in section B of part 2-02.

- K. Prior to planting, provide additional topsoil to all planting beds to bring the finish grade of the bed to 2" above lawn grade and to finish grade of adjacent hard surface grades.

- L. Add 2" thickness of mushroom compost to all annual, perennial and groundcover beds. Finish grade bed and install plants.

### 3-03 PLANTING PROCEDURES:

- A. Set plant material in the planting hole to proper grade and alignment. Set plants upright and plumb. Set plant material 2" above the adjacent finish grade. Remove burlap from top 1/3 of root ball. Remove treated burlap (green). Cut and remove or cut and fold down upper half of wire basket, dependent upon tree size. Backfill hole by firmly tamping soil to avoid any air pockets or voids.

- B. Set balled and burlapped plants in the planting hole and compact 8" of soil around the base of the ball. Backfill remaining space with planting mixture. Water plants immediately after planting to eliminate all voids and thoroughly soak the plant root ball.

- C. Space groundcover plants according to dimensions given on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated number of plants. Plant to within 18" of the trunks of trees and shrubs or at the edge of the plant ball, whichever is closest. Plant to within 12" of edge of bed.

- D. Mulching:
  - 1. Install 4" depth of mulch around all tree and shrub beds as indicated on drawings or planting details. Mulch shrub planting areas as continuous beds. Do not place mulch directly against tree trunk; form mulch to create an inverted cone around trunk.
  - 2. Mulch perennial, groundcover and annual planting beds with 2" mushroom compost. Water mulched areas thoroughly after placing mulch.

- E. Tree wrapping is not required, unless the Contractor feels it is necessary due to characteristics of a particular species or past experience with the species. The landscape architect will be notified as to which trees are to be wrapped and shall inspect the trunk(s) before wrapping. Tree wrap will not be used to cover damage or defects. When wrapping is done, trunks will be wrapped spirally with approved tree wrapping tape that is not less than 4" wide, and securely tied with suitable cord at the top, bottom and 2" intervals along the trunk. Wrap from ground to the height of the first branch.

- F. Staking and guying of trees is optional. If the Contractor chooses to stake all or part of the trees, he/she shall use the method specified in the planting details. One (1) stake is to be used on trees of 1" caliper and under, or 4" height and under. Two (2) stakes are to be used on trees of 1" to 2 3/4" caliper. Guy trees of 3" caliper or larger at three (3) per tree. The root ball will not be pierced with a stake. Stakes are to be driven at least eighteen (18) inches into subsoil below the planting hole. Stakes and wire attachments shall be removed after three months for spring planted material and by the following May for fall planted stock by the Contractor. Staking and guying should be done immediately after lawn seeding or sodding operations.

- G. Seeding of specified lawn areas on plans will be treated as follows:

- 1. Topsoil shall be spread over all areas to be seeded to a minimum depth of 6" when compacted (to be performed by others).

- 2. Seed mixture and application rate - use Premium seed mix as supplied by Arthur Clesen, Inc. Apply at a rate of 5 lbs./1000 s.f.

- 3. Apply fertilizers and conditioners at the rate specified per soil test findings. In lieu of soil test results, apply two (2) tons of ground agricultural limestone and 1000 lbs. 10-10-10 or equivalent analysis fertilizer per acre. At least 40% of the fertilizer nitrogen shall be of an organic origin.

- 4. Soil preparation areas where vehicular traffic has compacted the soil shall be loosened/scarified to a minimum depth of 6" before fertilizing and seeding. Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

- 5. Watering seeded areas shall be done to ensure proper germination. Once seeds have germinated, watering may be decreased but the seedlings must never be allowed to dry out completely. Frequent watering should be continued approximately four (4) weeks after germination or until grass has become sufficiently established to warrant watering on an 'as needed' basis.

- 6. Turf is being established on a variety of slope conditions. It shall be the Contractor's responsibility to determine and implement whatever procedures he/she deems necessary to establish the turf as part of his/her work. Seeded areas will be accepted when all areas show a uniform stand of the specified grass in healthy condition and at least 90 days have elapsed since the completion of this work. The Contractor shall submit with his/her bid a description of the methods and procedures he/she intends to use.

- H. Erosion Control Blanket
  - 1. Erosion Control Blanket shall be installed per manufacturer's recommendation in all areas shown on the plan.

- 2. Install S-75 Erosion Control Blanket as manufactured by North American Green or approved equal.

- 3. Blanket should be premarked with staple pattern.

- 4. Staples should be 8" wire staples, applied at two (2) per square yard minimum.

- 5. Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

- I. Sodding of specified lawn areas on plans will be completed as follows:

- 1. Rake soil surface to receive sod to completely remove any soil crust no more than one day prior to laying sod.

- 2. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

- 3. Sod shall be laid within 24 hours from the time of stripping. Do not plant dormant sod if the ground is frozen.

- 4. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent sod.

- 5. Place top elevation of sod 1/2 inch below adjoining edging or paving.

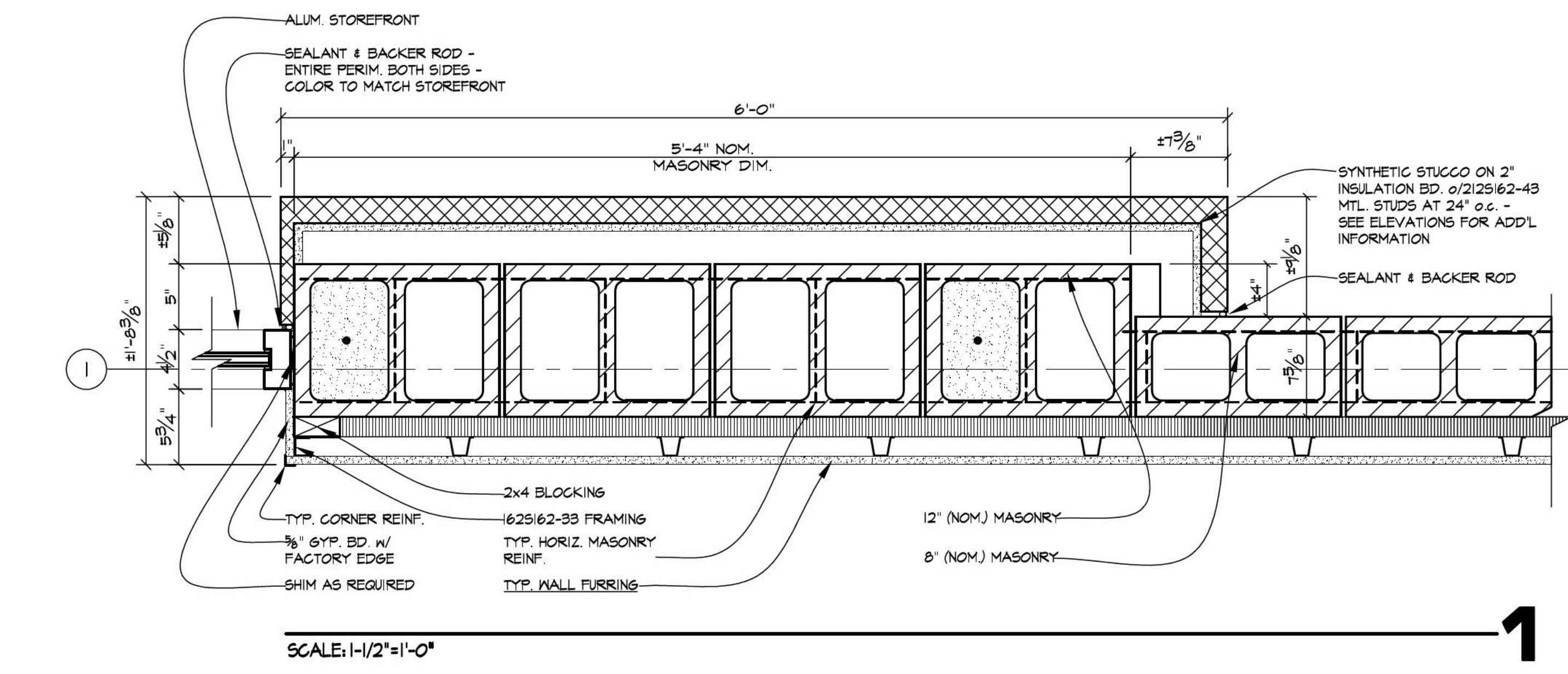
- 6. Water sod thoroughly with a fine spray immediately after planting.

- 7. After sod and soil have dried, roll seeded areas to ensure a good bond between the sod and soil, and to remove minor depressions and irregularities.

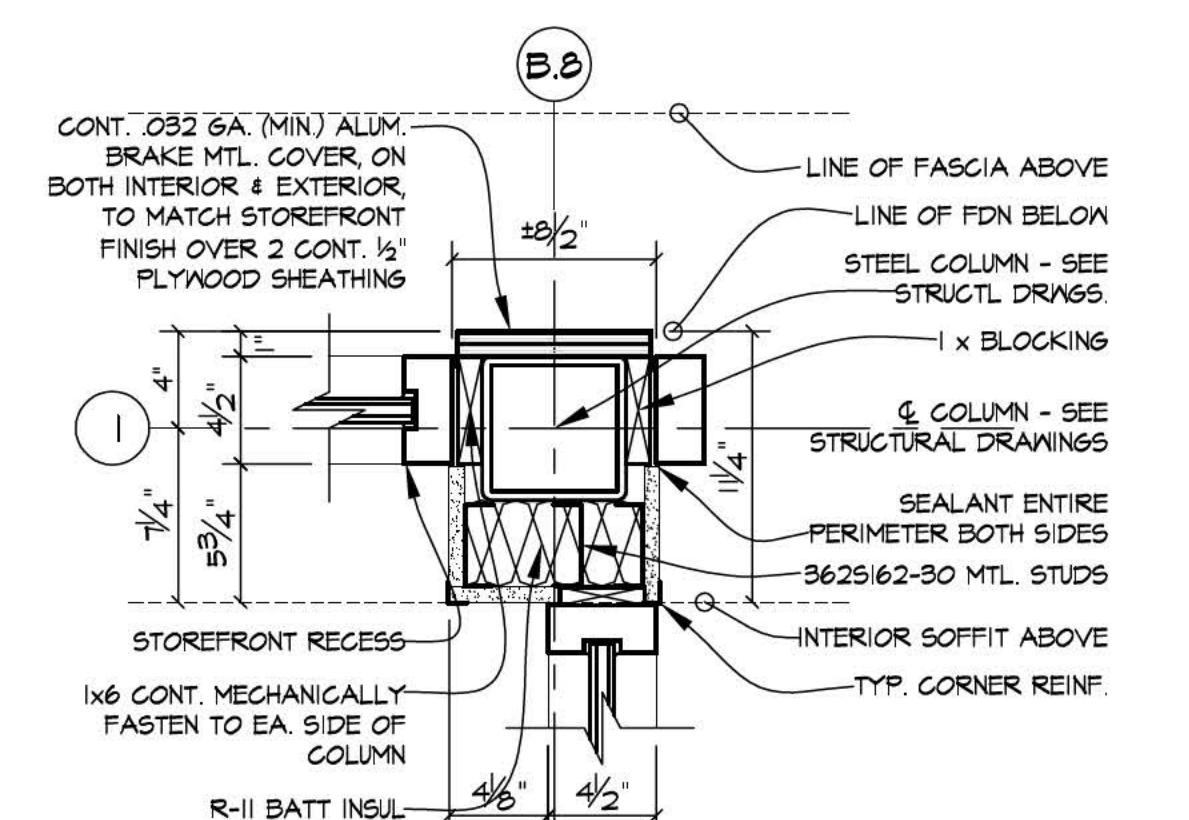
- 8. Sodded slopes 3:1 or greater shall be staked to prevent erosion and washout.

- 9. Warranty sodding for a period of one (1) year from the end of the 90 day maintenance period. If sod fails or lacks vigor and full growth as determined by the Landscape Architect, the Contractor will repeat site preparation operations and re-sod affected areas at the Contractor's expense.

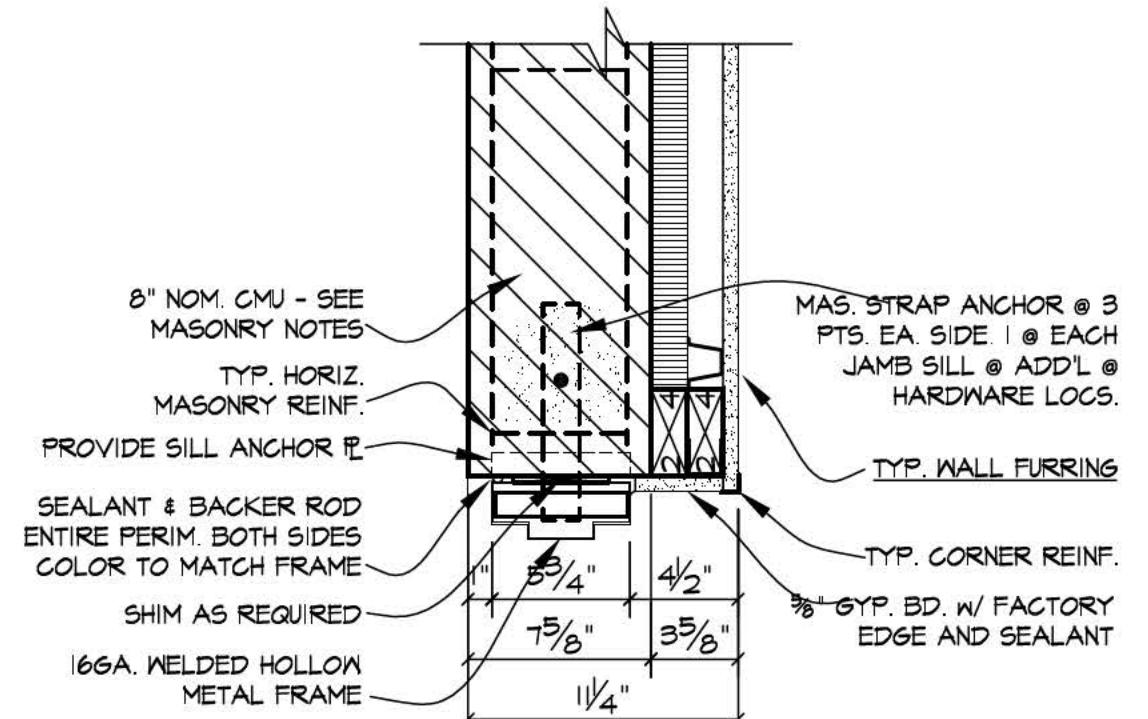
- 10. Note: Sod shall be a premium Kentucky Bluegrass blend, and is required in all areas indicated on the plans as well as areas which have been affected by construction. Sod can be placed as long as water is available and the



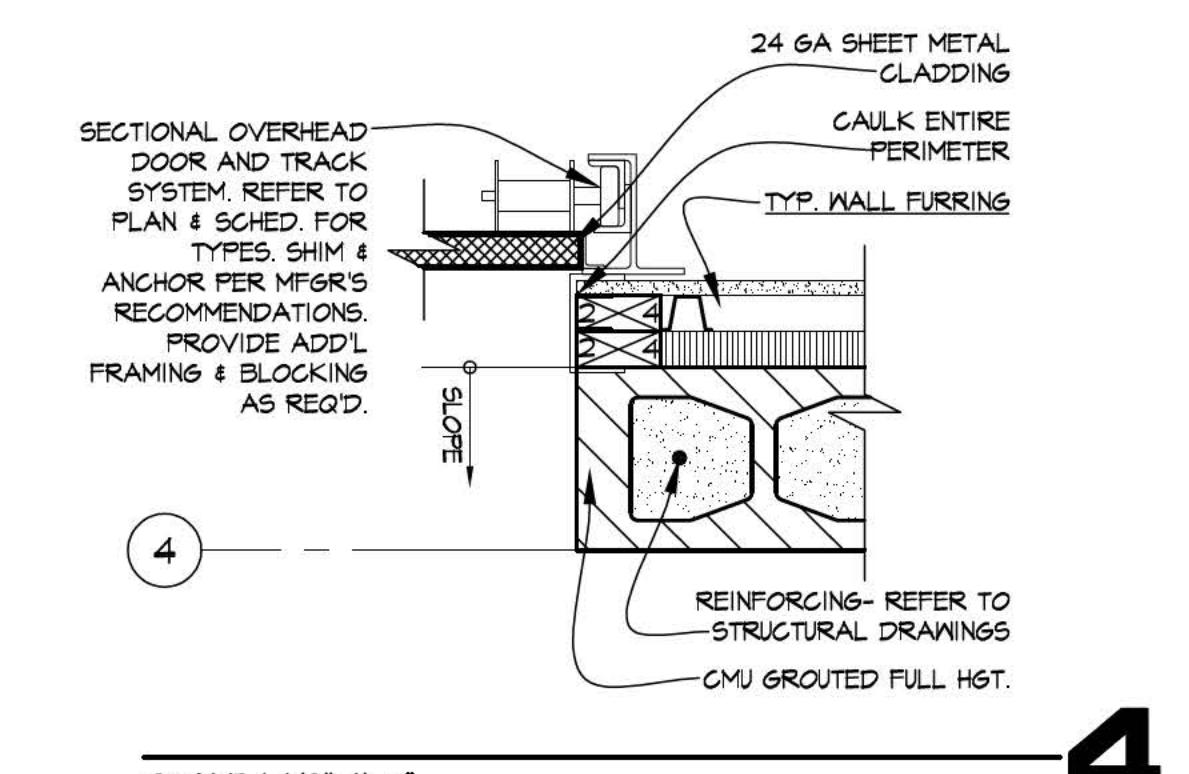
SCALE: 1-1/2"=1'-0"



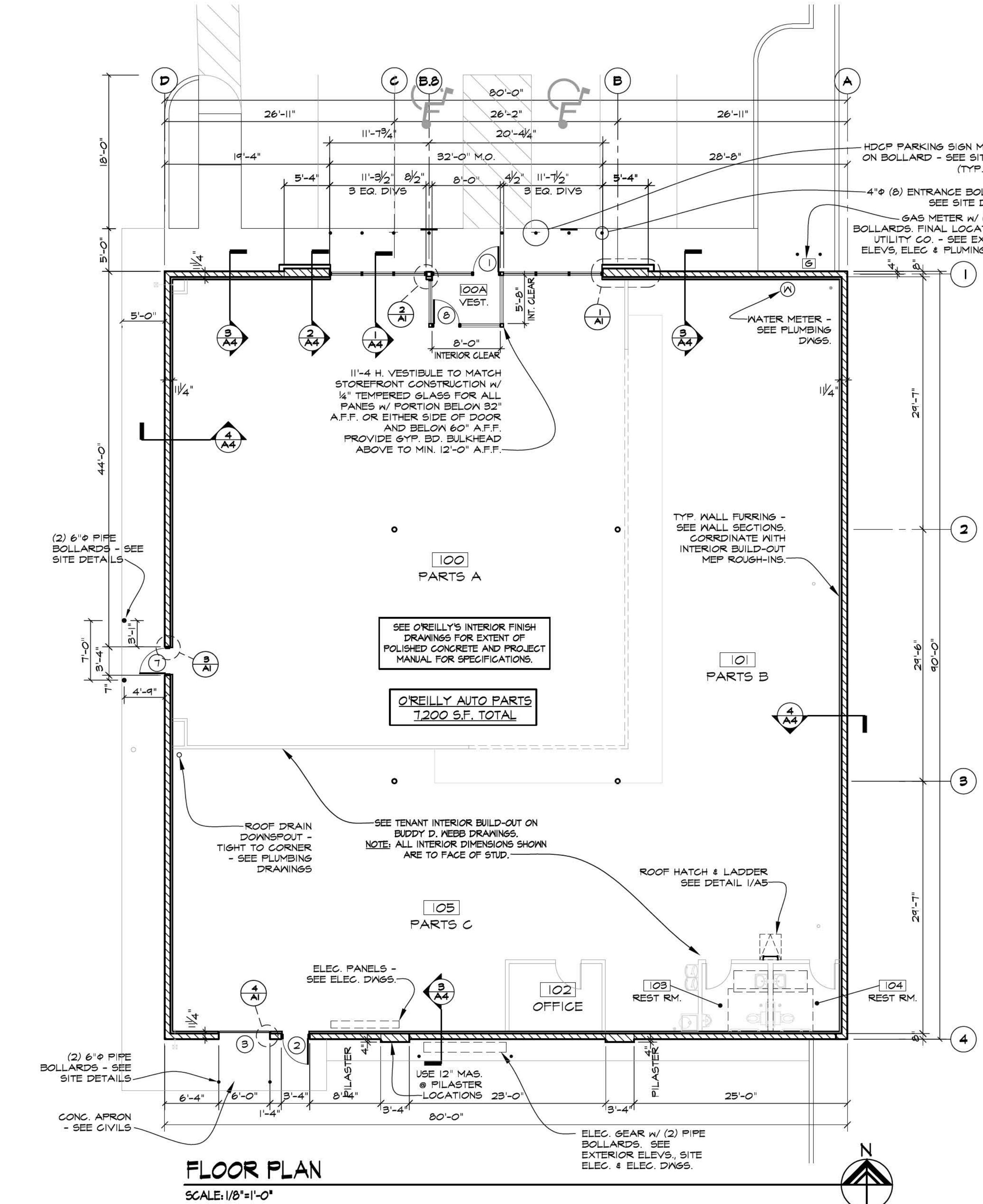
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SCALE: 1-1/2"=1'-0"



SCALE: 1-1/2"=1'-0"



## FLOOR PLAN

SCALE: 1/8"=1'-0"

NOTES:  
1. INTERIOR BUILD-OUT LAYOUT FOR TENANT (N.I.C.) IS SHOWN FOR INFORMATION PURPOSES ONLY.

2. SEE STRUCTURAL DRAWINGS FOR COLUMN SIZE
3. SEE ELEVATIONS FOR CONTROL JOINT LOCATIONS AND ADDITIONAL REQUIREMENTS
4. PROVIDE PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED BY TENANT. QUANTITY AND LOCATION AS REQUIRED BY LOCAL FIRE DEPARTMENT; IFC & NFPA 10
5. PROVIDE KNOX KEY LOCK BOX FOR FIRE DEPT. ACCESS AS REQUIRED BY LOCAL FIRE DEPARTMENT.

#### MASONRY NOTES:

1. STANDARDS: COMPLY WITH RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA), AND NATIONAL CONCRETE MASONRY ASSOC. (NCMA) AND THE REQUIREMENTS OF THE CURRENT BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530/ASCE 6).

ALL MASONRY TO HAVE INTEGRAL POLYMER WATER REPELLENT BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

2. CONCRETE MASONRY UNITS (CMU): ASTM C 90, GRADE N-1. PROVIDE "MEDIUM WEIGHT" UNITS (MIN. 105 PCF) WITH A MINIMUM COMPRESSIVE STRENGTH, FM = 2000 PSI.

SELECTION: ELSION SPLIT & SMOOTH FACE. DISTRIBUTOR: RAMM BRICK & SUPPLY LLC. CONTACT: KIP RAMM - CELL (847)871-7183.

SIZES & TEXTURE:  
A) 7/8" H. x 1 1/2" D. x 15/8" L. (NOM. 8 x 12 x 16 @ PILASTERS) SPLIT-FACE FINISH  
B) 7/8" H. x 1 1/2" D. x 15/8" L. @ BEHIND EIFS, SMOOTH-FACE FINISH  
C) MISC. SIZES AS REQ'D. SEE WALL SECTIONS, EXTERIOR DETAILS & EXTERIOR FINISH LIST.

3. FINISH: PAINTED PER EXTERIOR FINISH SCHEDULE.

4. MASONRY MORTAR: ASTM C 270, TYPE S, APPROXIMATELY 3:1:1 PORTLAND CEMENT/LIME, SAND FOR EXTERIOR, MORTAR 2:1:0.5, NATURAL INTEGRAL POLYMER WATER REPELLENT ADMIXTURE (COMPATIBLE w/ MASONRY) ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

5. PORTLAND CEMENT: ASTM C 150, TYPE I, NON-STAINING, NO AIR ENTRAINMENT, WHITE IF NEEDED FOR COLOR MATCH.

6. LIME: HYDRATED LIME, ASTM C 207, TYPE S.

7. SAND: ASTM C 144, OR FINER IF NEED FOR JOINT SIZES LESS THAN 1/4".

8. INSTALL (LAY) THRU-WALL BRICK UNITS IN 1/2 RUNNING BOND PATTERN @ CMU IN RUNNING BOND PATTERN.

9. CUT EXPOSED MASONRY UNITS, WHERE NECESSARY, WITH A POWER SAW. AVOID THE USE (BY PROPER LAYOUT) OF LESS-THAN-HALF-SIZE UNITS.

10. HOLD UNIFORM JOINT SIZES AS INDICATED, OR IF NOT INDICATED, HOLD JOINT SIZES TO SUIT MODULAR SIZE OF MASONRY UNITS.

11. CUT JOINTS FLUSH AND TOOL SLIGHTLY CONCAVE, UNLESS OTHERWISE INDICATED.

12. REINFORCE HORIZONTAL JOINTS WITH CONTINUOUS MASONRY WIRE REINFORCING SPACED 16" VERTICALLY, EXCEPT SPACED 8" IN PARAPET WALLS AND IMMEDIATELY ABOVE AND BELOW OPENINGS, FOR A DISTANCE OF 2 FEET BEYOND THE OPENING IN ALL FOUR DIRECTIONS. DO NOT BRIDGE CONTROL AND EXPANSION JOINTS IN THE WALL SYSTEM.

13. COMPLETELY FILL WITH MORTAR COLLAR JOINTS IN MULTI-WYTHE MASONRY WALLS, EXCEPT WHERE FLASHING AND/OR WEEPS ARE PRESENT.

14. FILL HEAD (VERTICAL) JOINTS WITH MORTAR @ INTERIOR AND EXTERIOR FACES ONLY IN ALL MASONRY WORK, EXCEPT WHERE FLASHING AND/OR WEEPS ARE PRESENT..

15. WHERE INDICATED, COMPLETELY FILL CORES OF MASONRY UNITS FOR FULL HEIGHT OF THE WALL WITH THE TYPE S MORTAR OR CONCRETE - SEE MASONRY REINFORCING NOTES.

16. PROVIDE CONTROL AND EXPANSION JOINTS AT LOCATIONS SHOWN, AND KEEP CLEAN OF MORTAR DROPPINGS/ SQUEEZE - OUT.

17. IF LOCATIONS ARE NOT SHOWN, SPACE CONTROL JOINTS 25'-0" (HORIZONTALLY) FOR CMU MASONRY.

18. THE CONTRACTOR SHALL BRACE WALLS ADEQUATELY DURING CONSTRUCTION UNTIL THE ROOF AND FLOOR STRUCTURE ARE IN PLACE.

19. THE WORK IN PROGRESS WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH SECTION 15 OF ACI 530..

20. JOIST BEARINGS - USE A MINIMUM OF 3 CONCRETE BLOCK BRICK COURSES OR FILL ONE COURSE OF CONCRETE BLOCK SOLID WITH GROUT UNDER EACH JOIST.

21. BEAM BEARING - USE SOLID CONCRETE BLOCK 2 COURSES WIDE BY 3 COURSES DEEP UNDER EACH BEAM.

22. PILASTERS - FILL SOLID WITH GROUT (SEE BEAM BEARING NOTE # 21).

23. N/A

24. MASON IS RESPONSIBLE FOR KEEPING FLASHING/WEPP SYSTEM FUNCTIONING AND FREE OF MORTAR.

25. PROVIDE CONTROL JOINTS AT MAXIMUM 25'-0" O.C.

26. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.

27. PROVIDE INTEGRAL POLYMER WATER REPELLENT RECOMMENDED BY MANUFACTURER. PROVIDE POLYMER WATER REPELLENT ADMIXTURE ADDED TO THE MORTAR BY THE MASONRY CONTRACTOR, PER MANUFACTURER'S SPECIFICATIONS.

28. CLEANING: DO NOT USE ACID WASH OR HARSH DETERGENT. MASONRY WALLS ARE TO BE CLEANED SEVEN DAYS AFTER COMPLETION WITH A MILD DETERGENT SOLUTION OR OTHER PROPRIETARY SOLUTION AS RECOMMENDED BY MASONRY MANUFACTURER, OR USE PROSOCO "LIGHT DUTY Concrete Cleaner". WALLS SHOULD BE THOROUGHLY SATURATED WITH CLEAR WATER BEFORE AND AFTER CLEANING SOLUTION IS APPLIED.

29. N/A

30. FLASHING: "BLOCKFLASH" BY MORTAR NET SOLUTIONS, AS SHOWN ON DRAWINGS. SEE BLOCKFLASH INSTALLATION NOTES. IN ADDITION, FLEXIBLE MEMBRANE FLASHING WITH END DAMS TO ALSO BE USED AND FULLY ADHERED TO ALL STEEL LINTELS.

#### MASONRY REINFORCING NOTES:

1. PROVIDE REINFORCED UNIT MASONRY WITH RUNNING BOND.

2. REINFORCED CONCRETE UNIT SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. MEDIUM WEIGHT HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS COMPLYING WITH ASTM C90, GRADE N TYPE I.  
B. REINFORCING BARS SHALL BE ASTM A615-60 AND SHALL HAVE DEFORMATIONS IN ACCORDANCE TO ASTM SPECIFICATION A805.  
C. THE STARTAR WITH A MINIMUM COMPRESSIVE UNIT STRESS FOR THE MASONRY ASSEMBLY, FM = 2000 PSI.  
D. GROUT SHALL BE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE ASSEMBLY, FM = 2000 PSI. STRENGTH OF 2000 PSI.

3. THE REINFORCED CONCRETE MASONRY UNITS SHALL BE ERECTED USING THE LOW LIFT METHOD.

4. PROVIDE ONE NUMBER FOUR (4) BAR MINIMUM AROUND ALL DOOR OPENINGS.

5. VERTICAL REINFORCING BARS SHALL BE AS SHOWN ON DRAWINGS WITH LADDER TYPE HORIZONTAL REINFORCING WITH FOUR(4) NO. 9 GAGE BARS AT 16" ON CENTER, U.N.O.

6. REINFORCING STEEL SHALL BE LAPPED 16 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, WHERE SPLINED, AND SHALL BE SEPARATED BY ONE BAR DIAMETER OR WIRED TOGETHER.

7. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF REINFORCEMENT.

8. VERTICAL REINFORCING STEEL SHALL HAVE A CLEARANCE OF THREE QUARTERS OF AN INCH FROM MASONRY OR ADJACENT BARS, BUT NOT LESS THAN ONE BAR DIAMETER BETWEEN BARS.

9. ALL REINFORCING SHOWN ON DRAWINGS SHALL BE GROUTED FULL LENGTH.

10. ALL GROUT SHALL BE PUDDLED OR VIBRATED IN PLACE.

11. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 2" X 3".

12. CELLS CONTAINING REINFORCEMENT SHALL BE SOLIDLY FILLED WITH GROUT AND POURS SHALL BE STOPPED ONE AND ONE HALF INCHES BELOW THE TOP OF A COURSE TO FORM A KEY AT FOUR JOINTS.

13. ALL BOLTS, ANCHORS, ETC. INSERTED IN THE WALL SHALL BE SOLIDLY GROUTED IN PLACE.

#### THRU-WALL MASONRY NOTES:

1. **MOCK-UP:** CONSTRUCT A MASONRY WALL PANEL AT LEAST 4 FEET LONG BY 4 FEET HIGH TO REPRESENT THE EXTERIOR MASONRY WALL (INCLUDING ACCENT BANDS). INCLUDE REINFORCING AND MINIMUM ONE CONTROL JOINT AND ONE OUTSIDE CORNER. INCLUDE JOINT PROFILE AND MORTAR COLOR.

CLEAN ONE-HALF OF MOCK-UP TO REPRESENT FINAL CLEAN DOWNSIZING METRICS AND MATERIALS IN ACCORDANCE WITH CLEANING REQUIREMENTS HEREIN AND LEAVE REMAINDER WITHOUT FINAL CLEANING FOR COMPARISON. MOCK-UP TO BE APPROVED BY ARCHITECT/OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH MASONRY INSTALLATION. PROVIDE ON-SITE INSPECTION BY MASONRY MANUFACTURER REPRESENTATIVE OF MOCK-UP CONSTRUCTION AND CLEANING AND SUBMIT MANUFACTURER'S LETTER OF APPROVAL OF THE WORK PROCEDURES AND THE COMPLETED MOCK-UP.

2. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.

#### SPECIAL MASONRY NOTE ALERT!

There are four CRITICAL elements to SINGLE WYTHE masonry construction:

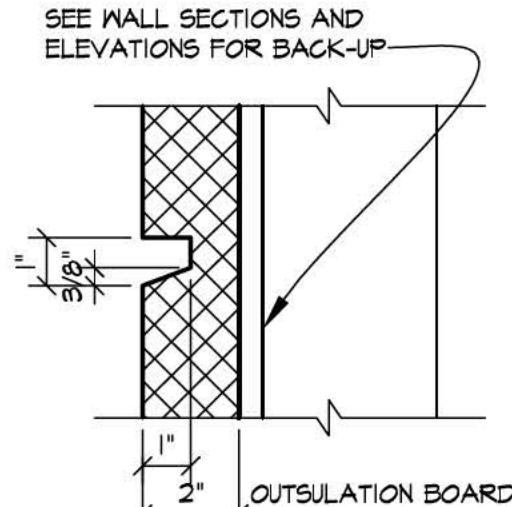
1. The concrete brick product has to have integral waterproofing.

2. The mortar has to have a water repellent.

3. All flashing, including the "BlockFlash" flashing system, has to be employed correctly.

4. The building has to be sealed with a protective sealer treatment.

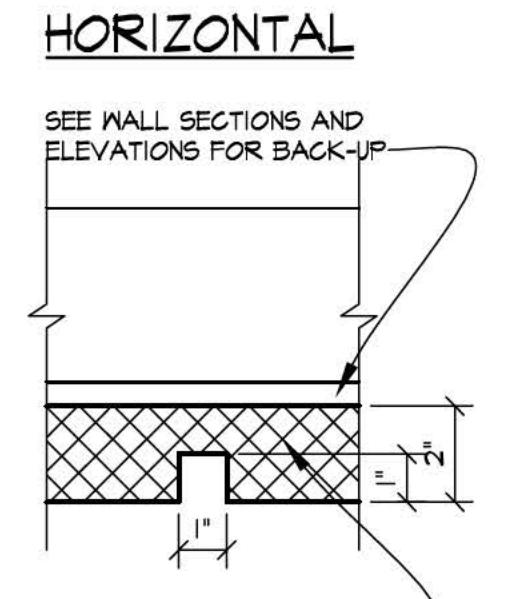
See masonry notes for more information regarding these and other specification items.



#### HORIZONTAL

SEE WALL SECTIONS AND ELEVATIONS FOR BACK-UP

OUTSULATION BOARD



#### VERTICAL

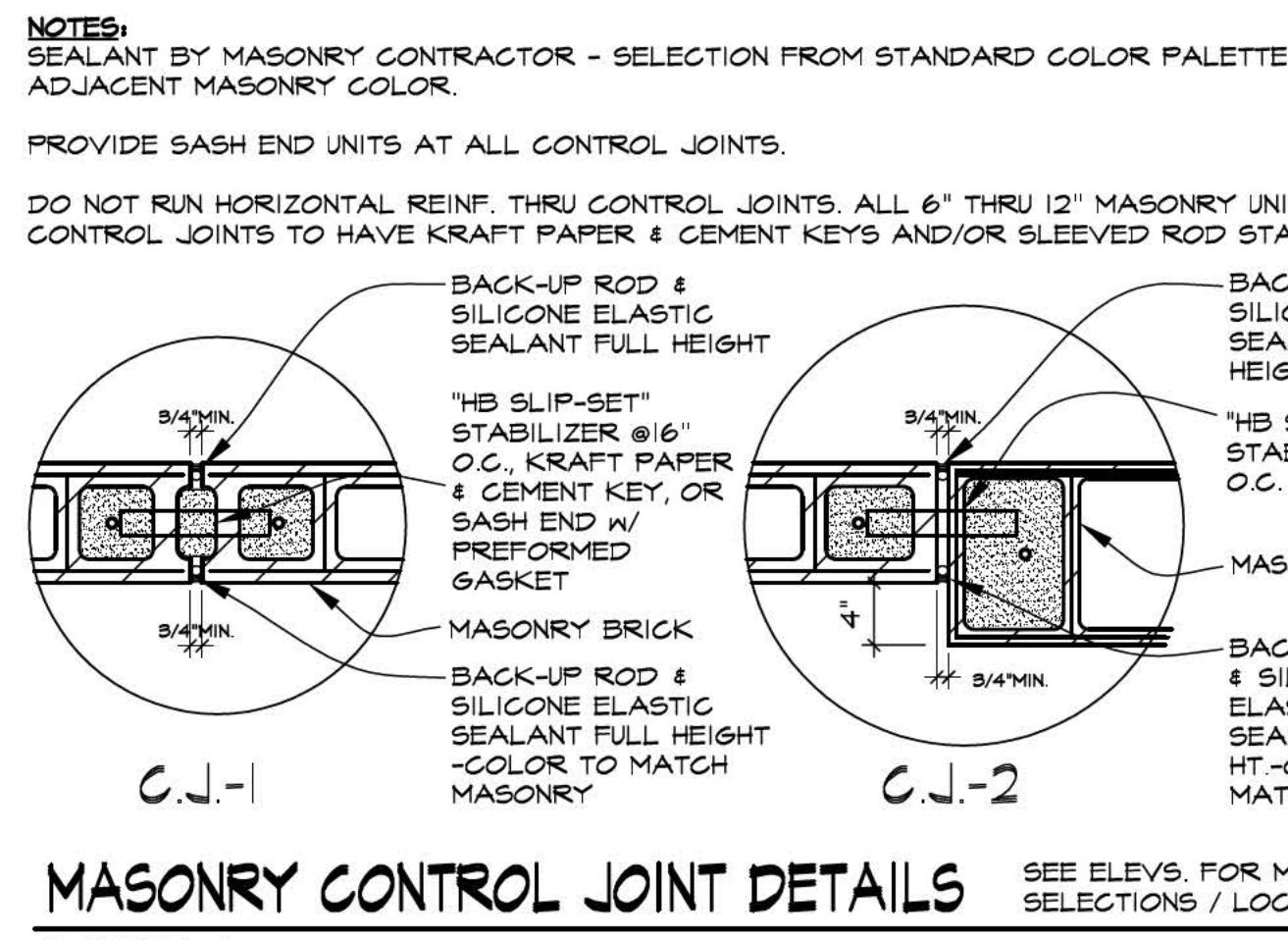
SEE WALL SECTIONS AND ELEVATIONS FOR BACK-UP

2" OUTSULATION BOARD



#### E.I.F.S. SCORE JOINT DETAILS

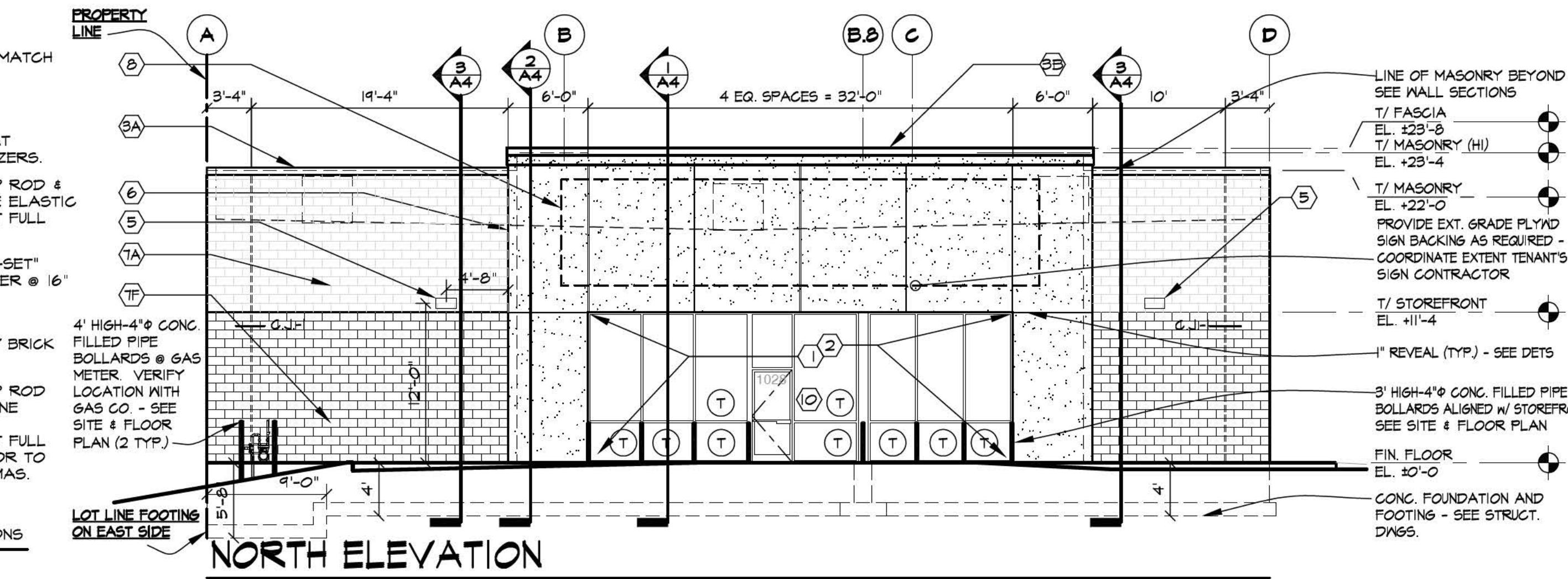
SCALE: 3" = 1'-0"



#### MASONRY CONTROL JOINT DETAILS

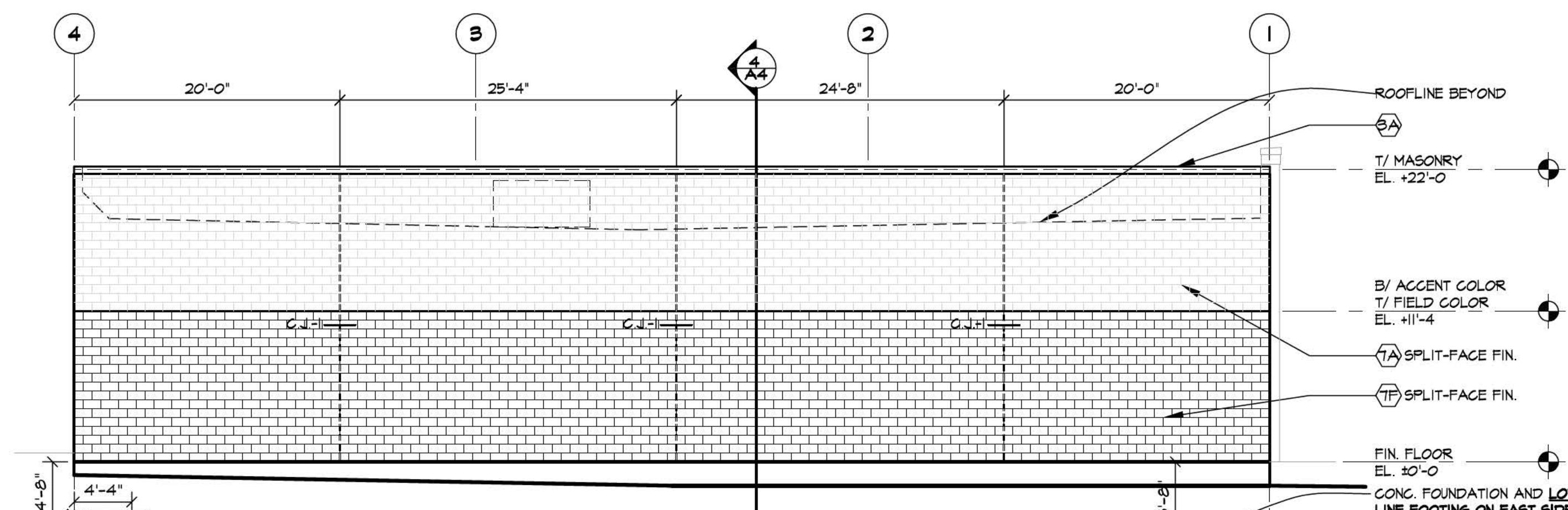
SEE ELEV. FOR MAS. SELECTIONS / LOCATIONS

SCALE: 1"-1'-0"



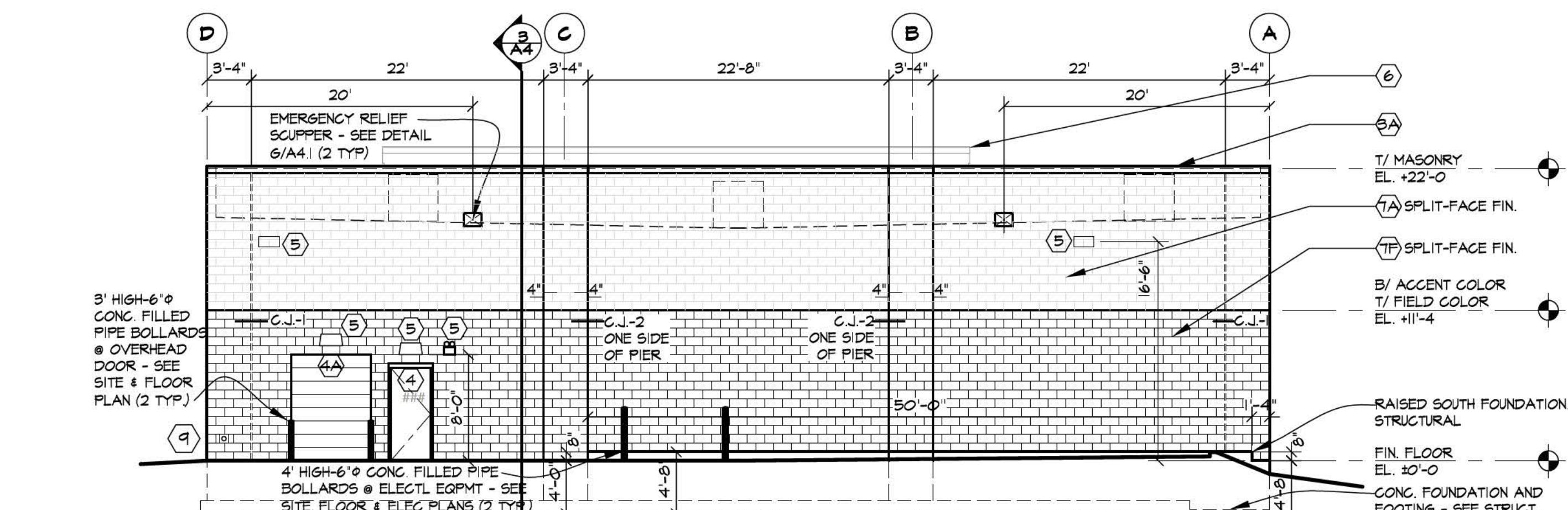
#### NORTH ELEVATION

SCALE: 1/8"=1'-0"



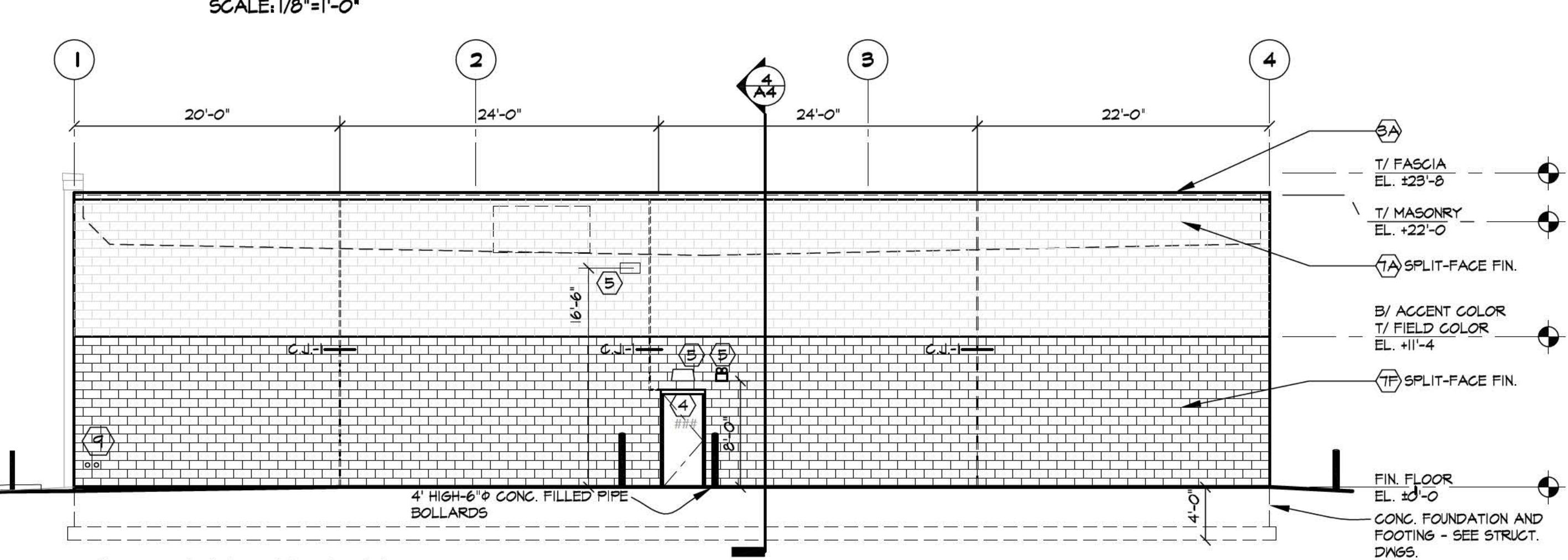
#### EAST ELEVATION

SCALE: 1/8"=1'-0"



#### SOUTH ELEVATION

SCALE: 1/8"=1'-0"



#### WEST ELEVATION

SCALE: 1/8"=1'-0"

#### O'REILLY AUTO PARTS

DOLTON PLAZA  
1317 E. SIBLEY BLVD. DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

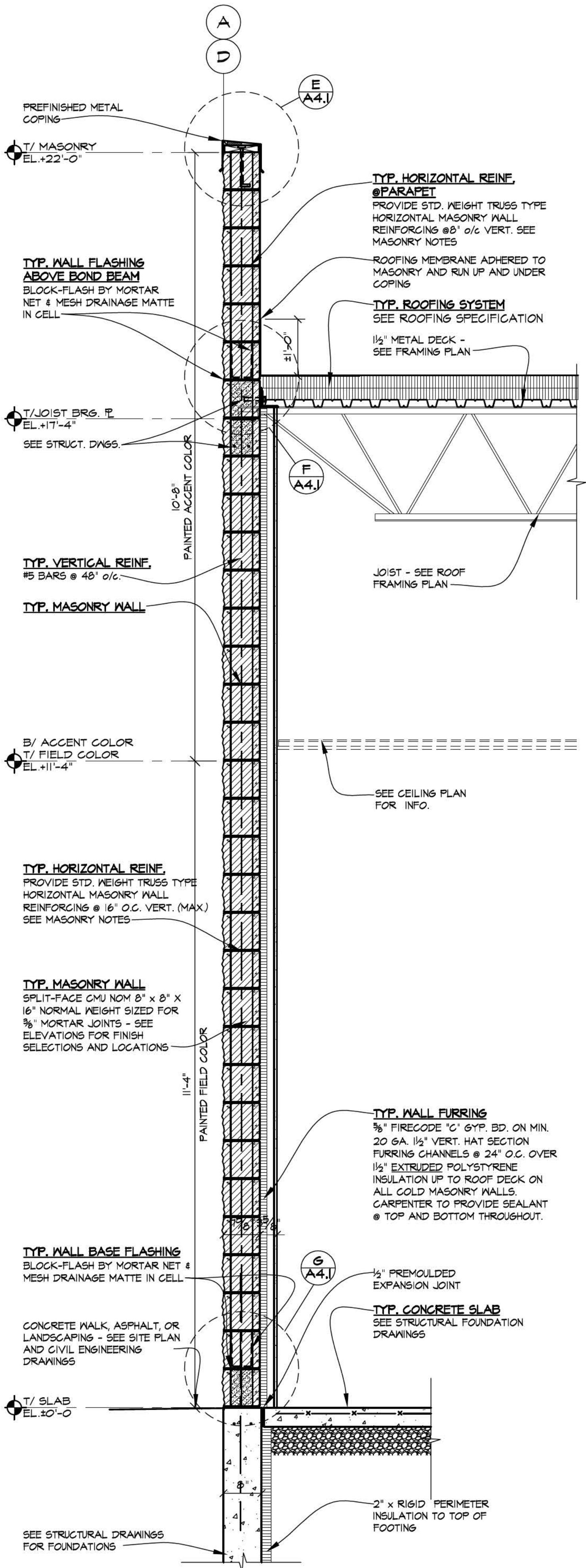
SHEET TITLE  
ELEVATION  
NOTES  
DETAILS

1906  
A  
3

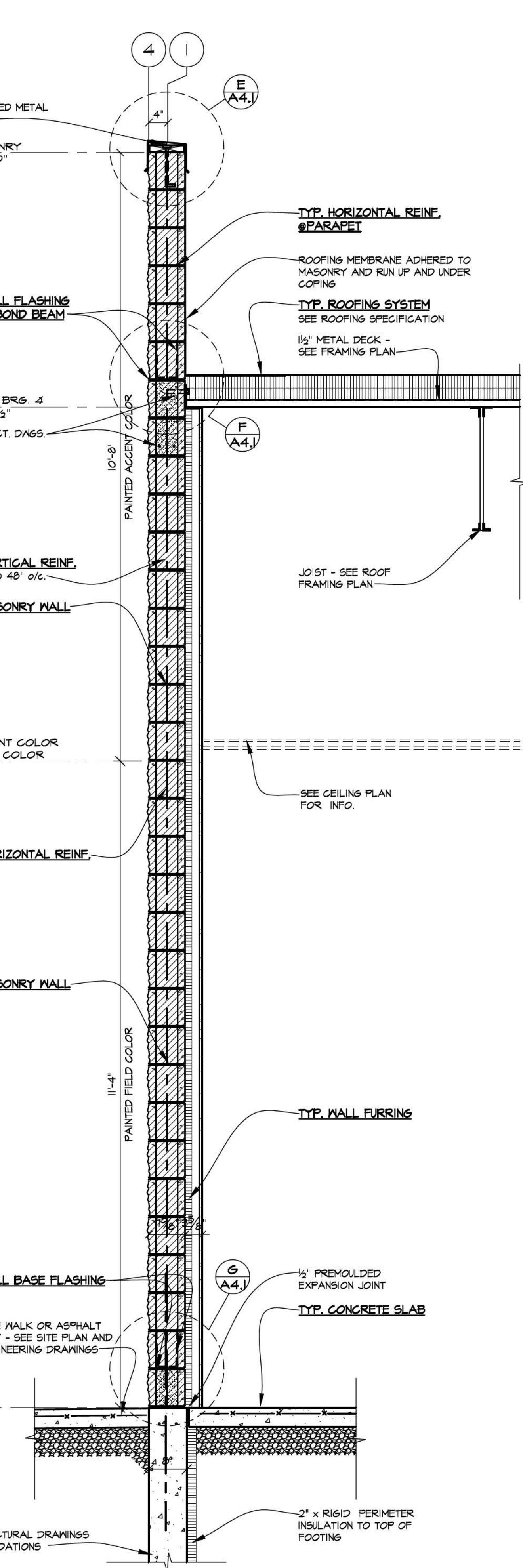
T-H DRAWING		NOT FOR COORDINATION	NOT FOR BIDDING	NOT FOR PERMITTING	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION
1/12/19	1/12/19					

REVISIONS	
T-H DRAWING	1/12/19

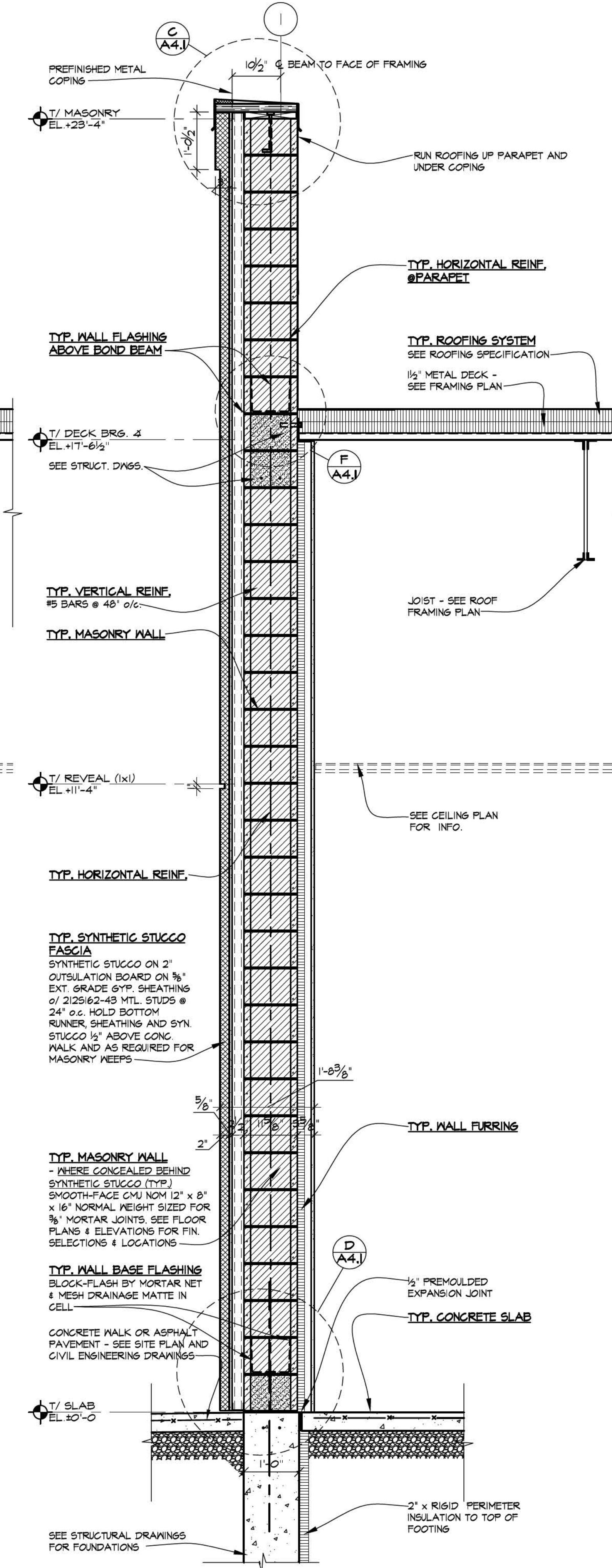
VERIFY JOIST ORIENTATION W/ ROOF FRAMING PLAN AND DETAILS



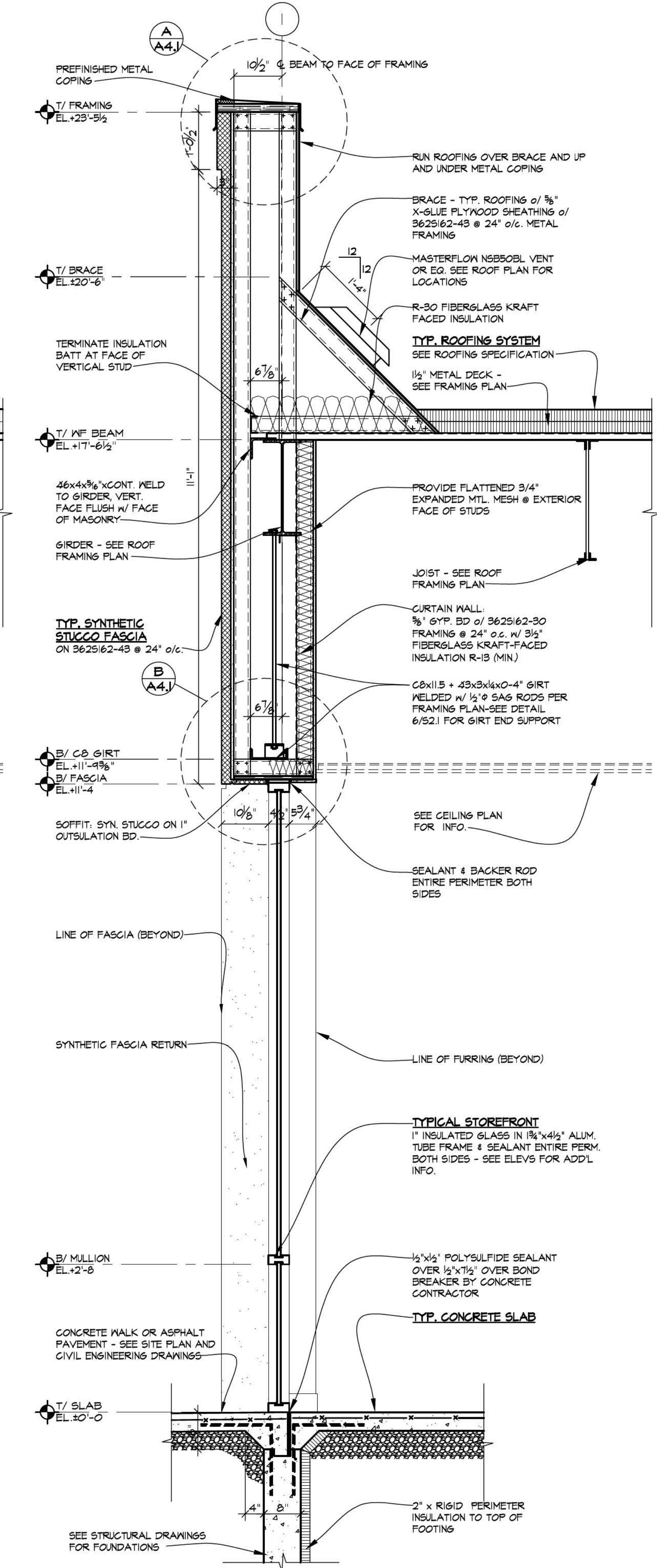
4



3



2



1

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
WALL SECTION

1906

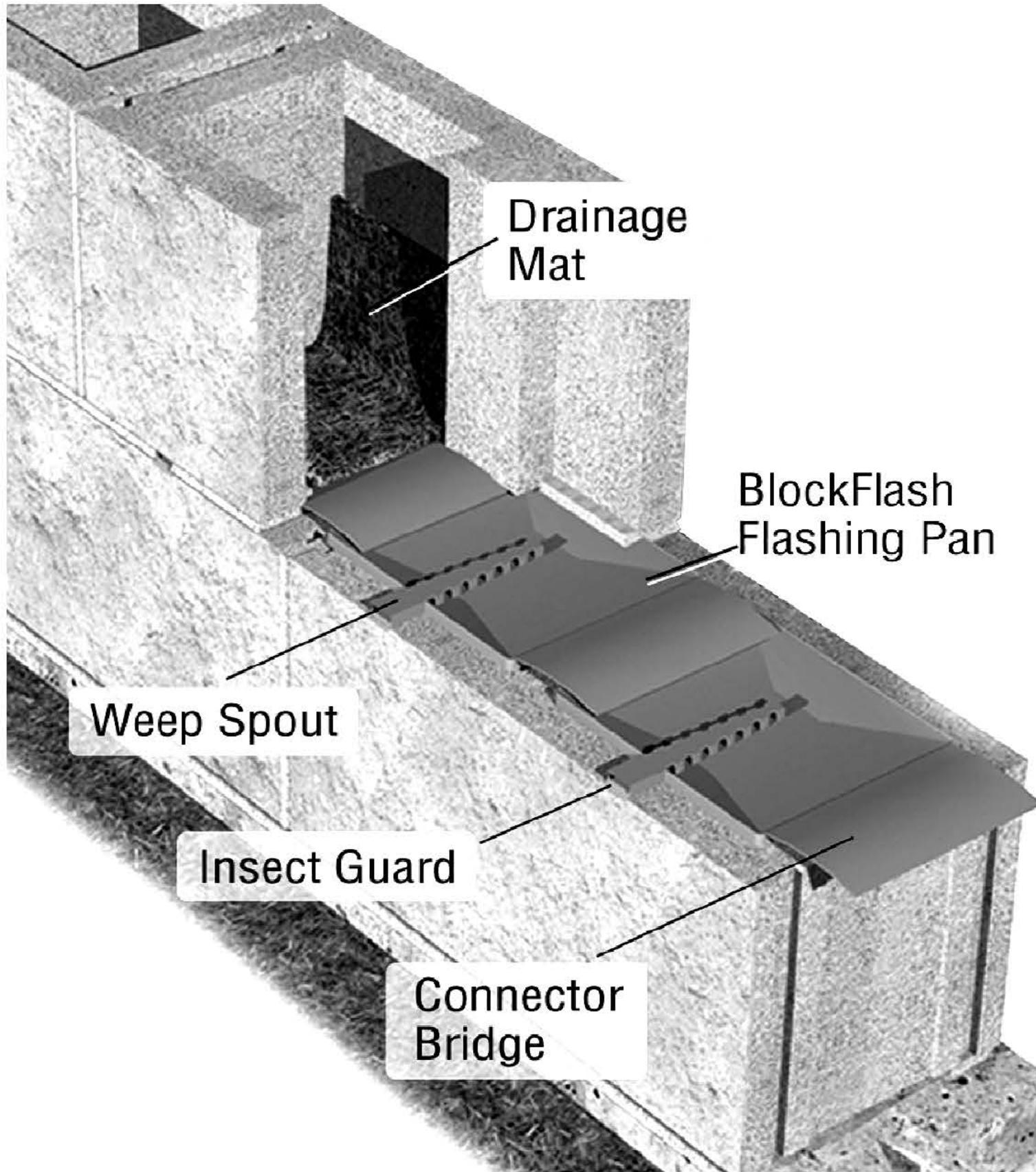
A  
4

REVISIONS

THIS DRAWING	NOT FOR COORDINATION	1/1/21
FOR BIDDING	FOR PERMIT	1/1/21
FOR CONTRACTING	FOR CONSTRUCTION	NOT FOR CONSTRUCTION

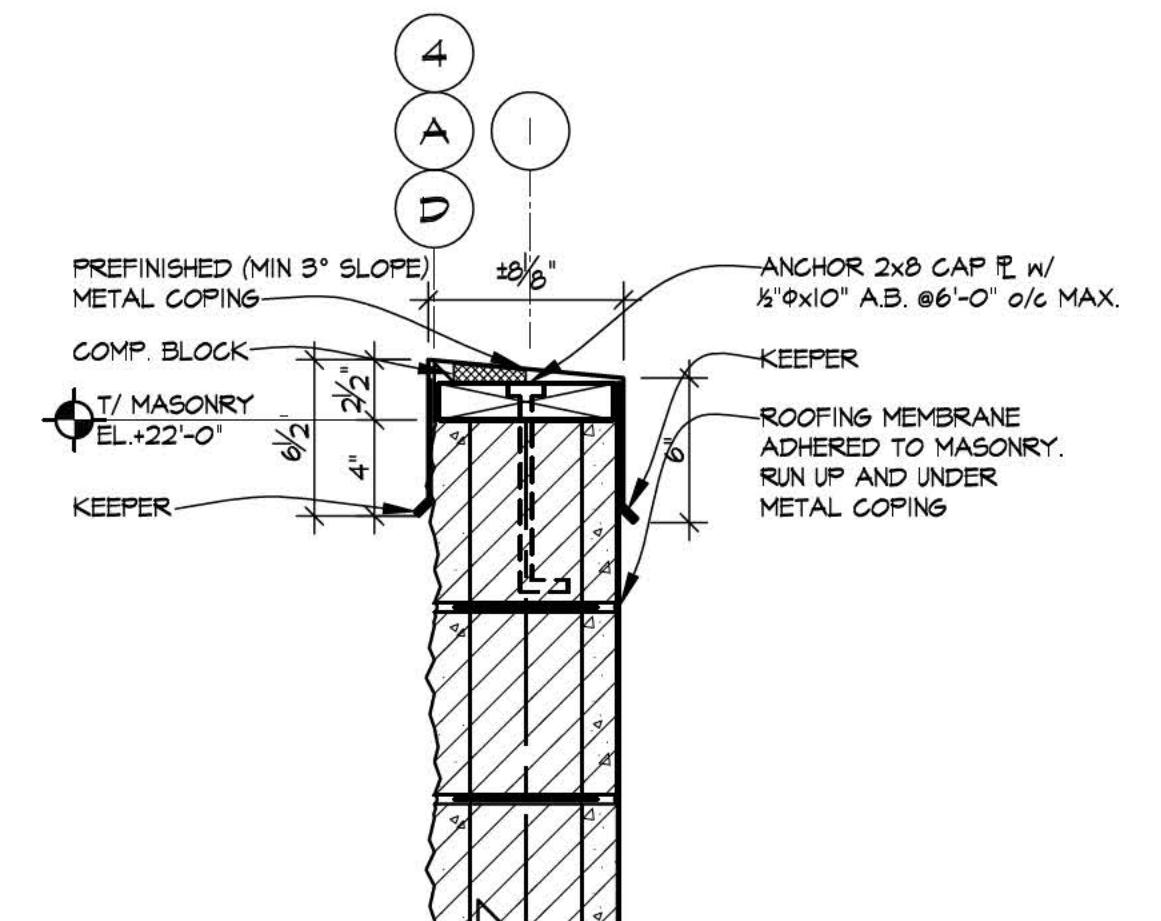
KMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
60015-162-35  
FAX(847)945-6669

1121 LAKE COOK ROAD  
DEERFIELD, ILLINOIS  
(847)945-6669

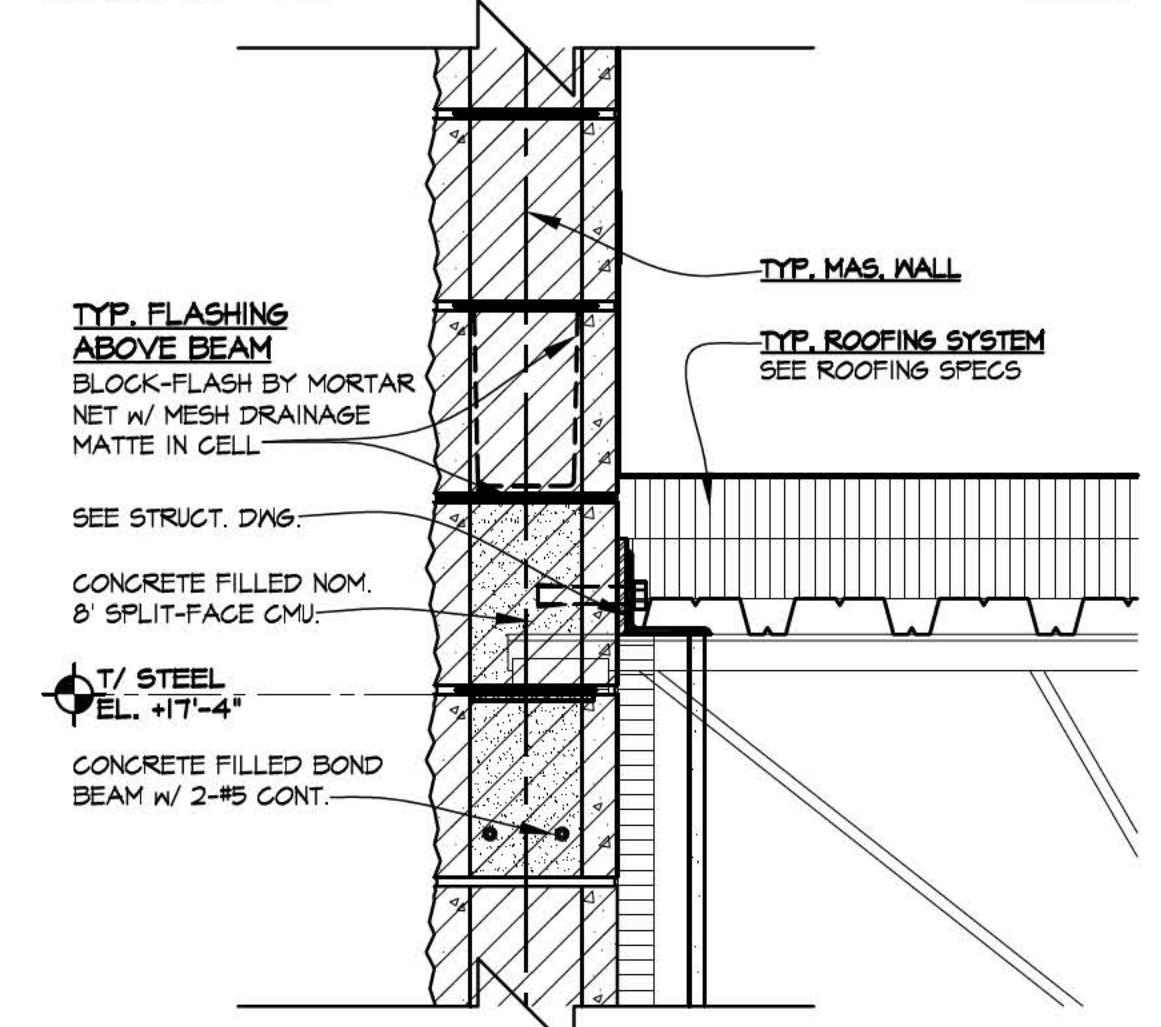


#### SINGLE NYTHE THRU-WALL MASONRY BLOCKFLASH INSTALLATION NOTES

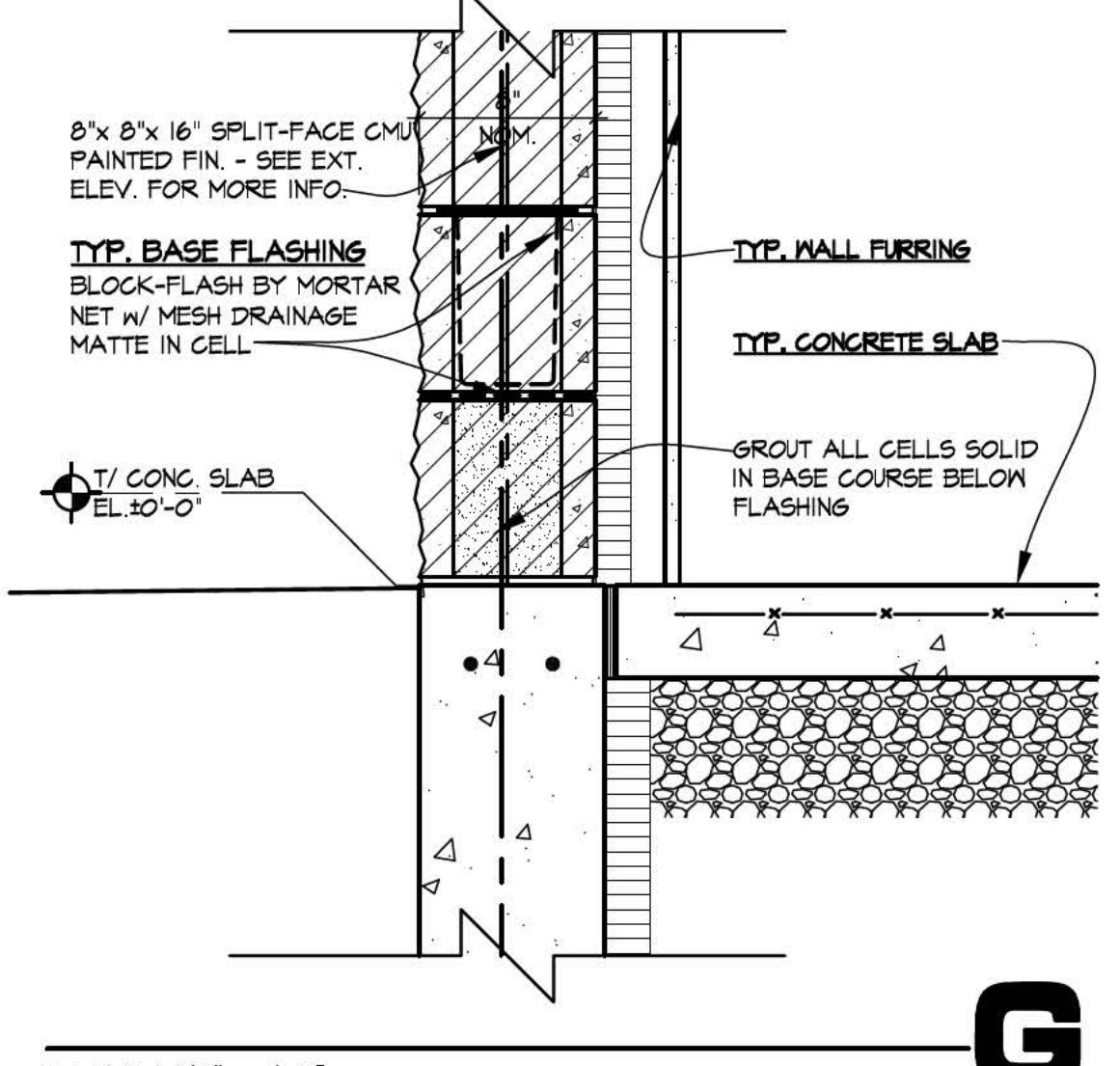
- BlockFlash is a product of Mortar Net Solutions. Provide BlockFlash near base of wall & above all lintels, steel beams, solid cores, bond beams and above any multi-nythe condition.
- See all wall sections for complete information.
- BlockFlash is to be installed ABOVE GRADE ONLY.
  - Fully grout masonry cores / cells directly below BlockFlash, for one course minimum.
  - Install the BlockFlash course by spacing BlockFlash Pan units over the cores of each block.
  - Use the reference lip on bottom of the BlockFlash spout to position the pan against front of block. The drip edge on the weep spout will extend slightly. Make sure the connector bridges overlap the next pan this will divert water into adjoining BlockFlash pans.
  - Continue BlockFlash a minimum of one cell beyond edge of any intel opening.
- Vertical rebar/grouted cells/corners: Where walls are reinforced, eliminate the BlockFlash pan at the grouted core and attach the connector bridge from the adjoining pan by bending it back and forth a few times. You same technique for corners. Cross bed webs adjacent to the grouted core making sure to overlap the BlockFlash flange. Use same technique for corners.
- Mortar spreading: Use standard mortar spreading techniques with mortar lapped first over the inner and second over the outer flanges of the BlockFlash pane. This will stabilize the pane during the installation and later help divert moisture into the BlockFlash pane. Cross bed mortar front to back on both sides of the grouted cells to prevent grout from flowing onto pan adjacent to grouted cells.
- Drainage: With 8, 10 and 12 inch pons install one 7" x 16" Drainage Mat in each CMU core in the course directly above the pan course. With 6 inch pons install one 7" x 14" Drainage Mat in each CMU core directly above the pan course. 6 inch pan should run continuously so the bridge of each pan overlaps onto the pan next to it as with other sizes, but the 6 inch size pan may not align perfectly over every CMU cell or structural brick core. The Drainage Mat for all sizes should be installed front and back of CMU cells not side to side, and should touch both walls of the CMU and the BlockFlash pan. Properly installed Drainage Mats catch and suspend mortar droppings above the pans and provide pathways for water to flow past the droppings to the pans.
- Tooling: Tool all head and bed joints and remove any obstruction from the weep spouts.



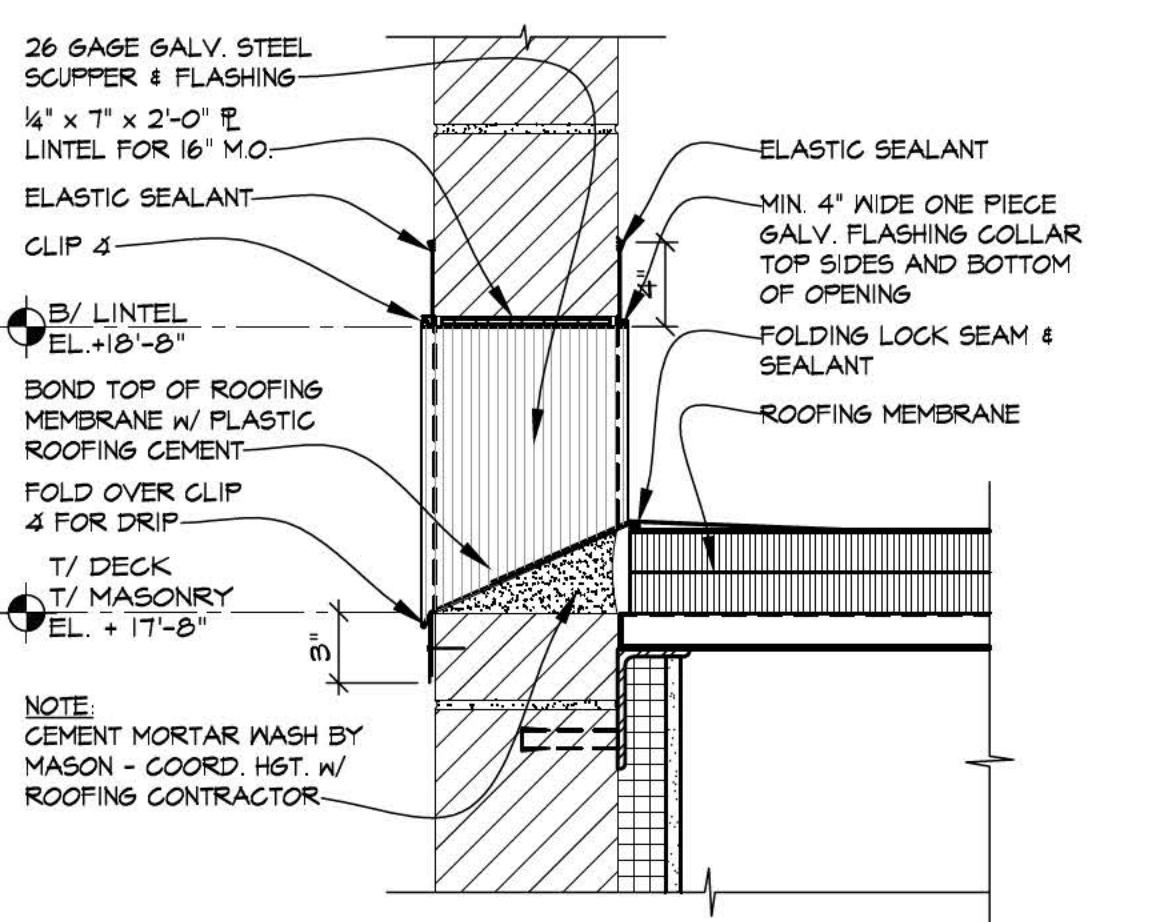
SCALE: 1 1/2" = 1'-0"



SCALE: 1 1/2" = 1'-0"

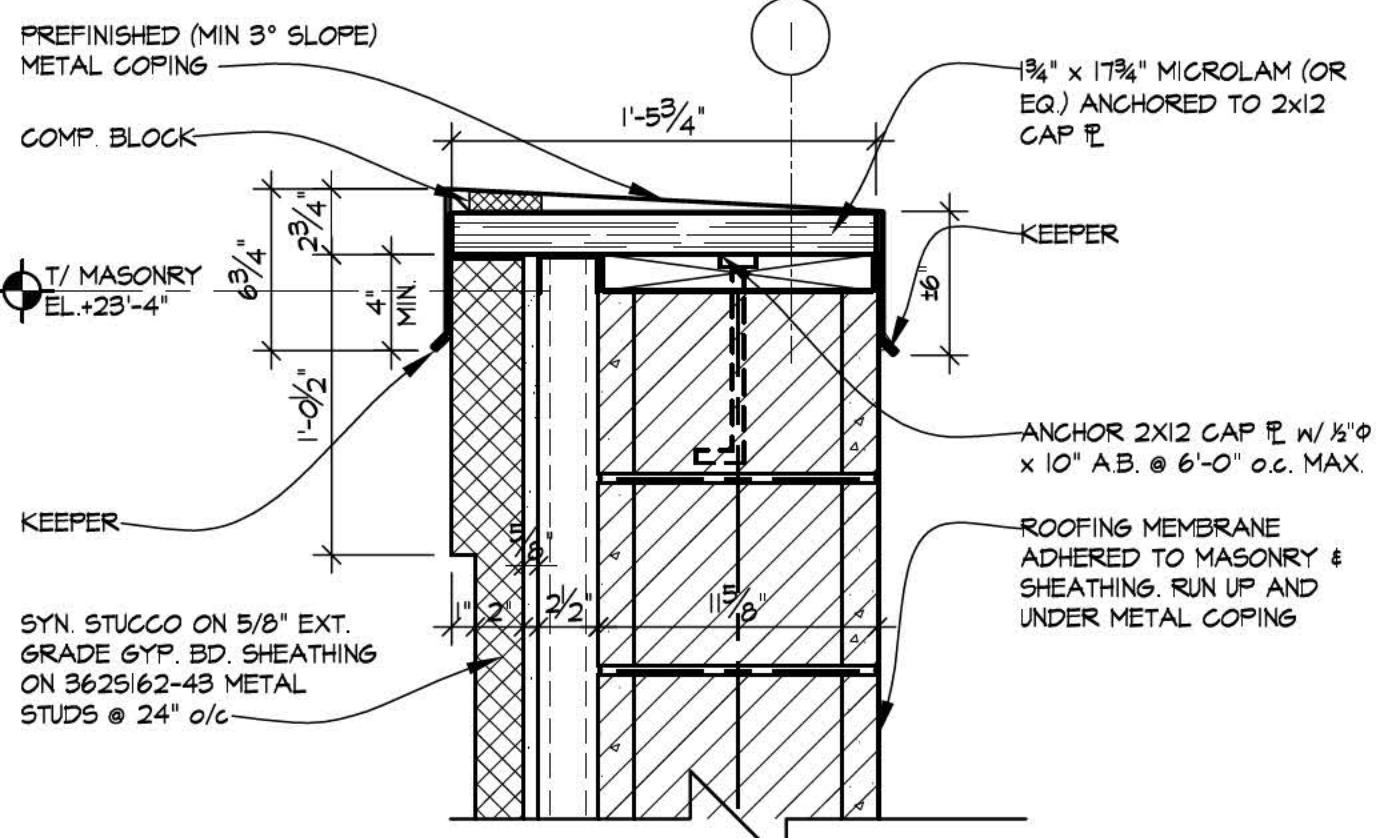


SCALE: 1 1/2" = 1'-0"

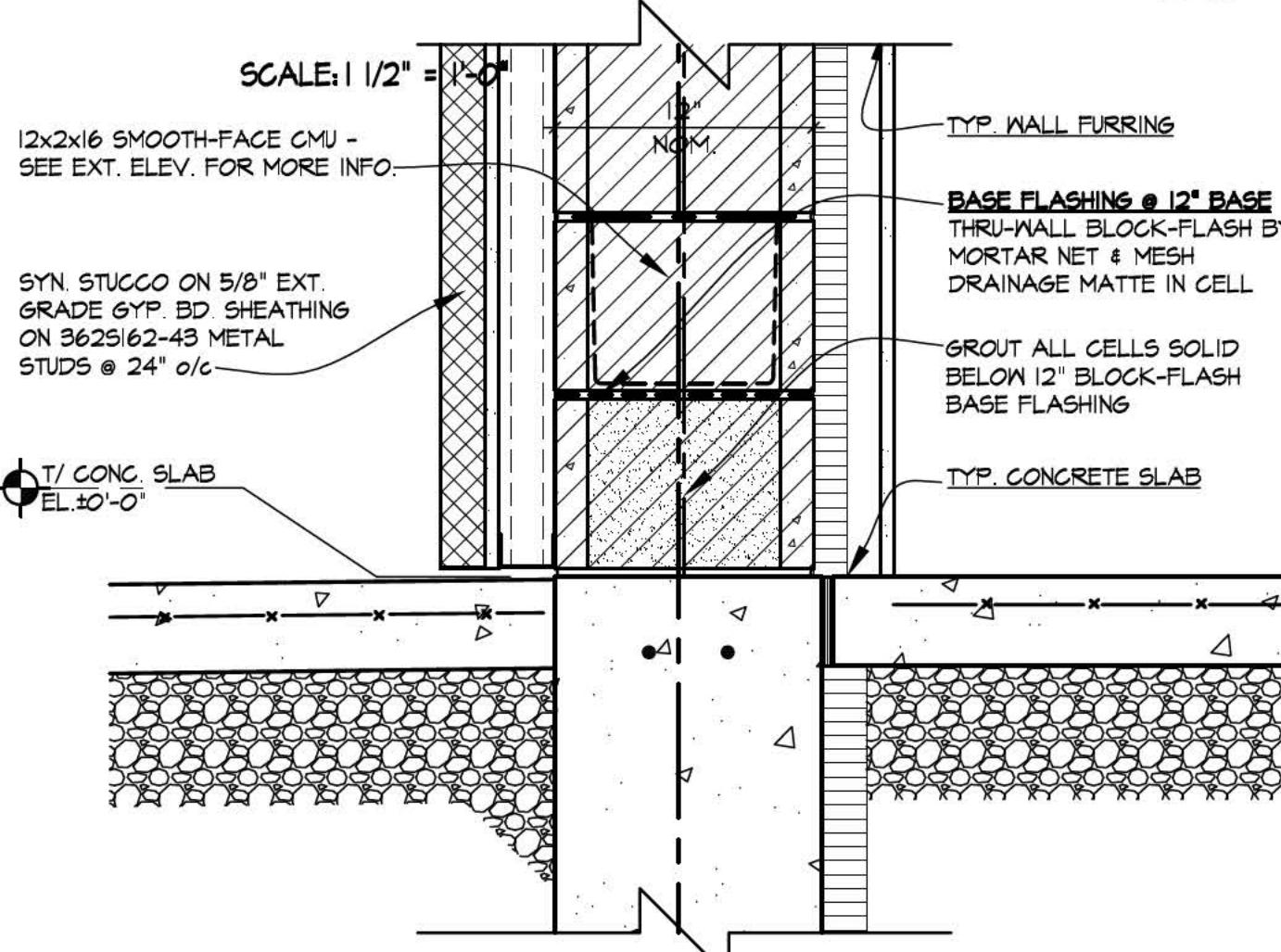


ROOF SCUPPER

SCALE: 1 1/2" = 1'-0"



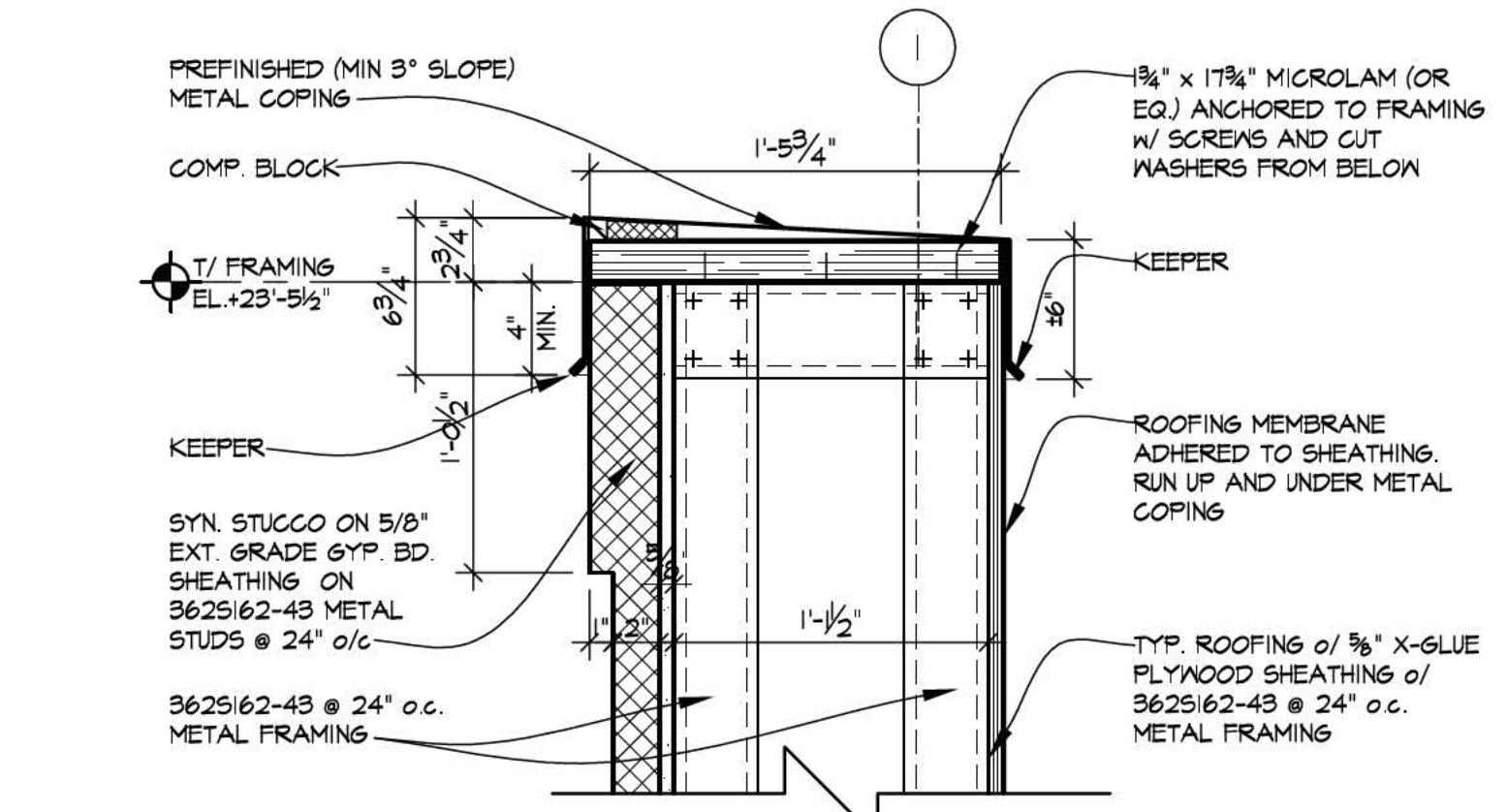
SCALE: 1 1/2" = 1'-0"



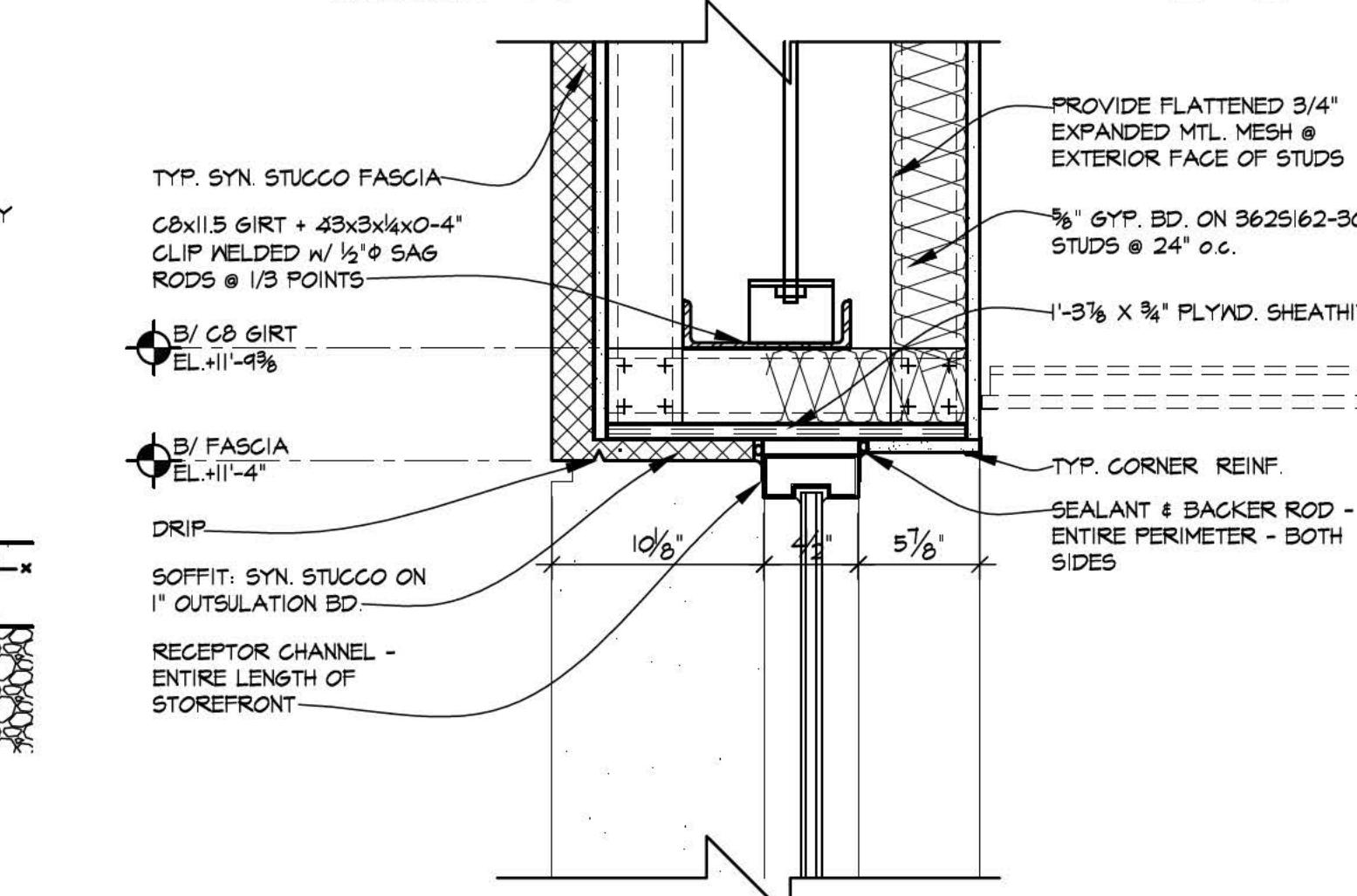
SCALE: 1 1/2" = 1'-0"

<b>EXTRUDED POLYSTYRENE INSULATION BOARD</b>
POLYSTYRENE BOARD INSULATION IS LIMITED TO A FLAME SPREAD OF 25 OR LESS (ACTUAL = 5) AND A SMOKE DEVELOPED RATING OF 450 OR LESS (ACTUAL = 165) PER ASTM E84. INSULATION AND STUDS TO BE FACED WITH A FACE LAYER OF 1/8" FIRECODE 'C' GYPSUM DRYWALL PROTECTION AS REQUIRED BY CODE
<b>FIBERGLASS INSULATION</b>
FIBERGLASS INSULATION TO BE TYPE FLAME SPREAD 25 INSULATION, FACED WITH A VAPOR BARRIER OF MAX. 1.0 PERM RATING WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE FLAME SPREAD INDEX OF 25 AND A SMOKE DEVELOPED INDEX OF 160 PER ASTM E84.
<b>PLYWOOD SHEATHING</b>
ALL PLYWOOD ROOF & WALL SHEATHING SHALL BE FASTENED #18 SCREWS @ 6" O.C. @ SUPPORTED PLYWOOD EDGES, AND 12" O.C. @ INTERMEDIATE SUPPORTS, UNO. ROOF & WALL PLYWOOD SHEATHING TO MEET DOG PS 1 OR 2 STANDARDS
<b>GYPSUM BOARD &amp; ACCESSORIES</b>
ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO THE APPROPRIATE STANDARDS LISTED BELOW:
ACCESSORIES FOR GYPSUM BD.....ASTM C 1047 GYPSUM WALLBOARD.....ASTM C 74 JOINT REINF TAPE & COMPOUND.....ASTM C 474, C 475 STEEL SCREWS.....ASTM C 454; C 1002 STEEL STUDS NON-LOAD BEARING.....ASTM C 645 WATER RESISTANT GYP BACKING BD.....ASTM C 630 TESTING SYSTEM AND GYPSUM PRODUCTS.....ASTM C 22, C 412; C 473

SCALE: 1 1/2" = 1'-0"



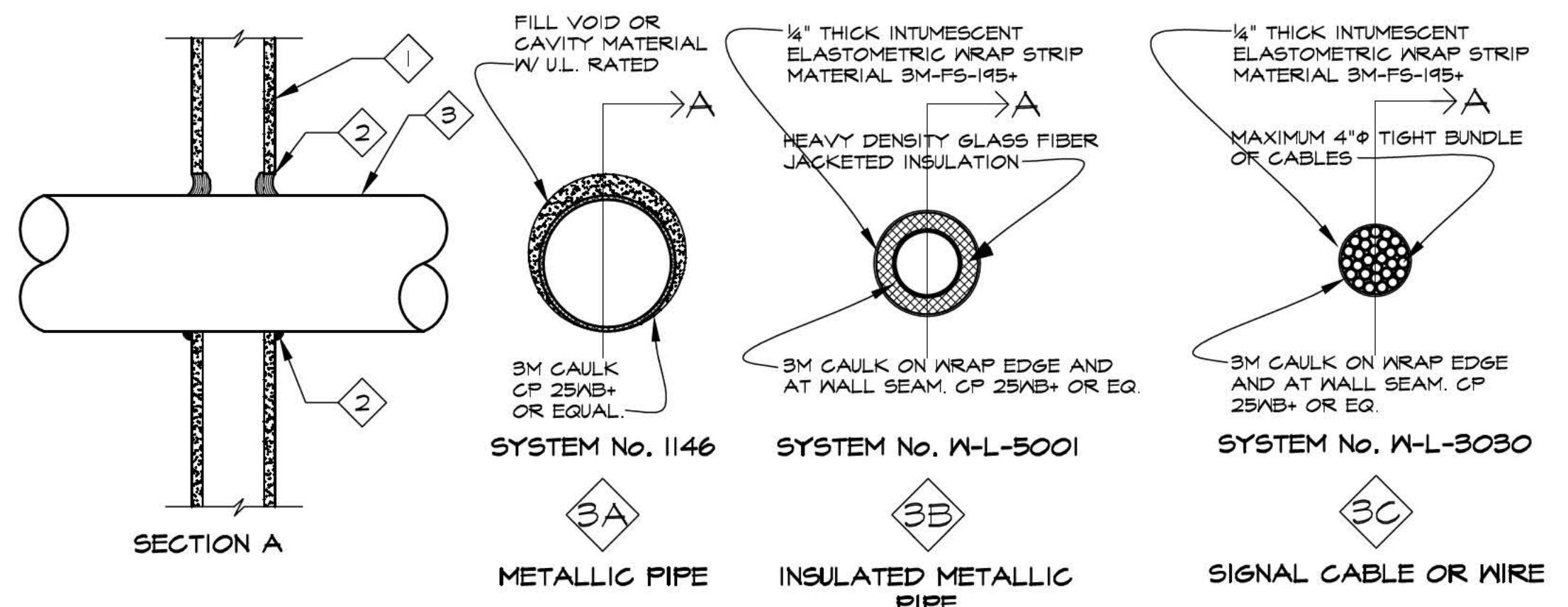
SCALE: 1 1/2" = 1'-0"



SCALE: 1 1/2" = 1'-0"

## INTERIOR FINISH SCHEDULE

SEE BWCO DRAWINGS  
FOR INTERIOR FINISHES



### TYPICAL DEMISING WALL PENETRANT RESTORATION DETAIL

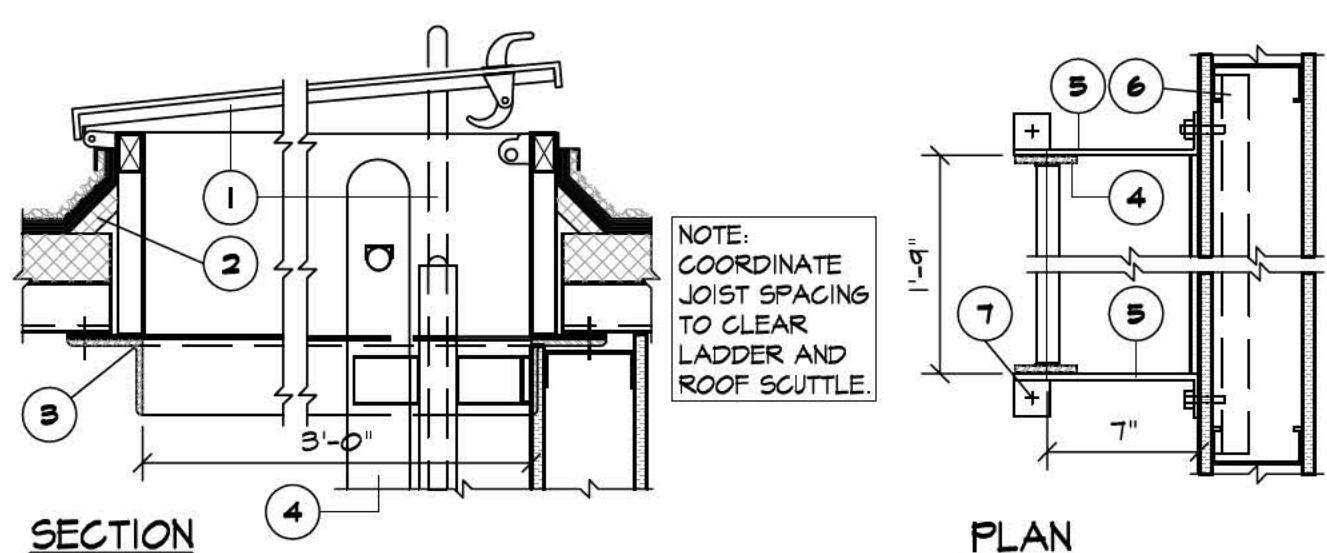
SCALE: 1/4" = 1'-0"

#### DRAWING LEGEND NOTES

- WALL ASSEMBLY
- 2 1/8" THICK MINIMUM CAULK 3M CP 25WB+ OR EQUAL
- THROUGH WALL PENETRANT
- SA METALLIC PIPE (SYSTEM W-L 1146)
  - 1. STEEL PIPE 12" (OR SMALLER) SCHED. 10 (OR HEAVIER)
  - 2. IRON PIPE 12" (OR SMALLER)
  - 3. CONDUIT 6" (OR SMALLER)
- 3C SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)

NOTE:  
CONSULT INDIVIDUAL PENETRATION SYSTEM  
DESIGNS IN THE UL FIRE RESISTANCE  
DIRECTORY FOR ADDITIONAL INFO.

4. COPPER TUBING, 6" (OR SMALLER) TYPE L (OR HEAVIER)
5. COPPER PIPE, 6" (OR SMALLER) REGULAR (OR HEAVIER)
- 3B INSULATED METAL PIPE (SYSTEM W-L 5001)
  1. STEEL PIPE 12" (OR SMALLER) SCHED. 10 (OR HEAVIER)
  2. COPPER TUBING 6" (OR SMALLER) TYPE L (OR HEAVIER)
  3. COPPER PIPE, 6" (OR SMALLER) REGULAR (OR HEAVIER)



#### KEYED NOTES

1. ROOF SCUTTLE - 2'-6" X 3'-0" TYPE "S" WITH "LADDER-UP" SAFETY POST MODEL 2 BY BILCO TO SECURE SCUTTLE TO ROOF STRUCTURAL STEEL WITH THRU BOLTS ACCORDING TO MANUFACTURER'S DIRECTIONS. HINGE PINS ARE TO BE WELDED NON-REMOVABLE.
2. STANDARD 1" FIBER CANT, BUILT UP ROOFING & COUNTER FLASHING.
3. 3/4" X 3/4" X 14" ANGLED WELDED FRAME, EXTEND AND SECURE TO BUILDING ROOF STRUCTURE AS REQUIRED.
4. 2 1/8" FLAT STL BAR SIDE RAILS, 8" DIA STL RINGS FURNISHED INTO RAILS 12" O.C. & WELDED W/ MELAC SLIP-RESISTANT RUNG COVERS W/ A FINISH COAT RUST INHIBITIVE PAINT.
5. PROVIDE 2 1/8" X 3/8" THICK FLAT BENT STEEL BRACKETS AT MAX. 4'-0" CENTERS, WELD TO SIDE RAILS, WELD TOP TO STEEL ANGLE FRAME.
6. AT METAL STUD WALL, PROVIDE 1 1/2" O.R. STEEL REINFORCING CHANNELS WITH WELDED 3/8" THRU BOLTS TO RECEIVE BRACKETS. CUT STUD FLANGES TO RECEIVE REINFORCING CHANNEL. AT MASONRY, FASTEN BRACKETS WITH 3/8" X 2 1/2" WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.
7. PROVIDE 2 1/8" X 2 1/2" X 3/8" WELDED CLIP ANGLES SECURED TO CONCRETE FLOOR WITH 1/2" X 2 1/2" WEDGE "RED HEAD" OR "MOLLY" ANCHOR BOLTS.

#### LADDER & SCUTTLE DETAIL

SCALE: NONE

2

1

## DOOR SCHEDULE

MK	DOOR				DOOR HARDWARE	FRAME			DETAILS			FIRE RATING	REMARKS (REFER NOTES)	
	SIZE (W X H X D)	TYPE	SWING	MATERIAL		GLAZ. SET #	KEYED	TYPE	MATERIAL	HEAD HEIGHT	HEAD	JAMB	SILL	
1	3'-0" X 7'-0" X 1-3/4" (STOREFRONT ENTRY DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM	1	A	1	ALUMINUM						1, 2
2	3'-0" X 7'-0" X 1-3/4" (DELIVERY DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL	2	A	2	INSULATED METAL	4" (IF MASONRY)	SEE 3/A1				1, 2, 3
3	6'-0" X 8'-0" (DRAWDOWN DELIVERY DOOR)	D	SECTIONAL OVERHEAD	INSULATED METAL	3			MANUFACTURER'S STANDARDS		SEE 4/A1				1

SEE BWCO DRAWINGS FOR INTERIOR DOORS

7	3'-0" X 7'-0" X 1-3/4" (SHOWROOM EGRESS DOOR)	B	REFER TO FLOOR PLAN	INSULATED METAL	6		2	INSULATED METAL	4" (IF MASONRY)	SEE 3/A1				1, 3
8	3'-0" X 7'-0" X 1-3/4" (INTERIOR VESTIBULE DOOR)	A	REFER TO FLOOR PLAN	ALUMINUM	7		1	ALUMINUM						1

NOTES:  
1. ALL DOORS SHALL BE SHOP PREPARED FOR HARDWARE.  
2. ALL EXTERIOR DOORS TO BE KEYED ALIKE. CONTRACTOR TO FIELD VERIFY AND MATCH CORE OF DOOR MARKED "2".  
3. EXTERIOR DOOR, FRAME AND HARDWARE OWNER FURNISHED AND CONTRACTOR INSTALLED. VERIFY WITH G.C.  
4. CONTRACTOR'S OPTION TO PURCHASE INTERIOR DOORS, FRAMES, AND HARDWARE THROUGH PREFERRED VENDOR. REFER TO SCOPE OF WORK SCHEDULE.

LOCKNET  
100 COURCHELLE DRIVE  
NICHOLSVILLE, KY 40356  
CONTACT: PAM PEEL  
PHONE: 800-887-4307 EXT 133  
FAX: 859-881-5499  
EMAIL: construction@locknet.com

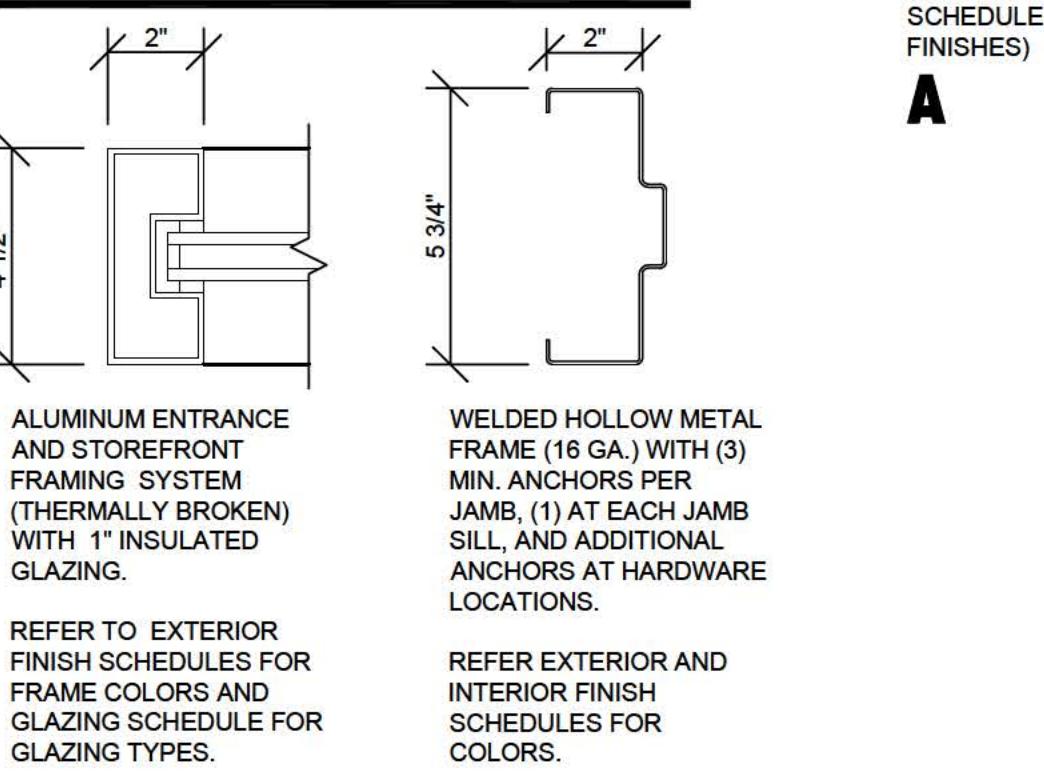
SPECIAL NOTE:  
UNLESS OTHERWISE INDICATED, KNOCK  
DOWN (KD) TYPE DOOR FRAMES ARE NOT  
PERMITTED.

## GENERAL NOTES

- (A) N/A
- (B) N/A
- (C) REFER TO FLOOR PLAN, ELEVATIONS, AND SECTIONS FOR ADDITIONAL REQUIREMENTS.
- (D) REFER TO EXTERIOR SCHEDULES FOR COLORS. PERIMETER SEALANT COLOR TO MATCH FRAME COLOR UNLESS OTHERWISE INDICATED.

## FRAME TYPES

(SCALE 3" = 1'-0")

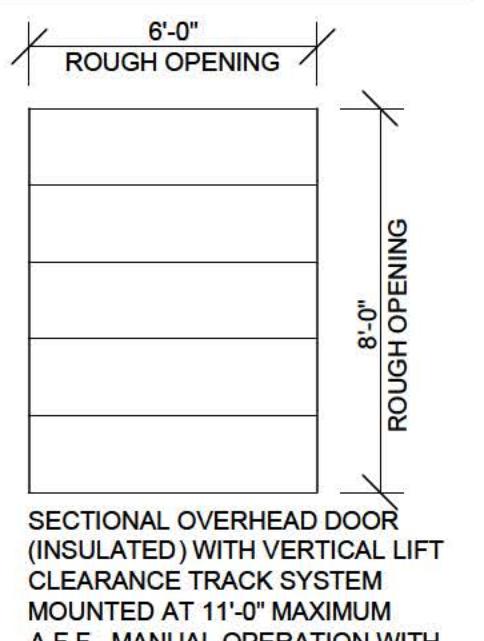


1

2

## DOOR TYPES

(SCALE 1/4" = 1'-0")



SECTIONAL OVERHEAD DOOR  
(INSULATED) WITH VERTICAL LIFT  
CLEARANCE TRACK SYSTEM  
MOUNTED AT 11'-0" MAXIMUM  
A.F.F. MANUAL OPERATION WITH  
PULL ROPE. (REFER TO  
SCHEDULES FOR FINISHES)

D

## ROOFING SYSTEM SPECIFICATIONS:

1. BASE BID - TYP. EPDM ROOF SYSTEM: FULLY-ADHERED MIN. 45 MIL BLACK EPDM ROOFING MEMBRANE OVER POLYISOCYANURATE INSULATION.
2. ALTERNATE BID - TYP. TPO SINGLE PLY ROOFING SYSTEM: MIN. 45 MIL WHITE TPO THERMOPLASTIC POLYOLEFIN SINGLE-PLY ROOFING MEMBRANE (MEETING ASTM STANDARDS D2147, D2178, D312, D3909 FOR MATERIAL USED), OVER POLYISOCYANURATE INSULATION.
3. PROVIDE MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION MECHANICALLY FASTENED TO 1/2" METAL ROOF DECK. MINIMUM INSULATION "R" VALUE SHALL BE .30 (SINGLE LAYER WILL NOT ACHIEVE REQUIRED R-VALUE & THICKNESS). TOTAL ROOF SYSTEM SHALL HAVE 40 MPH WIND RESISTANCE, PHYSICAL INTEGRITY AND IMPACT RESISTANCE IN ACCORDANCE WITH ASTM G55, D3746 AND D4272. ALL ROOF COMPONENTS TO BE INSTALLED PER MANUFACTURER'S WRITTEN TECHNICAL SPECIFICATIONS. PROVIDE ROOFING SYSTEM BY THE FOLLOWING APPROVED MANUFACTURERS OR APPROVED EQUAL:
  - FIRESTONE BUILDING PRODUCTS (800)428-4442
  - CARLISLE, INC. (717)245-1000
  - JOHNS MANVILLE (800)654-3103
4. ROOFING SYSTEM SHALL HAVE FIFTEEN (15) YEAR WARRANTY FROM DATE OF SUBSTANTIAL COMPLETION. ROOFING SYSTEM SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR, APPROVED BY ROOFING SYSTEM MANUFACTURER, TO INSTALL MANUFACTURER'S PRODUCTS. ROOFING SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH THE ROOFING SYSTEM MANUFACTURER'S WRITTEN TECHNICAL SPECIFICATIONS. PROVIDE ROOFING SYSTEM BY THE FOLLOWING APPROVED MANUFACTURERS OR APPROVED EQUAL:
  - FIRESTONE BUILDING PRODUCTS (800)428-4442
  - CARLISLE, INC. (717)245-1000
  - JOHNS MANVILLE (800)654-3103

## ROOF PLAN

SCALE: 1/16"=1'-0"

## DOOR HARDWARE SCHEDULE

### ARE NOTES:

1. ALL HARDWARE TO BE ADA AND ANSI COMPLIANT.
2. VERIFY COMPATIBILITY OF HARDWARE SPECIFIED. NOTIFY ARCHITECT OF INCOMPATIBILITY ISSUES PRIOR TO ORDERING AND INSTALLATION.

### SET NO. 1 (DR. 1) - EXTERIOR STOREFRONT DOOR

1 CYLINDER: 20-062 X US26D - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

### (FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)

1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 DEADLOCK: MS1860S X 626..... ADAMS RITE

1 STRIKE: MS400X 90 X 626..... ADAMS RITE

1 SET PUSH/PULLS: 90 X 626..... EFCO

1 CLOSER: 4041-3077-1871-TB X 689 (ADJ. TO 8.5 LBS.)..... LCN

1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED..... PEMKO

1 SWEEP: 245AP X LENGTH REQUIRED..... PEMKO

1 THRESHOLD: 270A X LENGTH REQUIRED (OFFSET PIVOT COMPATIBLE)..... PEMKO

1 CONTINUOUS HINGE: 178-112HD X LENGTH REQUIRED X 628..... HAGER

1 CYLINDER: 20-057 X 626 - "E" KEYWAY (REMOVABLE CORE)..... SCHLAGE

1 PANIC LOCK: 9300B X 486 X 689 - PRTO3 X 630 (THROUGH SEX BOLT MOUNTING)..... DORMA

1 CLOSER: 8616DST X SNB1 X 689 (ADJ. TO 8.5 LBS.)..... DORMA

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQD..... SCHLEGEL

1 LATCH GUARD: LG100Z/SX 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR VIEWER: 698 - 190 DEGREE X 626..... IVES

1 KICK PLATE: 190S X 8" X 34" X 630..... HAGAR

1 DOOR BOTTOM SEAL: 31321 X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

### SET NO. 3 (DR. 3) - OVERHEAD DELIVERY DOOR

REQUIRED HARDWARE FURNISHED WITH OVERHEAD DOOR SYSTEM (LOCKING FROM INSIDE ONLY)

### SET NO. 6 (DR. 7) - SHOWROOM EGRESS DOOR

3 HINGES: ECBB1100 X 4 1/2" X 4 1/2" X 626 X NRP..... HAGER

1 EXIT ONLY PANIC LOCK: 8300B X 486 X 689..... HAGER

1 CLOSER: 5300MLT X 689 (ADJ. TO 8.5 LBS.) (THROUGH SEX BOLT MOUNTING)..... HAGER

1 SET PERIMETER GASKETS: QEBD-500 X LENGTH REQD..... SCHLEGEL

1 LATCH GUARD: LG100Z/SX 626 (STRAIGHT W/ PIN W/ SEX BOLTS)..... LATCHGUARD

1 DOOR BOTTOM SEAL: 31321 X LENGTH REQUIRED..... GLOBAL

1 THRESHOLD: 31206 X LENGTH REQUIRED..... GLOBAL

### SET NO. 7 (DR. 8) - INTERIOR VESTIBULE DOOR

(FOLLOWING REQUIRED HARDWARE FURNISHED WITH WINDOW FRAMING DOOR SYSTEM)

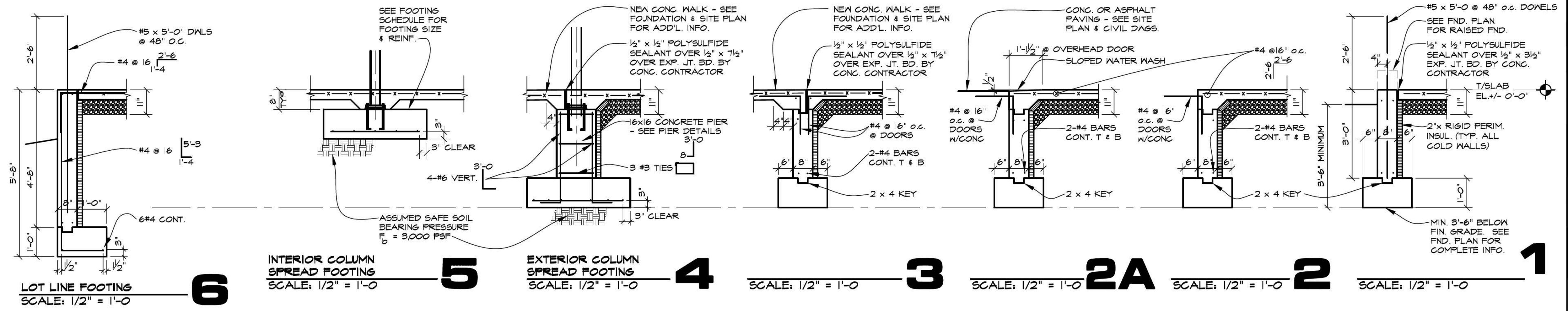
1 PAIR OFFSET PIVOTS: 195/188 X 626..... RIXON

1 SET PUSH/PULLS: 86-161 ULTRALINE W/ OFFSET PULL X 626..... EFCO

1 CLOSER: 4041-3077-1871-TB X AL (ADJ. TO 8.5 LBS.)..... LCN

1 SET PERIMETER GASKETS: POLYMERIC BULB X LENGTH REQUIRED..... PEMKO

### SET NO. 15 (DR. 15) - PLUMBING VENT

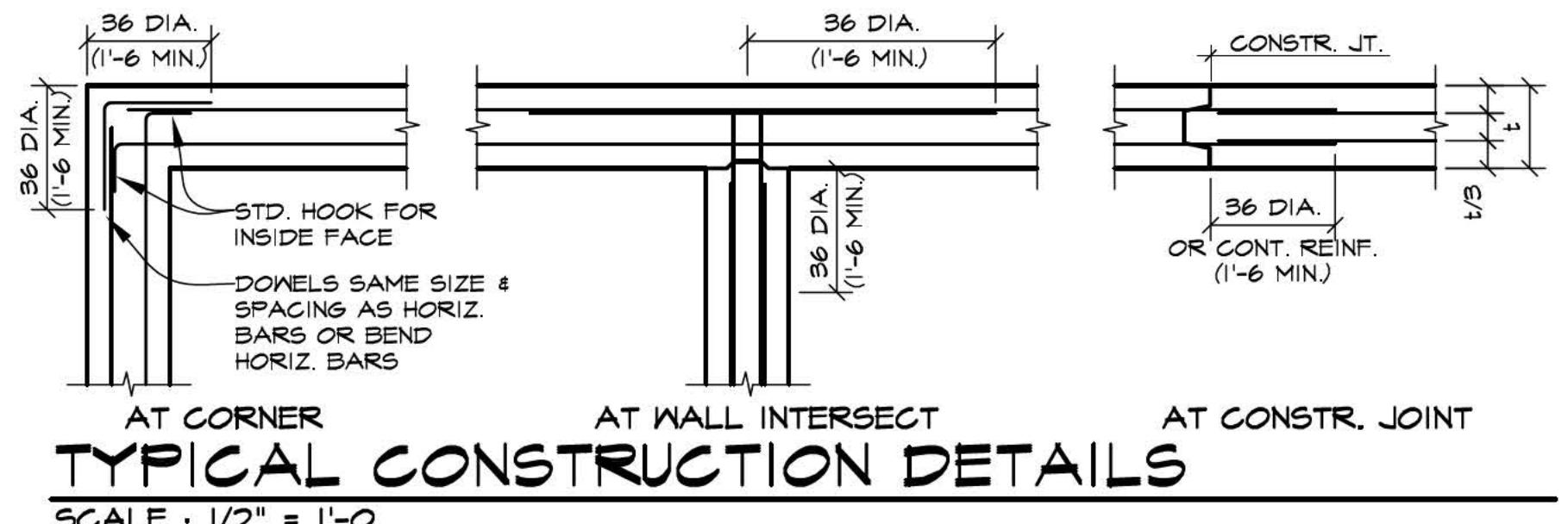


FOOTING SCHEDULE							
PAD				PIER			
MARK	SIZE	REINF. EA. WAY	BOTTOM ELEV.	SIZE	VERT. REINF.	TIES	TOP ELEV.
F1	4'-6" X 4'-6" X 1'-0"	9 #4 EA	(-1)-8				
F2	3'-6" X 3'-6" X 1'-0"	6 #4 EA	(-4)-6	16 x 16	4 #6	#3 @ 12	-0'-8
							PI
							SEE PIER DETAILS

**CONCRETE NOTES:**  
1. ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. DRIVEWAYS AND SIDEWALKS SHALL BE 4000 PSI COMPRESSIVE STRENGTH.  
2. ALL REINFORCING BARS SHALL BE ASTM A615-60 AND SHALL HAVE DEFORMATIONS IN ACCORDANCE TO ASTM SPECIFICATIONS A-305 AND A-402 LATEST EDITIONS.  
3. ALL WELDED WIRE FABRIC SHALL BE ASTM A162. ALL FLATWALL SHALL BE REINFORCED WITH 6 X 6#4 X 16#4 WELDED WIRE FABRIC UNLESS NOTED OTHERWISE. ALL WWF SHALL BE SET 1" DOWN FROM TOP OF SLAB.  
4. ALL REINFORCING BARS SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS, AND SECURED IN PLACE IN ACCORDANCE WITH PROCEDURES AND REQUIREMENTS OUTLINED IN THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI-315, LATEST EDITION AND THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AC 318-81".  
5. MECHANICAL EQUIPMENT PADS, OPENINGS, ETC. SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR CONFIGURATION ONLY. THEIR FINAL LOCATION SIZE, ETC. SHALL BE AS PER APPROVED SHOP DRAWINGS FOR THE EQUIPMENT OR AS REQUIRED BY THE ARCHITECT.  
6. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, SLEEVES, EQUIPMENT PADS, DEPRESSION, CURBS, FLOOR FINISHES, INSERTS, OTHER EMBEDDED ITEMS AND DETAILS.  
7. FABRICATORS SHALL SUBMIT CHECKED SHOP DRAWINGS FOR REINFORCING STEEL AND OTHER DETAILS TO THE ARCHITECT-ENGINEER AND OBTAIN APPROVAL PRIOR TO FABRICATION.  
8. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.  
9. CONCRETE FLOOR SHALL HAVE HARDENER AND SEALER.  
10. SAM CUT CONTROL JOINTS AS SHOWN ON THE FOUNDATION PLAN.  
11. ALL INTERIOR CONCRETE SLABS SHALL HAVE HARD TROWEL FINISH. ALL EXTERIOR SIDEWALKS SHALL BE BROOM FINISHED WITH CONTROL JOINTS AT A MINIMUM OF 5 FEET ON CENTER IN EACH DIRECTION UNLESS NOTED OTHERWISE.  
12. CONCRETE CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL TRANSFORMER PAD, PYLON SIGN FOUNDATION & LIGHT POLE BASES.

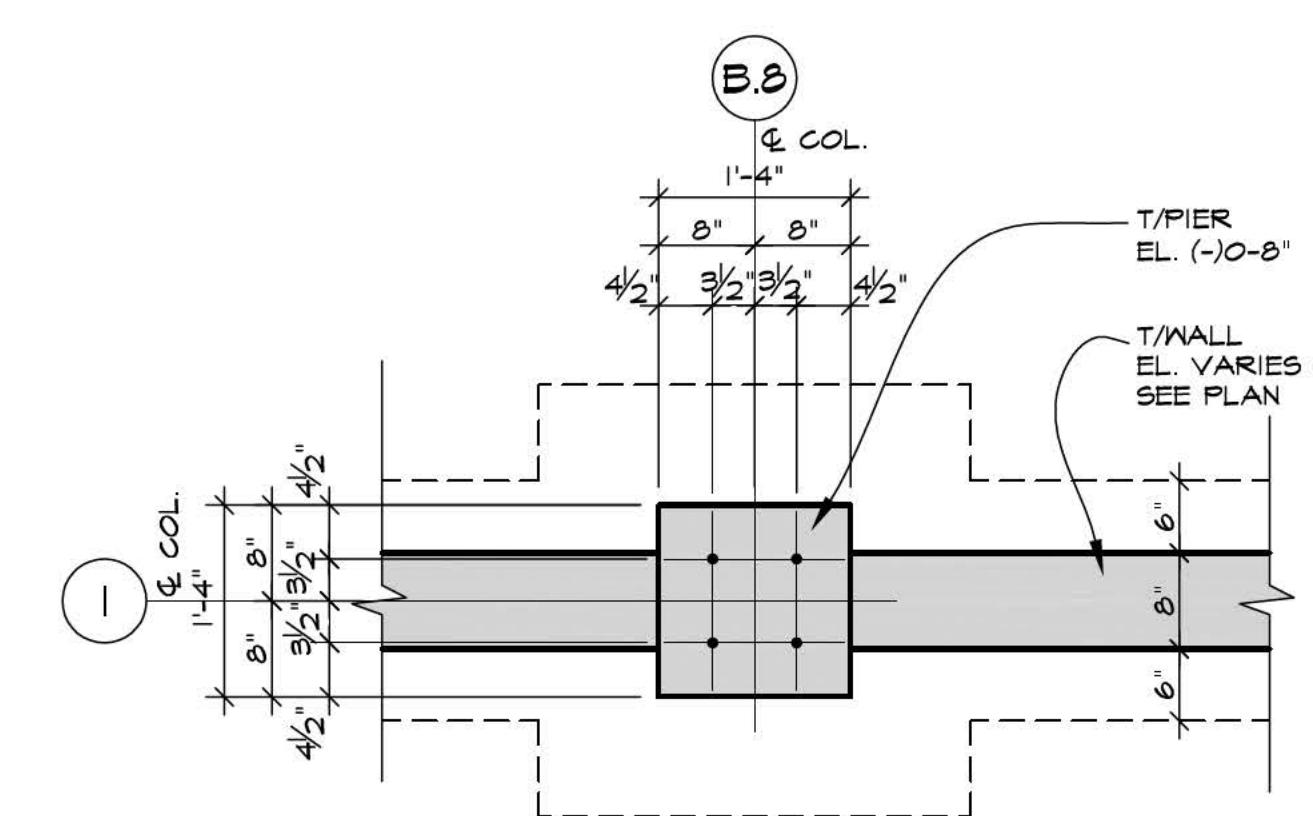
### FLOOR CONSTRUCTION DETAILS

SCALE : 1/2" = 1'-0"



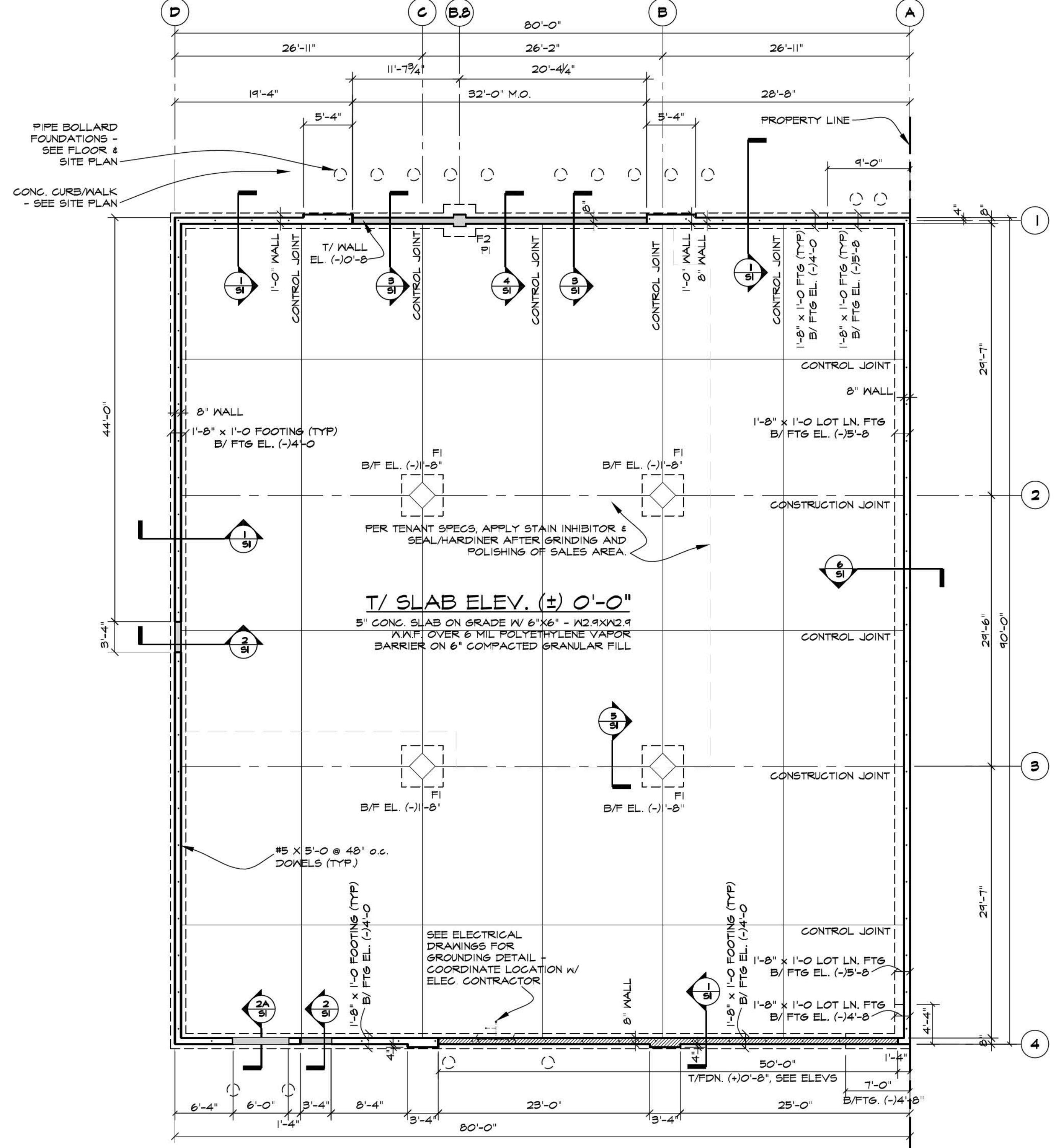
### TYPICAL CONSTRUCTION DETAILS

SCALE : 1/2" = 1'-0"



### PIER DETAILS

SCALE: 3/4" = 1'-0"



### FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



## GENERAL STEEL NOTES

- ALL STEEL SHALL BE NEW AND SHALL BE ASTM A992 (FY=50 KSI) EXCEPT TUBE COLUMNS SHALL BE ASTM A500 GRADE B WITH FY=46KSI.
- STEEL DETAILING, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CODES AND SPECIFICATIONS OF THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION.
- UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS, ALL CONNECTIONS SHALL BE STANDARD FRAMED BEAM CONNECTIONS WITH 3/4" DIAMETER HIGH STRENGTH BOLTS AS SHOWN IN TABLE II OF THE CURRENT A.I.S.C. MANUAL OF STEEL CONSTRUCTION. THE CONNECTION SHALL BE DESIGNED FOR A REACTION EQUAL TO THE VALUE "R" TABULATED AT THE BOTTOM OF THE UNIFORM LOAD BEAM TABLES.
- NO CONNECTION SHALL CONSIST OF LESS THAN 2-3/4" DIAMETER HIGH STRENGTH BOLTS OR WELDS DEVELOPING NOT LESS THAN 10,000 POUNDS.
- ALL WELDING SHALL BE E70XX ELECTRODES AND IN ACCORDANCE WITH A.W.S. SPECIFICATIONS.
- FIELD WELD BAR JOISTS TO BEAMS & ANCHOR PLATES.
- IN ADDITION TO WEB CONNECTION, PROVIDE 4X4X3/8" ANGLE SEAT FOR ALL GIRDERS FRAMING INTO COLUMNS.
- ALL STEEL JOISTS SHALL CONFORM TO STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS.
- EXTEND BOTTOM CHORD OF BAR JOISTS AND CONNECT TO COLUMNS AT ALL COLUMN LINES AND WHERE SHOWN BY "X".
- PROVIDE STANDARD MASONRY ANCHORS FOR BEAMS BEARING ON MASONRY EXCEPT AS NOTED.
- ALL ELEVATIONS ARE TO TOPS OF STEEL BEAMS UNLESS NOTED. SLOPE BEAMS UNIFORMLY BETWEEN ELEVATIONS SHOWN.
- SEE OTHER DRAWINGS FOR MISCELLANEOUS ANGLES, HOLES ETC.
- SEE FOUNDATION PLAN FOR ANCHOR BOLTS & SETTING PLATES.
- ALL STRUCTURAL STEEL INCLUDING BAR JOISTS SHALL HAVE ONE SHOP COAT OF RUST-INHIBITIVE PAINT.
- PROVIDE A 1/4" STIFFENER PLATE IN WEB OF GIRDERS WHERE THEY FRAME OVER COLUMNS, ONE SIDE ONLY.
- SIZE OF STRUCTURAL STEEL CANNOT BE VARIED FROM THOSE SHOWN ON THE DRAWINGS WITHOUT THE CONSENT OF THE ARCHITECT/ENGINEER.
- PROVIDE ALL LOOSE ANGLE LINTELS FOR MASONRY OPENINGS WHERE REQUIRED. LINTELS SHALL BE AS FOLLOWS: (UNLESS NOTED OTHERWISE). FOR OPENINGS IN 4" WALLS PROVIDE WT4 X 7.5 WITH 6" BEARING EACH END. FOR OPENINGS IN 6" WALLS PROVIDE WT4 X 8.5 WITH 8" BEARING EACH END. FOR WALLS 8" OR GREATER PROVIDE ONE ANGLE FOR EACH 4" OF WALL THICKNESS. THESE ANGLES SHALL BE 4 X 3 1/2 X 5/16 WITH 6" BEARINGS EACH END FOR OPENINGS LESS THAN 5'-0" WIDE; FOR OPENINGS 5'-0" OR WIDER, 5 X 3 1/2 X 3/8 ANGLES WITH 8" BEARING EACH END.
- PROVIDE MECHANICAL, ROOFTOP EQUIPMENT SUPPORT ANGLE FRAMING. COORDINATE EXACT LOCATION AND SIZE OF OPENINGS WITH HVAC CONTRACTOR.

## ROOF DECK NOTES

- ROOF DECK SHALL BE TYPE "B" WIDE RIB, 22 GAUGE, PAINTED METAL DECK.
- THE DECK SHALL BE WELDED TO THE SUPPORTS BY 5/8" DIAMETER WELDS WITH A FREQUENCY OF 4 WELDS PER 3 FEET.
- PROVIDE TWO INTERMEDIATE SIDELAP CONNECTION WITH #12 TEK FASTENER AT THE CENTER OF EACH DECK SPAN.

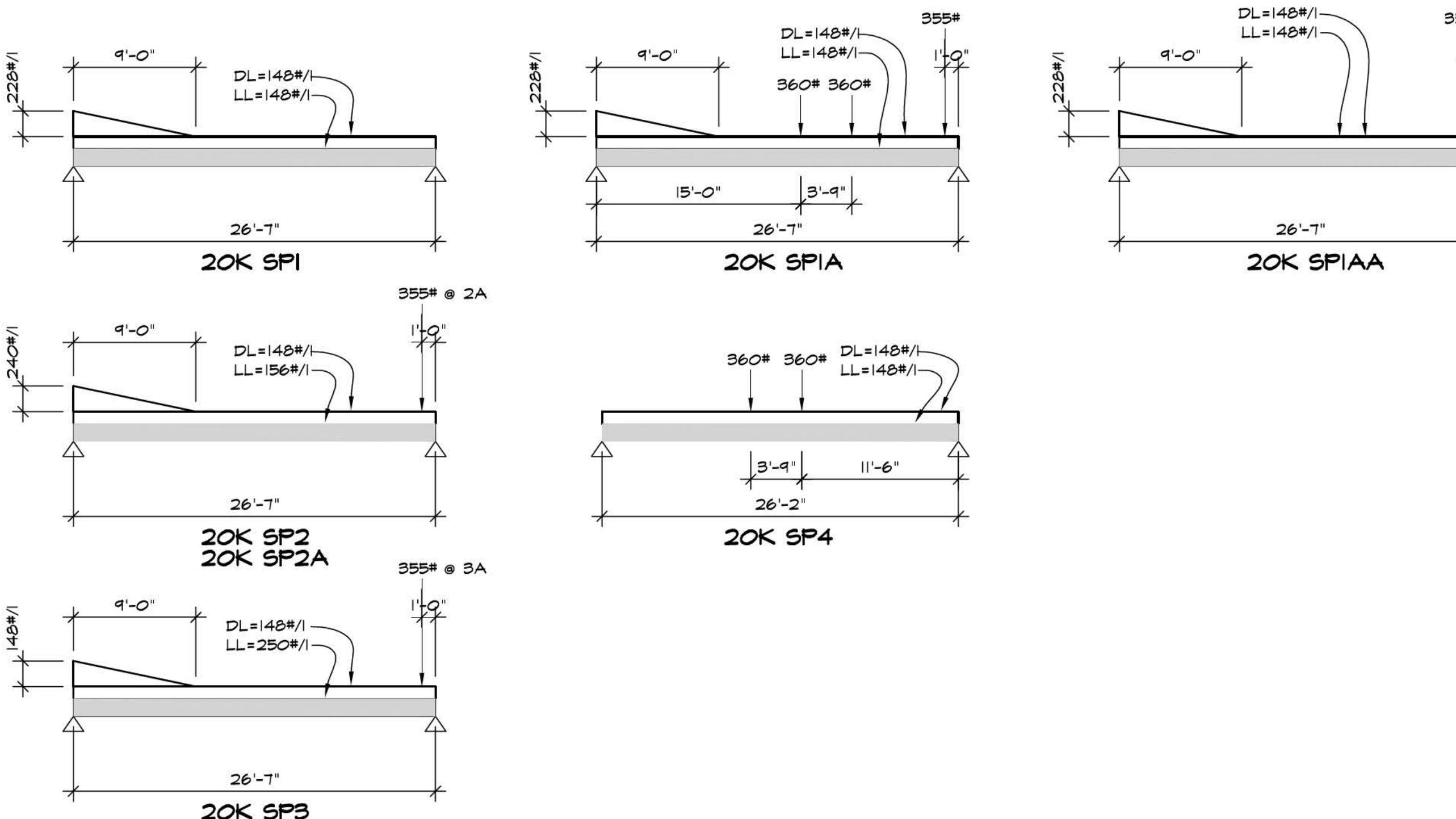
## DESIGN LOADS

ROOF LOAD	6 PSF
ROOFING	2
INSULATION	3
METAL DECK	5
MECHANICAL	4
JOISTS	5
CEILING	5
TOTAL DEAD LOAD	25
LIVE LOAD	25
TOTAL LOAD	50 PSF

## DESIGN LOADS

2012 INTERNATIONAL BUILDING CODE  
A. FLOOR (RETAIL FIRST FLOOR)

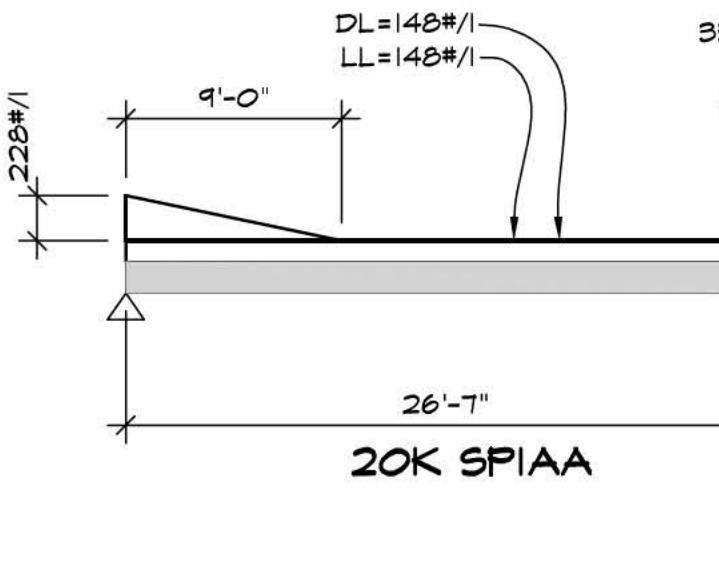
	100 PSF
B. ROOF SNOW LOADS	25 PSF
GROUND SNOW LOAD	10
EXPOSURE FACTOR ( $C_e$ )	10
IMPORTANCE FACTOR (I)	10
Thermal Factor ( $C_t$ )	10
C. DEAD LOADS	ACTUAL MATERIAL WEIGHTS
D. WIND LOADS	90 MPH
3 SECOND GUST	10
Importance Factor	B
Exposure Category (MAFRG)	10
Exposure Category (C&C)	10
Main Wind Force Pressure	16 PSF
Wind Pressure (MAFPAP)	16/20 PSF
Components & Cladding Varies	WALL
E. SEISMIC LOADS	II
Seismic Use Group	D
Site Class	10
Spectral Response Coeff.	104
Short Periods (SDS)	104
1 Second Periods (SD1)	104
Basic Structural System	104
Ordinary Reinforced Masonry Shear Walls	2.0
Response Mod Factor (R)	0.739W
Design Base Shear (V)	10
Analysis by Equiv. Lateral Force Procedure	B
Seismic Design Category	10
F. Handrails & Guards	50 LB/FT
Uniform Load in Any Direction	200 LB/FT
Concentrated Load in Any Direction	



NOTE: JOIST MANUFACTURER SHALL DESIGN FOR THE LOADING SHOWN IN THE DIAGRAMS SHOWN HEREIN

## JOIST DIAGRAMS

NO SCALE



20K SPIA

20K SP2

20K SP4

20K SPS

20K SP2A

20K SPI

20K SP2

20K SP3

20K SP4

20K SPS

20K SP2A

20K SPI

20K SP2

20K SP3

20K SP4

20K SPS

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20K SP4

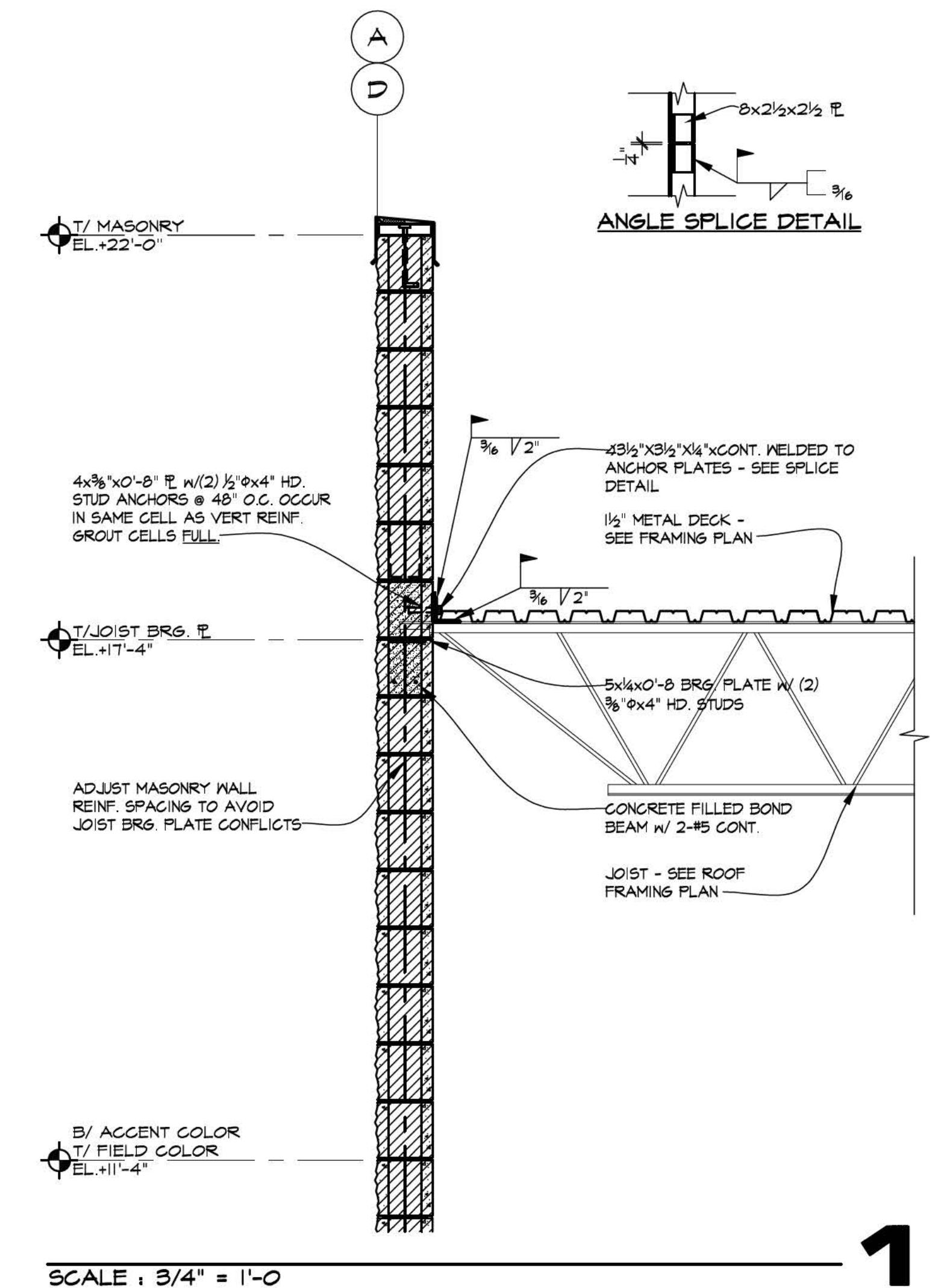
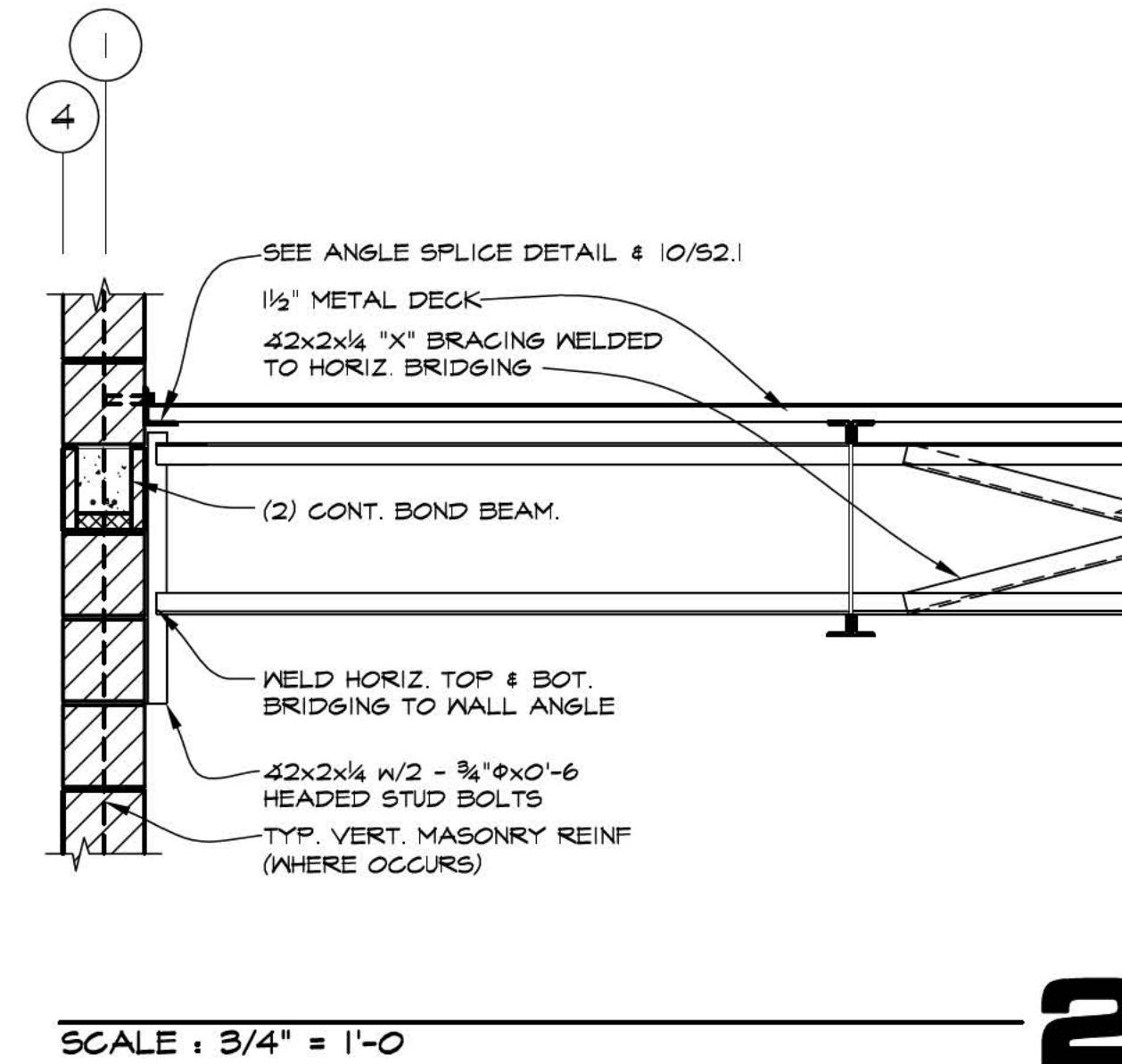
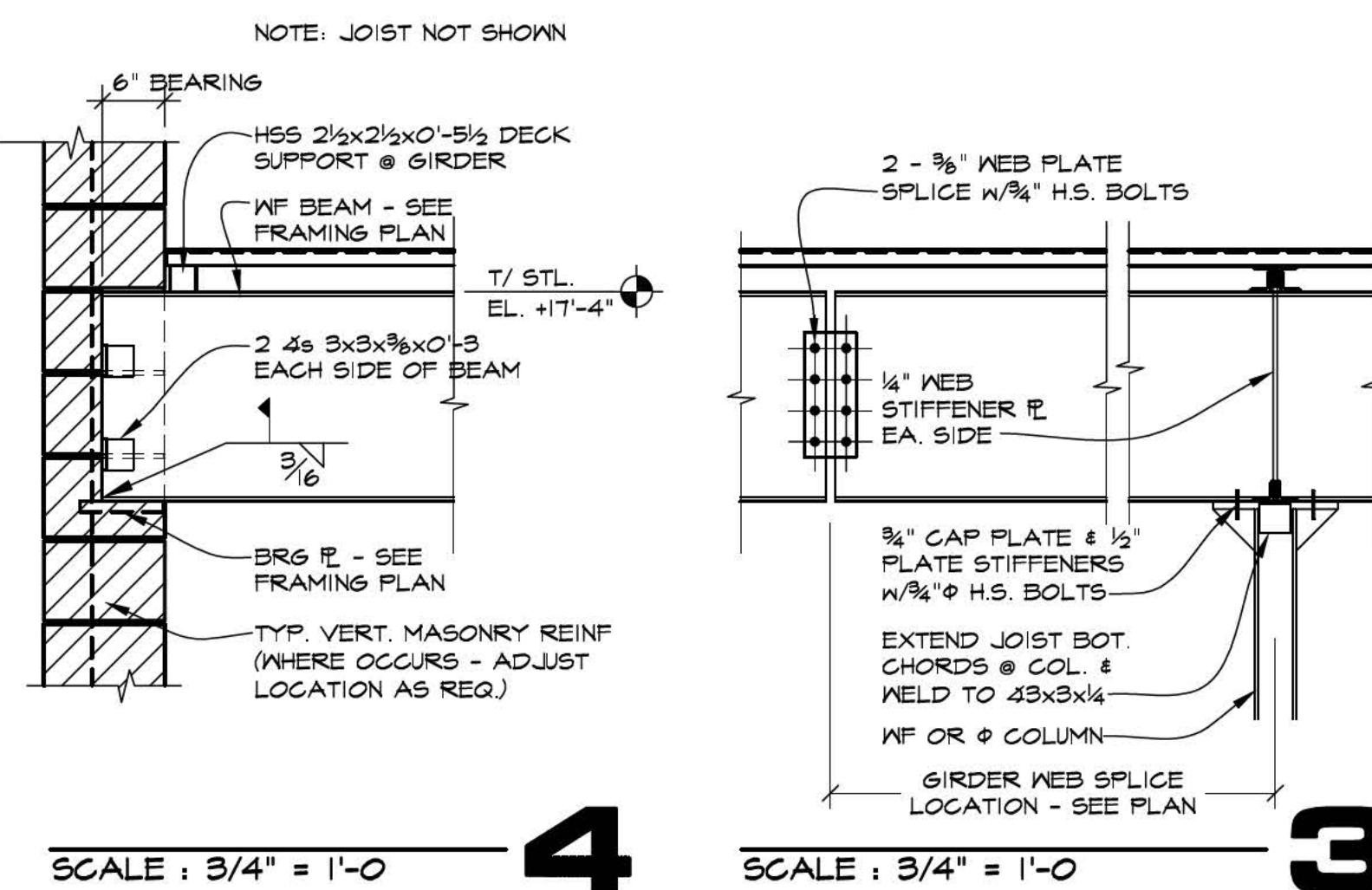
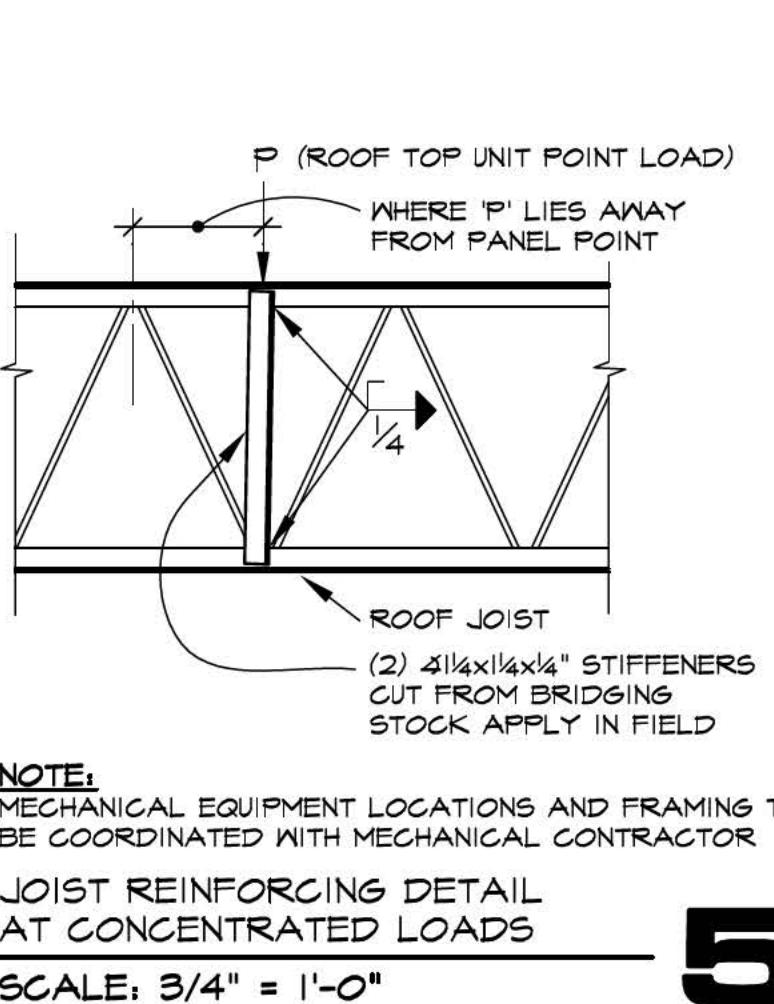
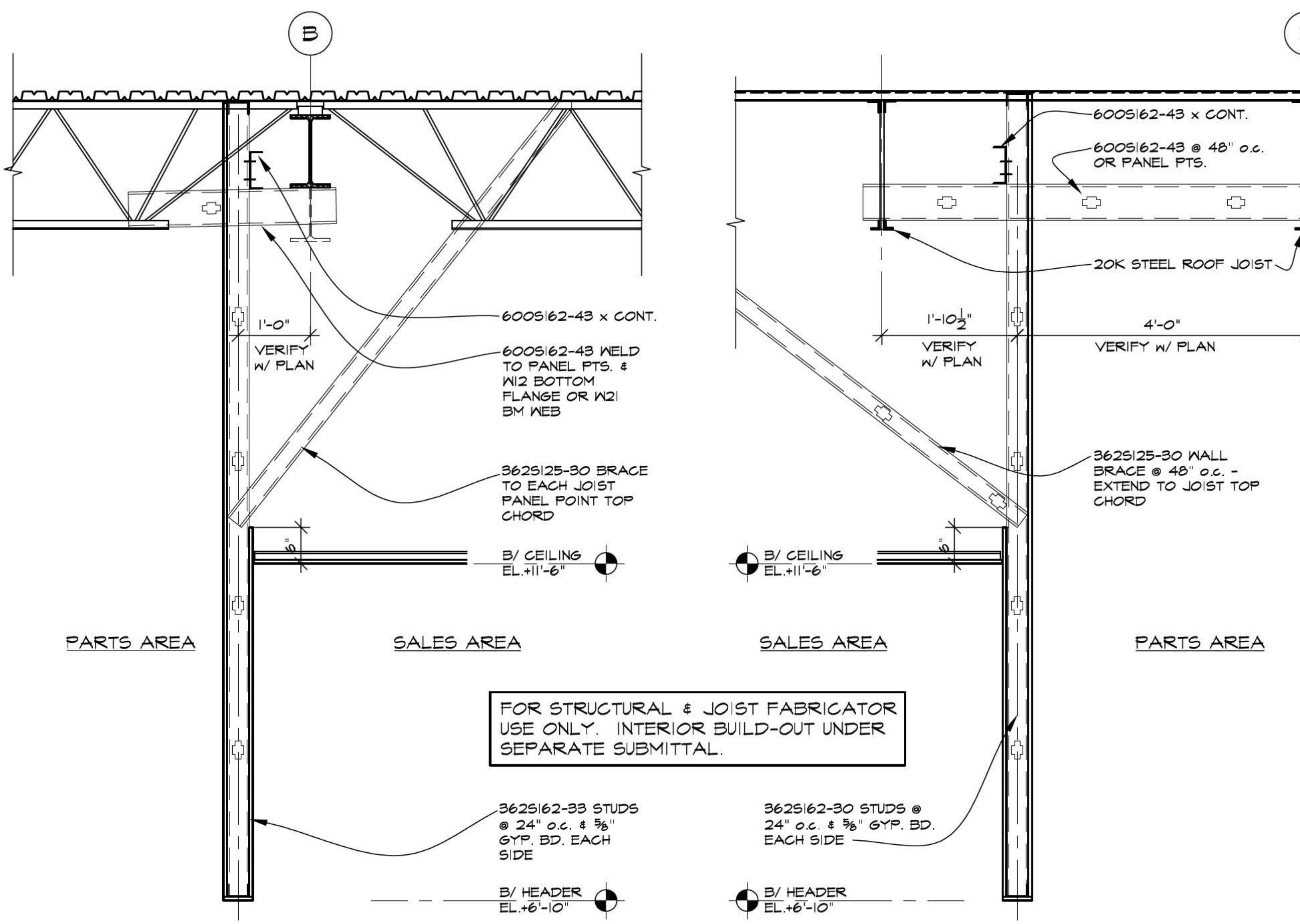
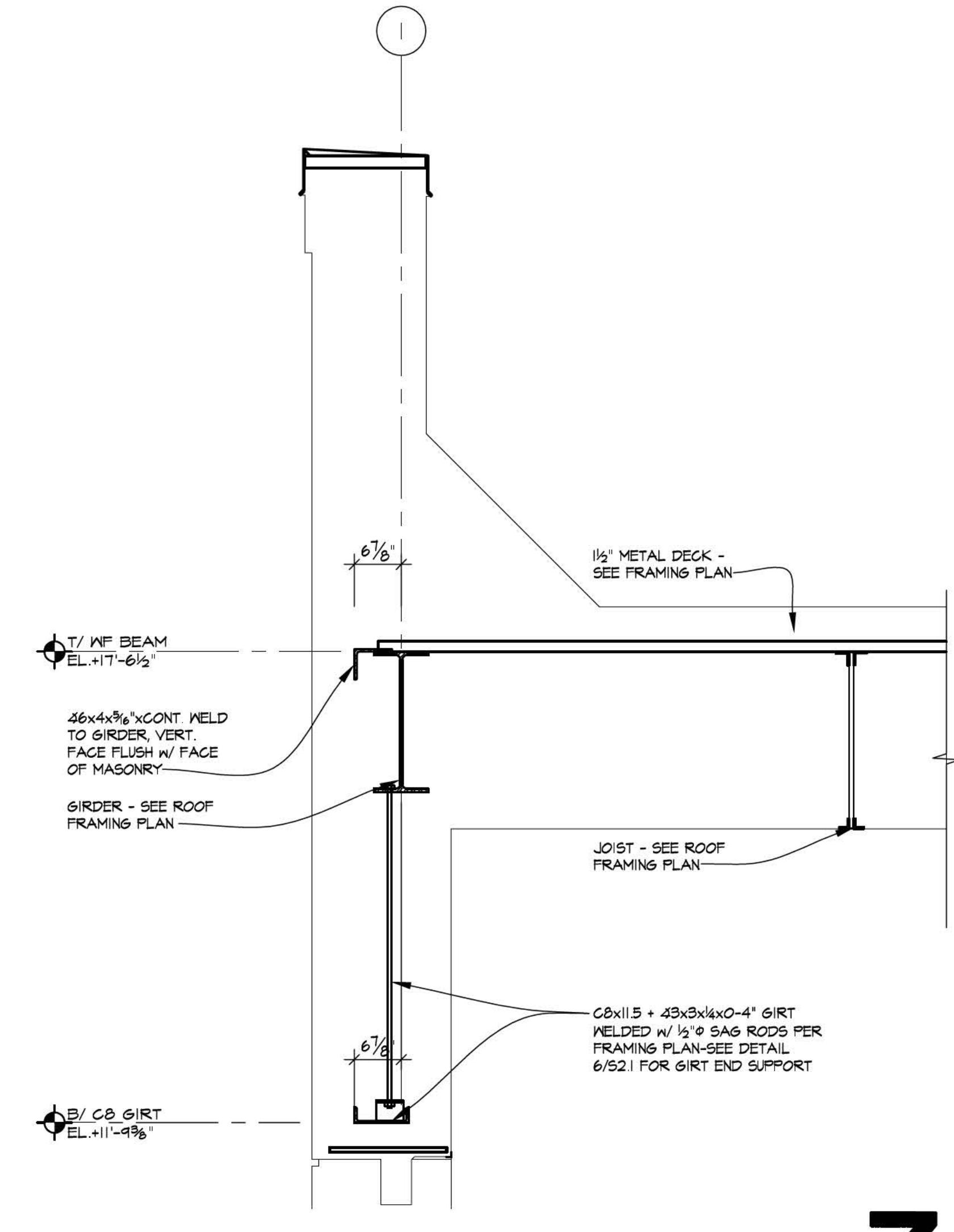
20K SPS</p

O'REILLY AUTO PARTS  
DOLTON PLAZASHEET TITLE  
DETAILS

1906

2.1

7

**10****HEADWALL DETAIL****SCALE: 3/4"=1'-0"****8**

## PLUMBING FIXTURE SCHEDULE / ALL FIXTURES & FITTINGS MUST BE "LEAD FREE"

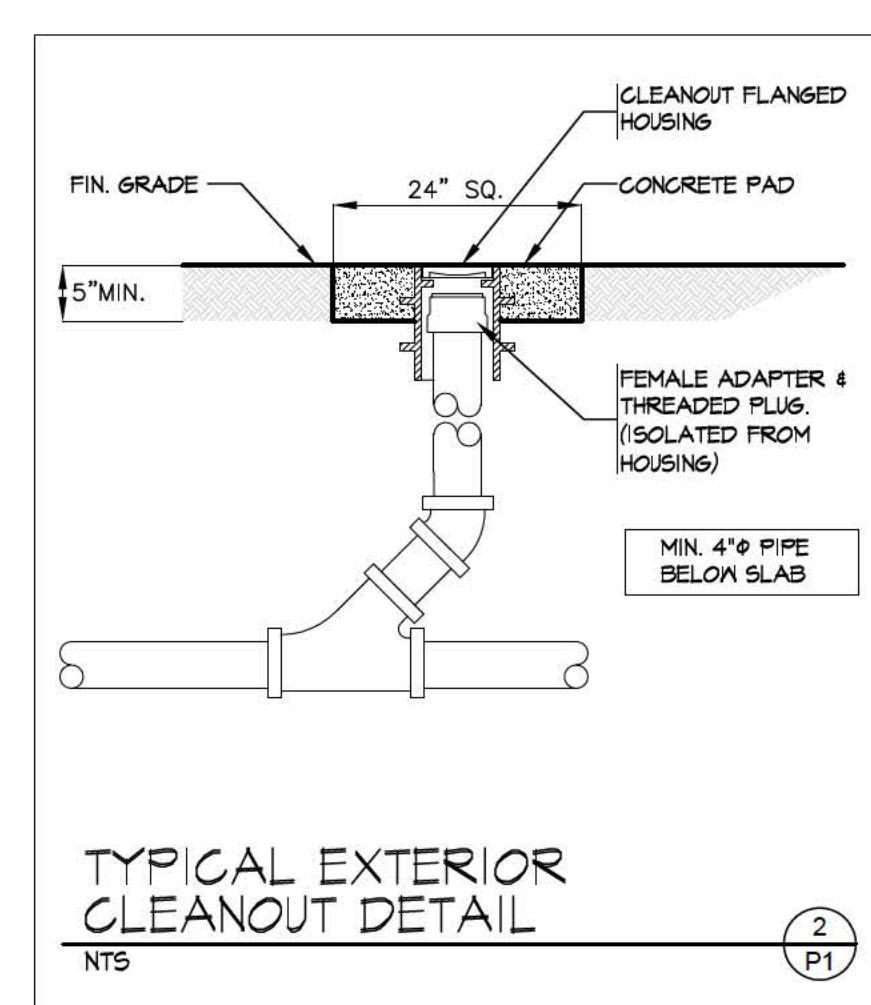
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURERS	CODE APPROVALS
					WASTE	VENT	SUPPLY			
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	2"	2"	—	COMBINATION WASTE VENT	WADE & ZURN	ASSE 1010-B
C.O.	CLEANOUT (INTERIOR)	JAY R. SMITH	4100	W/CARPET CLAMPING RING WHERE REQUIRED	SEE PLAN	—	—	SAME SIZE AS LINE	WADE & ZURN	—
C.O.I.	CLEANOUT (EXTERIOR)	JAY R. SMITH	4250	—	SEE PLAN	—	—	SAME SIZE AS LINE SEE DETAILS 2/P2 & 8/P2	WADE & ZURN	—

### PLUMBING NOTES

- DRAWING IS DIAGRAMMATIC & IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
  - ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
  - VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING (SPEC 20 05 00).
  - ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC. (SPEC 22 40 00).
  - THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS & SUBCONTRACTORS IN LAYING HIS OUT & INSTALLING HIS WORK. COOPERATION DOES NOT MEAN "I WAS HERE FIRST".
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
- T-10 N/A
- CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
- I-13 N/A
- ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USED SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT. (SPEC OT 92 00)
  - N/A
  - ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
  - N/A

### PLUMBING PIPE MATERIALS

- A. THE FOLLOWING APPLICATIONS ARE FOR INSIDE, BELOW & ABOVE THE BUILDING SLAB AND ENDING AT A POINT 5'-0" OUTSIDE THE PERIMETER BUILDING WALLS.
- DOMESTIC WATER DISTRIBUTION PIPING BELOW GROUND: ALL INTERIOR DOMESTIC WATER PIPING SHALL BE TYPE "K" HARD DRAWN COPPER TUBING (SL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL). THIS IS REQUIRED FOR THE WATER SERVICE LINE FROM THE COLD WATER MAIN IN THE BUILDING TO A POINT 5 FEET OUTSIDE THE BUILDING.
  - DOMESTIC WATER DISTRIBUTION PIPING ABOVE GROUND: HARD COPPER (TYPE K).
  - SOIL, WASTE, AND VENT PIPING BELOW GROUND: SCHEDULE 40 PVC PIPE (PVC) PLASTIC DWV PIPE.
  - SOIL, WASTE, AND VENT PIPING ABOVE GROUND: HUBLESS CAST-IRON SOIL PIPE OR PVC (PVC) PLASTIC DWV PIPE.
  - NOTE: PVC PIPING IS NOT PERMITTED IN AIR-HANDLING CEILING SPACES, USE ONLY CAST-IRON OR DUCTILE IRON PIPE IN THESE LOCATIONS.
- B. THE FOLLOWING APPLICATIONS ARE FOR ONLY FROM 5'-0" OUTSIDE THE BUILDING TO THE UTILITY POINT OF CONNECTION (POC).
- UNDERGROUND DOMESTIC WATER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC. (SEE SITE UTILITIES PLAN FOR WHICH PIPING MATERIAL (COPPER OR PVC) IS REQUIRED).
- 3/4" - 1 1/4" SCHEDULE 40 PVC PIPE WITH SOLVENT-WELDED JOINTS.
  - 1 1/2" - 3" SDR-21 PVC PIPE (ASTM D2241) CLASS 200, BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
  - 3 1/4" - 3" TYPE "K" HARD DRAWN COPPER TUBING (SL-FOS 2, FOS-FLO 7 OR OTHER SILVER BRAZING MATERIAL).
  - 4" AND LARGER SDR-16 PVC PIPE (AWWA C-900) CLASS 150 BELL AND SPIGOT WITH RUBBER GASKETED JOINTS.
- UNDERGROUND SANITARY SEWER SERVICE PIPING FROM A POINT 5 FEET OUTSIDE THE BUILDING TO THE POC.
- POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D2024 (SDR-35).
  - CAST IRON OR DUCTILE IRON PIPE SHALL CONFORM TO USASI #A-21 CLASS 50.
- C. GAS PIPE MATERIAL:
- LOW-PRESSURE GAS SYSTEMS, ABOVE GROUND WITHIN OR OUTSIDE BUILDING:  
USE THE FOLLOWING:
- 2" AND SMALLER: STEEL PIPE, MALLEABLE-IRON, THREADED FITTINGS, AND THREADED JOINTS.
  - 2 1/2" AND LARGER: STEEL PIPE, BUTT-WELDING FITTINGS, AND WELDED JOINTS.



### PIPING INSULATION NOTES

#### SCOPE:

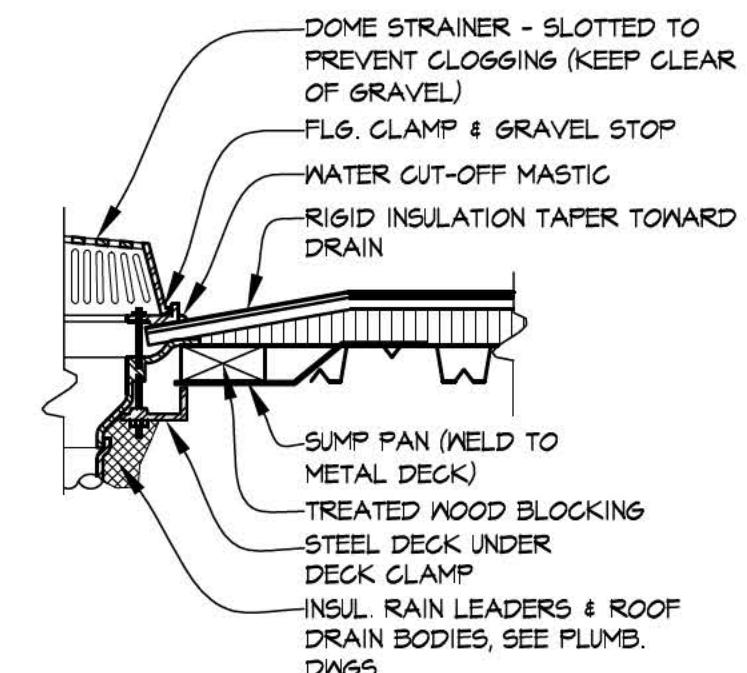
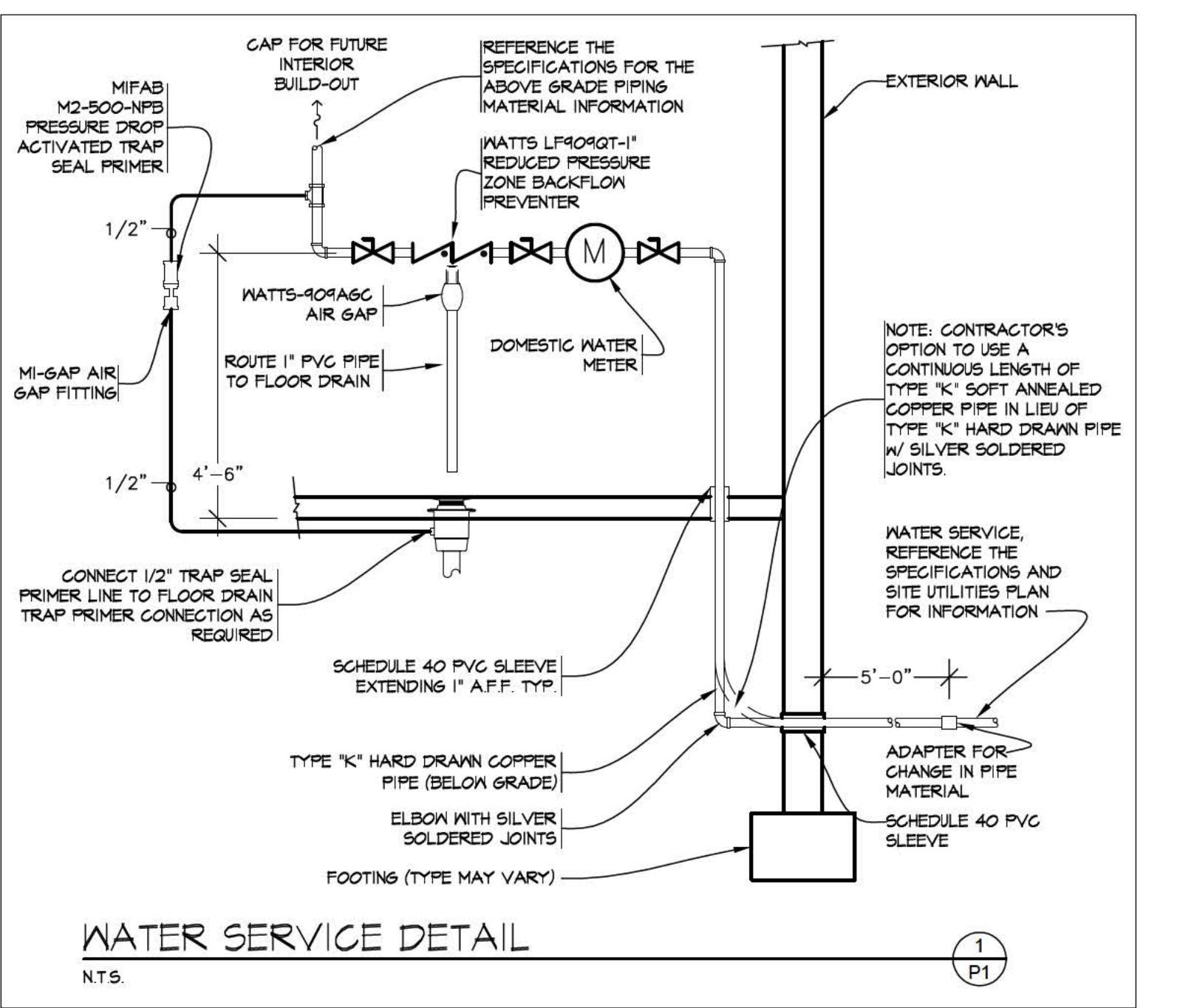
FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID. PROVIDE PIPING INSULATION ON NEW AND EXISTING PIPING AS REQUIRED BY CONSTRUCTION DOCUMENTS. REPAIR OR REPLACE EXISTING PIPING INSULATION WITHIN PROJECT AREA AS REQUIRED.

PIPING INSULATION IS REQUIRED AT NEW AND EXISTING PLUMBING PIPING INCLUDING: ALL DOMESTIC HOT WATER, EXPOSED DOMESTIC COLD WATER, DOMESTIC COLD WATER AGAINST AN EXTERIOR WALL, HVAC PIPING & CONDENSATE LINES/DRAINS, INTERIOR HORIZONTAL AND VERTICAL ROOF DRAIN PIPING AND INTERIOR ROOF DRAIN BODY.

#### SPECIFICATIONS:

- ALL PIPING (ABOVE FINISHED FLOOR) SHALL BE COVERED WITH ARMACELL AP/ARMAFLEX PIPE INSULATION IN ACCORDANCE WITH ASTM C-554, GRADE I, TYPE I FOR TUBULAR MATERIALS AND GRADE I, TYPE II FOR SHEET MATERIAL. MINIMUM PIPE INSULATION THICKNESS (PER IECC TABLE C403.11.3) AS FOLLOWS:
- ALL JOINTS SHALL BE SEALED WITH APPROVED MANUFACTURER'S ADHESIVE.
- ACCEPTABLE ALTERNATE MANUFACTURER: AEROCEL (BY AEROFLEX INTERNATIONAL CO.) CLOSED CELL ELASTOMERIC THERMAL INSULATION.
- FIBERGLASS PIPE INSULATION, RIGID (NOT WRAP TYPE), ONE INCH THICK WITH BUILT-IN VAPOR BARRIER MAY BE USED IN LIEU OF ARMACELL PRODUCT SPECIFIED ON ALL PIPING EXCEPT HOT WATER 1 1/2" PIPE OR LARGER. ACCEPTABLE MANUFACTURERS ARE ARMSTRONG, CERTAINTEED, JOHNS-MANVILLE, KNAUF, AND OWENS-CORNING.
- FLAME SPREAD SHALL BE 25 OR LESS. SMOKE DEVELOPED SHALL BE 50 OR LESS.
- INSTALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

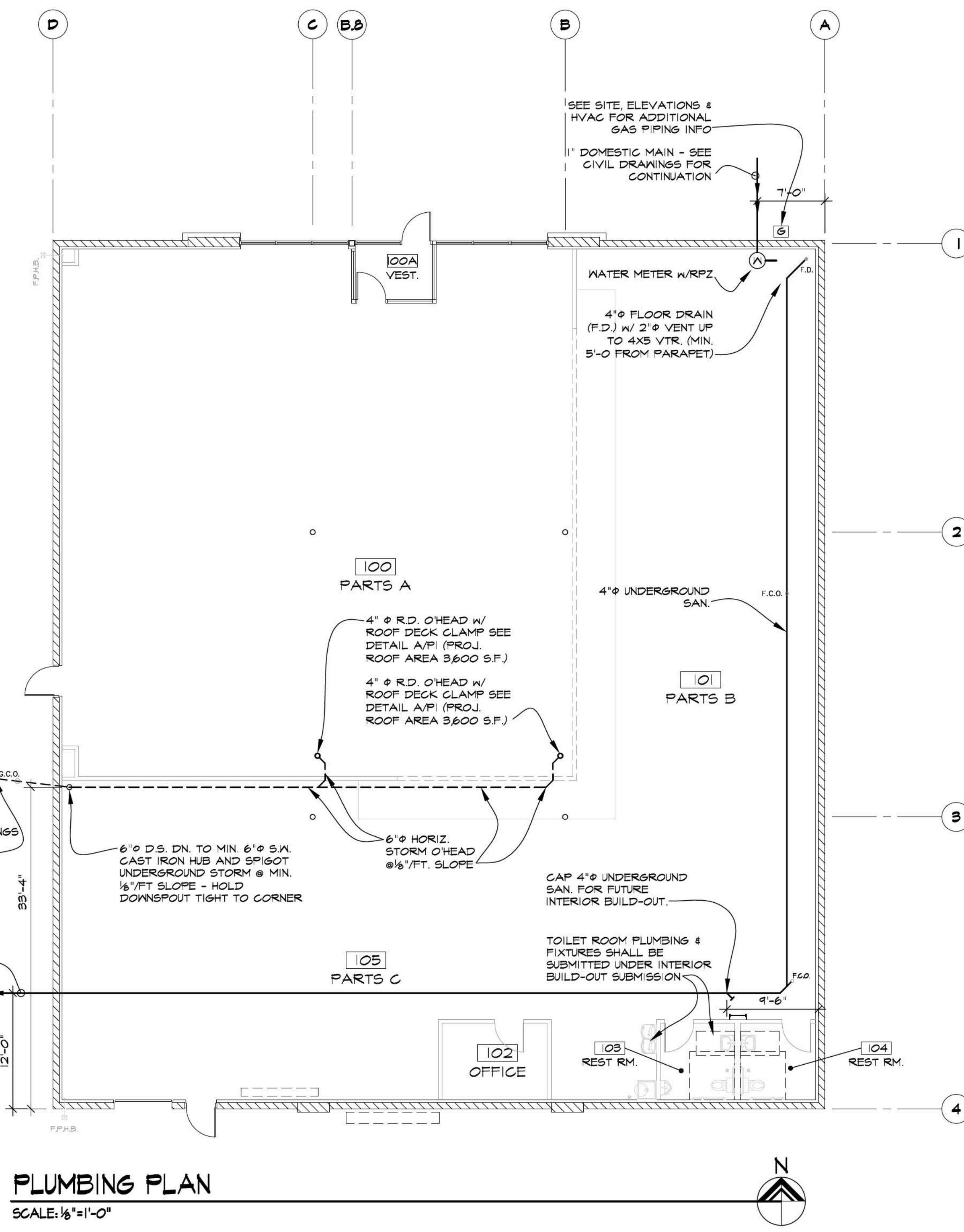
### WATER SERVICE DETAIL



### ROOF DRAIN

SCALE: 1/16"=1'-0"

**A**



## PLAN NOTES

- (1) SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
- (2) DUCT DROPS ONLY. COIL UP T-STAT WIRE WITH STAT AT BAR JOISTS FOR FUTURE INSTALLATION.
- (3) FUTURE WALLS. INTERIOR BUILD OUT TO BE UNDER SEPARATE PERMIT.

## REVISIONS

### THIS DRAWING

NOT FOR COORDINATION

FOR BIDDING

NOT FOR PERMIT

NOT FOR CONTRACTING

NOT FOR CONSTRUCTION

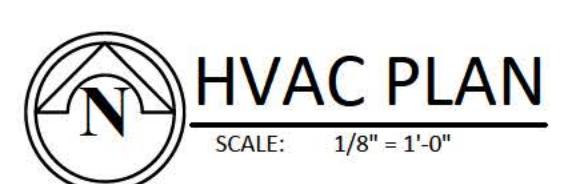
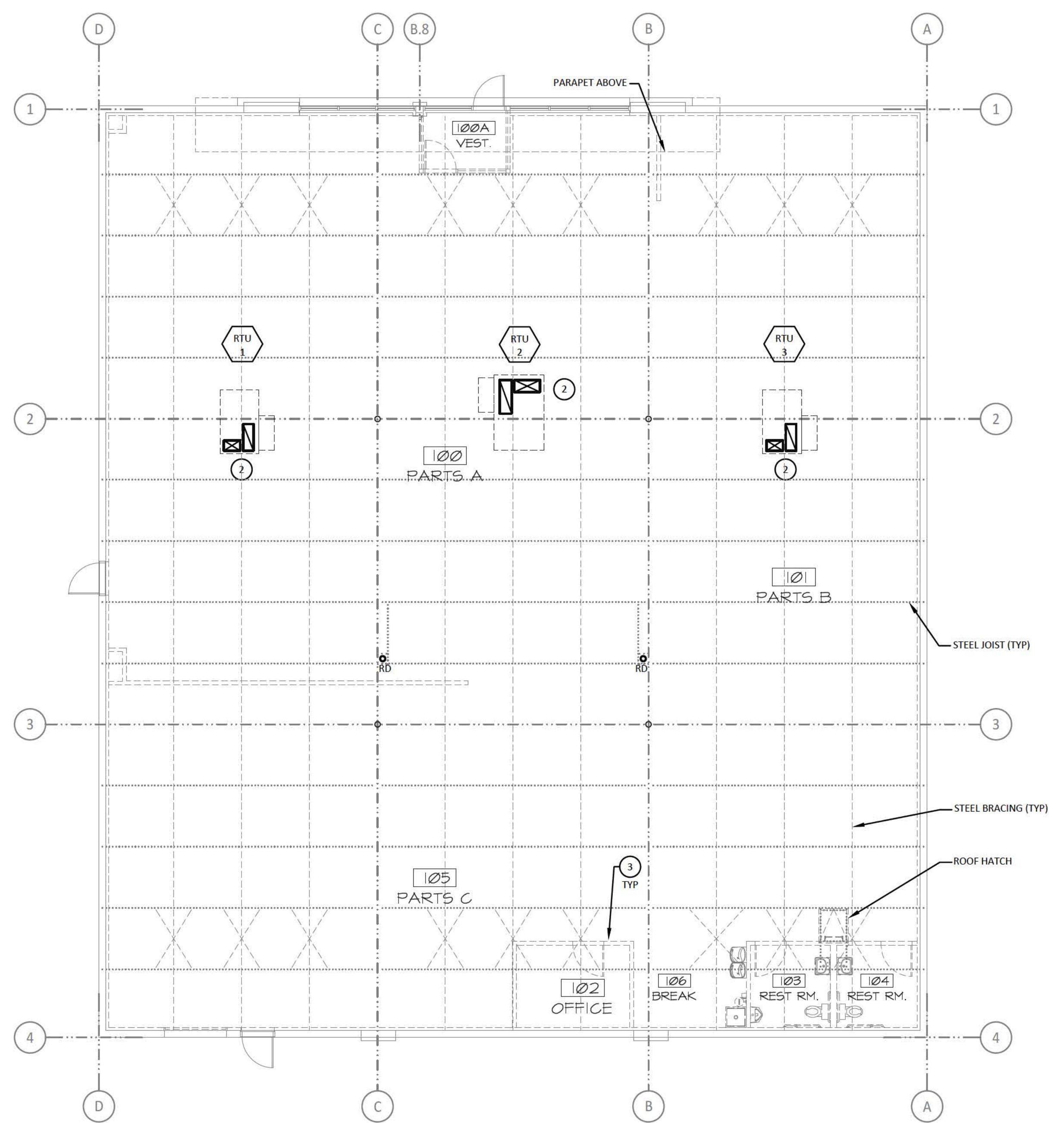
KIMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
1121 LAKE COOK ROAD  
DEERFIELD, ILLINOIS 60015-5235  
(847)945-6889 FAX(847)945-0284

O'REILLY AUTO PARTS  
DOLTON PLAZA  
1817 E. SIBLEY BLVD. DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
HVAC PLAN

1906

M  
1



HVAC PLAN

SCALE: 1/8" = 1'-0"

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

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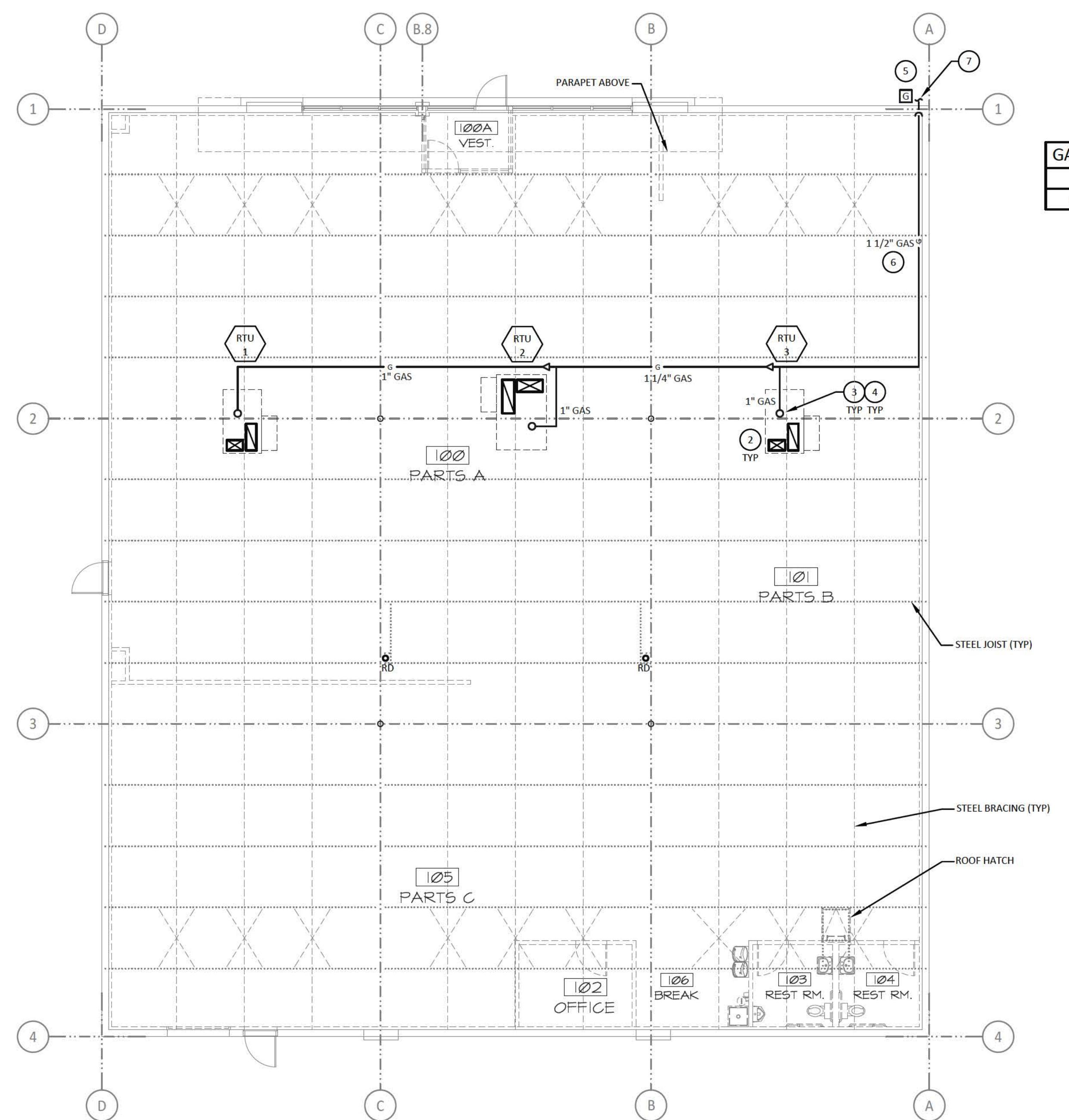
**United Engineering, Inc.**

PROJECT ENGINEERING AND LAYOUT SERVICES  
1006 GENEVA ST. \* SHOREWOOD, IL 60404  
PHONE: (815)744-1010 \* FAX: (815)744-1516  
[www.unitednep.com](http://www.unitednep.com)

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### GAS PIPING PLAN

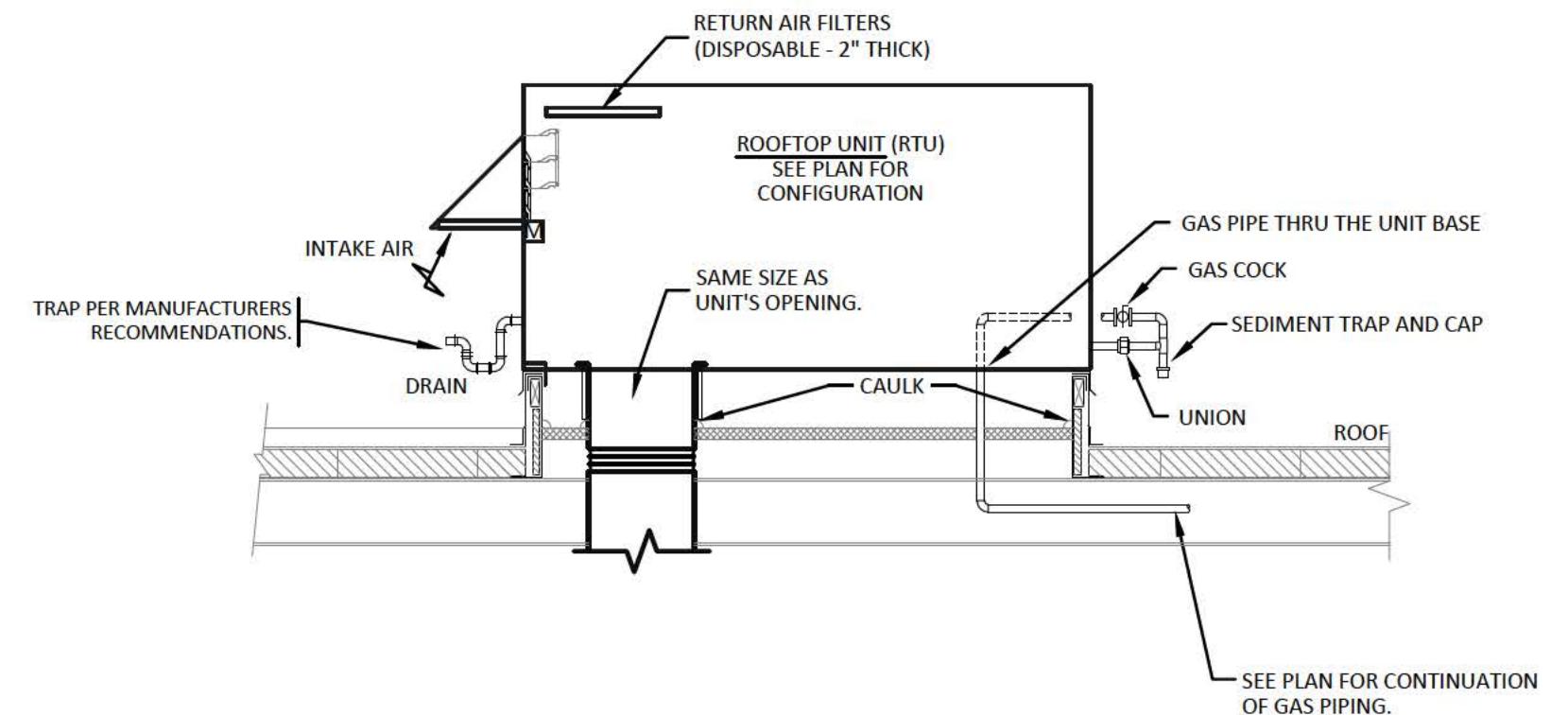
SCALE: 1/8" = 1'-0"

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

### PLAN NOTES

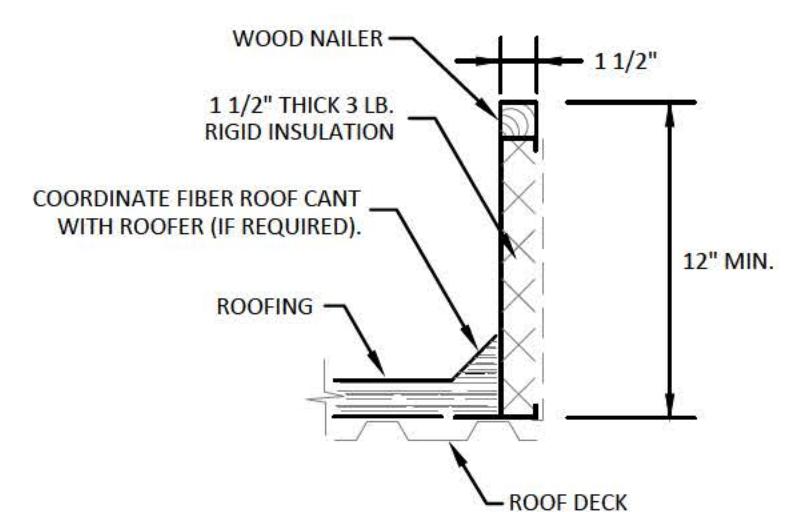
- ① SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION.
- ② TYPICAL EQUIPMENT MOUNTED ON CURB. SEE ROOF CURB DETAIL #D-1-11A.
- ③ GAS PIPE UP IN CURB AND THRU UNIT BASE.
- ④ SEE GAS ROOF TOP UNIT DETAIL FOR GAS PIPING TRIM.
- ⑤ GAS METER LOCATION, COORDINATE METER SIZE AND LOCATION WITH GAS COMPANY. SEE GAS METER LOAD SCHEDULE.
- ⑥ RUN GAS PIPING BELOW ROOF. GAS PIPING TO BE INSTALLED ABOVE BOTTOM OF JOISTS WHEN POSSIBLE.
- ⑦ PAINT ALL EXTERIOR GAS PIPING TO MATCH COLOR OF EXTERIOR WALL.

TENANT	CFH	PRESSURE
100-RETAIL	480 (ALT)	6" W.C.



### GAS ROOF TOP UNIT DETAIL

(LOW PRESSURE) GAS PIPE INSIDE



RPS CORPORATION, MODEL: RC-2 OR EQUAL  
 \* 18 GAUGE GALVANIZED STEEL  
 \* WOOD NAILER  
 \* UNITIZED CONSTRUCTION  
 \* SLOPED CURB AS REQUIRED FOR ROOF PITCH  
 \* INTERIOR LINING  
 \* DAMPER SHELF (IF REQUIRED)

### ROOF CURB DETAIL

NO SCALE ID-1-11A

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SHEET TITLE  
 GAS PIPING PLAN

1906

**M**  
**2**

STANDARD SYMBOLS LEGEND	
	EQUIPMENT TAG
	POINT OF NEW CONNECTION
	REVISION TAG
	PHOTO VIEW POINT
	SECTION/DETAIL IDENTIFIER
	COLUMN LINE TAG
	N.I.C.
	U.N.O.
	NOT IN CONTRACT
	UNLESS NOTED OTHERWISE

DUCTWORK SYMBOLS LEGEND	
	S/A DIFFUSER
	R/A DIFFUSER
	SLOT DIFFUSER
	FLEXIBLE DUCT
	SPIN COLLAR
	① THERMOSTAT
	⑤ REMOTE SENSOR
	⑥ VEHICLE EXHAUST SENSOR
	⑦ HUMIDISTAT
	⑧ CONTROL CABINET
	QUANTITY
	CFM
	NECK SIZE
	GRD MODEL TAG
	RADIUS = 1/2W
	NOTE: WHERE THIS RADIUS IS NOT POSSIBLE PROVIDE A FULL RADIUS VANE OR A SQUARE ELBOW WITH VANES (BELOW)
	OUTSIDE DUCT DIMENSION
	L-LINER
	W-WRAPPED
	U-UNINSULATED
	AaxBx(C)
	X-X"
	ELEVATION
	BOTTOM OF DUCT
	BOTTOM OF PIPE
	BOTTOM OF EQUIPMENT
	DO NOT INSTALL SQUARE THROAT ELBOWS UNDER ANY CONDITIONS
	DO NOT INSTALL SQUARE THROAT ELBOWS W/O VANES UNDER ANY CONDITIONS (U.N.O.)
	NO TRAILING EDGE SINGLE THICKNESS VANE

ROOFTOP UNIT SCHEDULE				
	TAG	RTU-1	RTU-2	RTU-3
LOCATION SERVING	SALES/STOCK	SALES/STOCK	STOCK	
MANUFACTURER	CARRIER	CARRIER	CARRIER	
MODEL	48HCR06	48HCS08	48HCR06	
TONS (NOMINAL)	5	7.5	5	
COOLING ENERGY EFFICIENCY	15.2 EER	12 EER	15.2 EER	
REFRIGERANT TYPE	R-410A	R-410A	R-410A	
SUPPLY FAN DATA	CFM	1,500	2,250	1,500
	ESP (DUCT ONLY)	0.75	0.75	0.75
	RPM	1173	759	1173
COOLING COIL DATA	BHP	0.81	0.86	0.81
	MBH	59	90	59
	EAT (DB/WB)	81.5/67	81.5/67	81.5/67
HEATING DATA (MIN. REQ'D)	COIL LAT (DB/WB)	54.5/54	54.5/53.5	54.5/54
	UNIT LAT (DB/WB)	56/55	55/54	56/55
	STAGES	1	2	1
HEATING DATA (ALTERNATE)	INPUT (MBH) (MAX)	115	125	115
	OUTPUT (MBH) (MAX)	93	103	93
	STAGES	2	2	2
ELECTRICAL DATA	MCA / MOPC	30/45	41/50	30/45
	VOLT	208	208	208
	PHASE	3	3	3
OUTDOOR AIR (CFM)		430	640	430
UNIT WEIGHT (LBS)		1,000	1,350	1,000
REMARKS / ACCESSORIES		1-19, 21	1-20, 21	1-19, 21

## DIVISION 23 (HVAC)

## 1) GENERAL:

- JOB SPECIFICATIONS ARE AS FOLLOWS:
- CODE - CONTRACTOR TO LOCATE, REVIEW AND COMPLY WITH ALL LOCAL, STATE AND/OR NATIONAL CODES. CONTRACTOR TO SPECIFICALLY LOCATE, REVIEW AND COMPLY WITH ALL LOCAL CODE AMENDMENTS.
- WORKMANSHIP/WARRANTY - CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, MATERIALS, METHODS, TECHNIQUES, SEQUENCES AND DETAILS TO PERFORM ITS WORK. ALL MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE THE EQUIPMENT/SYSTEMS ARE PLACED INTO OPERATION AND ACCEPTED BY THE OWNER. WARRANTY TO INCLUDE LABOR & MATERIALS REQUIRED FOR WARRANTY ISSUES.
- EQUIPMENT MANUFACTURER INSTRUCTIONS - CONTRACTOR TO FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE (IOM) MANUALS FOR ALL NEW EQUIPMENT. EQUIPMENT MANUFACTURER'S IOM INSTRUCTIONS SUPERSEDE ANY CONFLICTS WITH THESE DRAWINGS.
- SCHEDULED EQUIPMENT - CONTRACTOR PRICING TO BE BASED ON THE SCHEDULED EQUIPMENT. SUBSTITUTIONS TO BE SUBMITTED AS DEDUCTS (OR ADDS) TO THE BASE CONTRACT ALONG WITH A DESCRIPTION OF THE DIFFERENCES. ALL SUBSTITUTIONS WILL REQUIRE THE CONTRACTOR TO SUBMIT EQUIPMENT DRAWINGS AND A DESCRIPTION OF THE DIFFERENCES. THE REVISED DRAWINGS TO INCLUDE (BUT NOT LIMITED TO) THE REVISED EQUIPMENT SPECIFICATION SCHEDULES, LOCATIONS, WEIGHTS, DUCTWORK, PIPING, WIRING, BREAKERS (ETC.). THE REVISED DRAWINGS TO SHOW THE ENTIRE SYSTEM AS THE SYSTEM WILL BE INSTALLED BY THE CONTRACTOR.
- SUBMITTALS - CONTRACTOR TO COORDINATE SUBMITTAL SCHEDULE WITH OWNER IMMEDIATELY AFTER ACCEPTANCE OF CONTRACT, AS SOON AS POSSIBLE BEFORE CONSTRUCTION. CONTRACTOR TO EMAIL NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING SUBMITTALS (INCLUDING ALL ACCESSORIES), NO NEW EQUIPMENT, FIXTURES AND/OR SHOP DRAWING ITEMS ARE TO BE INSTALLED UNTIL SUBMITTED INFORMATION IS APPROVED.
- SHOP DRAWINGS - BEFORE INSTALLATION, PROVIDE 1/4" SCALE "SHOP DRAWINGS" FOR COORDINATION AND APPROVAL. "SHOP DRAWINGS" TO SHOW DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT. INSTALLATION TO START ONLY AFTER WRITTEN APPROVAL FROM ENGINEER. ALL CONTRACTOR PROVIDED DRAWINGS TO BE MADE WITH "AUTO CAD" DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.] PROVIDE (4) PAPER HARD COPIES OF SHOP DRAWINGS.
- AS BUILT DRAWINGS - UPON COMPLETION OF THE INSTALLATION WORK, PROVIDE AS BUILT CHANGES CLEARLY SHOWING THE FINAL DIMENSIONS, ELEVATIONS AND LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, WIRING AND CONDUIT, ALL AS BUILT DRAWING CHANGES TO BE MADE WITH 'AUTO CAD' DRAFTING SOFTWARE AND SUBMITTED IN BOTH AUTOCAD AND ADOBE DIGITAL FORMAT. [NOTE - DESIGN DRAWINGS, NOTES AND/OR ADDENDUMS ARE NOT TO BE COPIED OR REPRODUCED IN ANY WAY FOR USE AS CONTRACTOR SUBMITTED DRAWINGS.]
- POST CONSTRUCTION DOCUMENTS - CONTRACTOR TO EMAIL A MICROSOFT WORDS FORMAT FOLDER INCLUDING ALL REQUIRED PROJECT CLOSE OUT DOCUMENTS, THE WINDOWS FORMAT FOLDER TO INCLUDE SUB-FOLDERS AND TO BE LABELLED AS PER BELOW. [ALSO PROVIDE (3) EXACT PRINTED COPIES IN SEPARATE HARD BINDERS.]

## o TRADE NAME

1. WARRANTY - WARRANTY LETTER INCLUDING THE AGREED UPON START DATE
2. EQUIPMENT - COMPLETE LIST OF MODEL NUMBERS AND SERIAL NUMBERS FOR EACH PIECE OF EQUIPMENT
3. IOM - INSTALLATION, OPERATION AND/OR MAINTENANCE (IOM) MANUALS. INCLUDE PARTS LIST FOR EACH PIECE OF EQUIPMENT
4. VENDORS LIST - LIST OF CONTACT INFORMATION INCLUDING CONTACT NAME, PHONE NUMBER AND EMAIL ADDRESS FOR EQUIPMENT.
5. AS BUILT DRAWING - AS BUILT DRAWING INCLUDING FINAL LOCATION FOR EACH PIECE OF EQUIPMENT
6. TEST & BALANCE REPORT - REPORT OF ALL FINAL TESTED AND BALANCED AIR AND WATER SYSTEMS. SEE DIVISION 23 NOTES.

- ACCESS DOORS - CONTRACTOR TO FURNISH AND INSTALL ACCESS DOORS AS REQUIRED. EACH TRADE TO COORDINATE WITH CARPENTRY CONTRACTOR THE LOCATION OF ACCESS DOORS IN ALL CEILINGS, SOFFITS AND WALLS FOR ACCESS TO EQUIPMENT, VALVES, FIRE DAMPERS, CLEAN OUTS, SWITCHES, CONTROLS, ETC.
- STRUCTURE PROTECTION - THE BUILDING OR STRUCTURE SHALL NOT BE WEAKENED BY THE INSTALLATION OF ANY NEW SYSTEMS. WHERE FLOORS, WALLS, CEILINGS OR ANY OTHER PORTION OF THE BUILDING OR STRUCTURE ARE REQUIRED TO BE ALTERED OR REPLACED IN THE PROCESS OF INSTALLING OR REPAIRING ANY SYSTEM, THE BUILDING OR STRUCTURE SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.
- FIRE RESISTANT ASSEMBLIES - PENETRATIONS OF WALL/FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR NATIONAL CODES.
- ACCESSIBILITY - MANUAL ACCESSIBLE ITEMS IN OCCUPIED SPACES (SUCH AS CONTROLS, THERMOSTATS, SWITCHES AND ELECTRICAL OUTLETS) TO BE LOCATED NO HIGHER THAN 48" AND NO LOWER THAN 15" PER THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. VERIFY LOCAL ACCESSIBILITY CODE REQUIREMENTS OVER AND ABOVE THE ADA REQUIREMENTS. COORDINATE FINAL MOUNTING HEIGHTS WITH OWNER.

## 2) GENERAL HVAC CONDITIONS:

- KEEP OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" AWAY FROM CONTAMINANT SOURCES.
- KEEP B-VENTS A MINIMUM OF 3'-0" ABOVE ROOF PENETRATION AND/OR 2'-0" ABOVE ANY PART OF THE BUILDING WITHIN 10'-0". B-VENTS TO CLEAR COMBUSTIBLES BY 3".
- THERMOSTATS, SENSORS AND CONTROL PANELS FOR HVAC EQUIPMENT SHALL BE LOCATED IN ACCORDANCE WITH THE MECHANICAL PLANS. FURNISH AND INSTALL CLEAR LOCKING COVERS FOR ALL T-STATS. ALL COVERS TO BE KEYED THE SAME.
- PROVIDE ENGRAVED TAGS FOR ALL HVAC EQUIPMENT.
- PROVIDE FACTORY START UP FOR ALL EQUIPMENT.

## 3) WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	NOTES/REMARKS
T-STAT(S)	T	T	T	INSTALLED BY TENANT'S EMS CONTRACTOR (VERIFY)
SPACE SENSOR(S)	MC	MC	MC	INSTALLED BY TENANT'S EMS CONTRACTOR (VERIFY)
SMOKE DETECTOR(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
REMOTE TEST STATION(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
REMOTE ALARM(S)/STROBE(S)	MC	MC	MC	PROVIDED WITH UNIT(S)
EMS (GRIDPOINT)	T	T	T	INSTALLED BY TENANT'S EMS CONTRACTOR
CO2 SENSOR(S)	MC	MC	MC	RTU's (PROVIDED WITH UNITS) COORDINATE WITH EMS CONTRACTOR

## MC - MECHANICAL CONTRACTOR

## EC - ELECTRICAL CONTRACTOR

## T - TENANT (MECHANICAL CONTRACTOR AND/OR GENERAL CONTRACTOR TO HIRE TENANT SUGGESTED EMS VENDOR. VERIFY WITH TENANT. SEE EMS SCOPE OF WORK ON TENANT'S PLANS FOR ADDITIONAL INFORMATION.)

## PROJECT NAME: O'REILLY - DOLTON

## IMC Ventilation COMMON VENTILATION SYSTEM CORRECTION

ROOM NAME & NUMBER	SUPPLY (CFM)	VENTILATION (CFM)			VENTILATION Note
		Base	110% Target	110% Adjstd	
100A-VESTIBULE	101	111	100	100	1 2 2.4%
100-PARTS A	1,943	2,143	2,150	1 665 30.9%	-
101-PARTS B	908	1,002	990	1 240 24.2%	-
102-OFFICE	265	292	260	1 10 3.9%	-
103-RESTROOM	18	20	50	1 1 -	-
104-RESTROOM	32	35	50	1 1 -	-
105-PARTS C	1,336	1,474	1,470	1 198 13.5%	-
106-BREAK	156	172	180	1 1 46 25.7%	-
	4,759	5,250	5,250	1 1,161 -	-
Multiple Zone = 1		Max Zp =	30.9%	O/A Percent-Critical Space	
Single or 100% = 2		Ev =	0.8	1,452 Corrected Total Outdoor Airflow Rate	

PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.

## 3) DUCTWORK:

- ALL DUCTWORK SHALL MEET S.M.A.C.N.A. STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE. DUCTWORK TO BE GALVANIZED SHELL METAL UNLESS NOTED OTHERWISE.
- ALL RECTANGULAR BRANCH DUCTS TO HAVE OPPOSED BLADE DAMPERS.
- ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC PLUS EMBEDDED FABRIC SYSTEMS, OR TAPE. TAPE AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

- EQUIPMENT MANUFACTURER INSTRUCTIONS - CONTRACTOR TO FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE (IOM) MANUALS FOR ALL NEW EQUIPMENT. EQUIPMENT MANUFACTURER'S IOM INSTRUCTIONS SUPERSEDE ANY CONFLICTS WITH THESE DRAWINGS

UNIT BATTERY EQUIPMENT NOTE:	
1. ALL UNIT BATTERIES SHALL BE INSTALL PER LOCAL AUTHORITY EM CODE AND IN COMPLIANCE WITH LOCAL INSPECTOR.	
2. ALL UNIT BATTERIES SHALL BE LABELED AS EMERGENCY LIGHTING EQUIPMENT. INDIVIDUAL UNIT EQUIPMENT FOR CODE REQUIRED STANDBY EMERGENCY ILLUMINATION SHALL CONSIST OF: A RECHARGEABLE BATTERY A BATTERY CHARGING MEANS PROVISIONS FOR ONE OR MORE LAMPS A RELAY DEVICE TO AUTOMATICALLY ENERGIZE LAMPS UPON FAILURE OF THE SUPPLY TO THE UNIT EQUIPMENT A TEST SWITCH A PILOT LIGHT TO INDICATE SUPPLY FROM NORMAL SOURCE AND A LOT LIGHT OR METER TO INDICATE THE BATTERY IS CHARGING. IT IS NOT PERMITTED FOR THIS PILOT LIGHT TO MARKED "READY" TO INDICATE POWER IS AVAILABLE. UNIT EQUIPMENT SHALL BE PERMANENTLY FIXED IN PLACE AND SUPPLIED BY HARD WIRE. THE BRANCH CIRCUIT FEEDING THE UNIT EQUIPMENT SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NIGHT LIGHTING ILLUMINATION IN THE AREA.	

## GENERAL NOTES

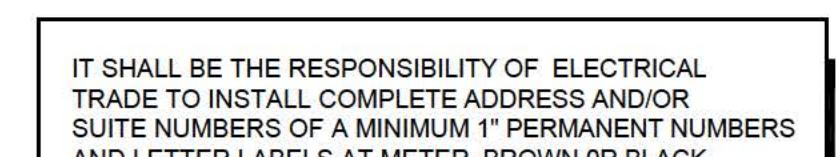
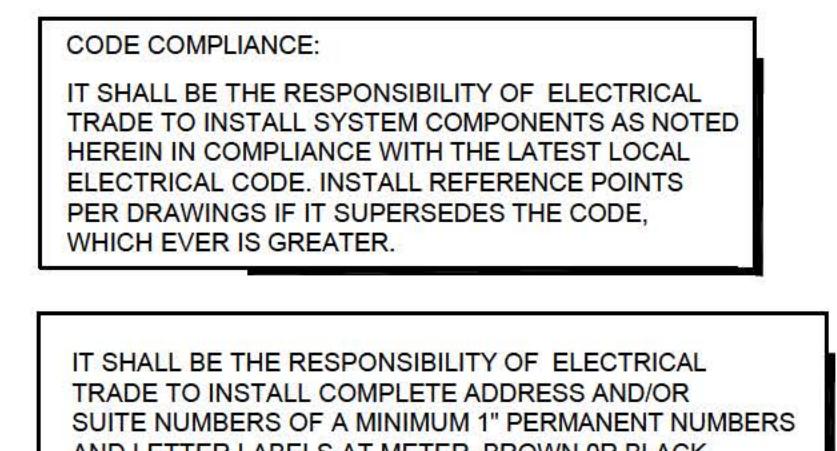
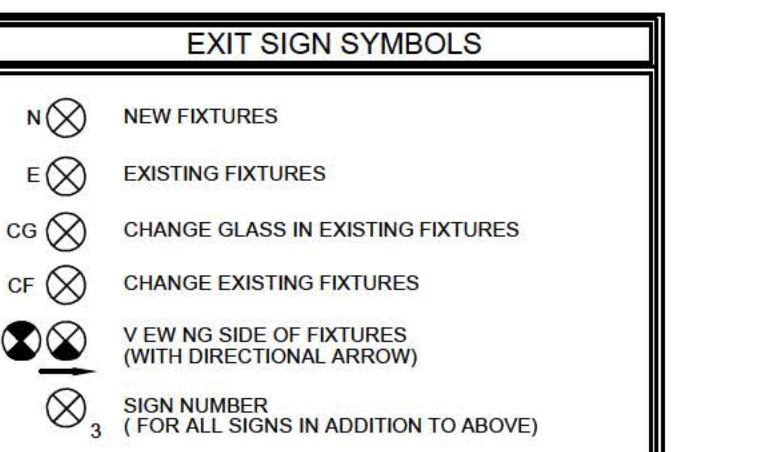
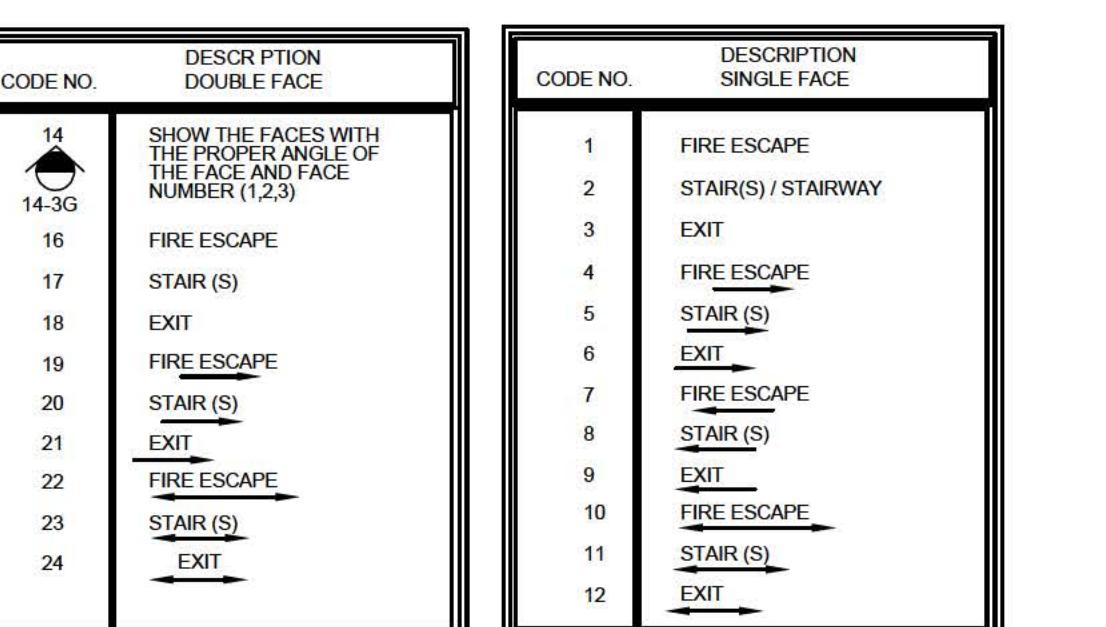
- A. LIGHTING AND EQUIPMENT BRANCH CIRCUIT BREAKERS SHALL BE SERIES RATED WITH REMOTE MAIN BREAKERS ALL IN ACCORDANCE WITH UL 489.
- B. PANELBOARD COMPONENTS INCLUDING OVERCURRENT PROTECTION DEVICES SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT. ELECTRICAL SHALL VERIFY AVAILABLE FAULT CURRENT WITH LOCAL POWER COMPANY ENGINEER.
- C. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT ENCLOSURE OF PANELBOARDS WHERE BREAKERS ARE APPLIED IN SERIES COMBINATION, STATING: "CAUTION SERIES RATED SYSTEM. \_\_\_\_\_ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
- D. PER LOCAL AUTHORITY, PROVIDE IDENTIFICATION AT EACH DISCONNECTING MEANS FEEDING DOWNSTREAM DEVICES APPLIED IN SERIES COMBINATION, STATING: "CAUTION -SERIES RATED DEVICES ARE FEED FROM THIS REMOTE MAIN. \_\_\_\_\_ AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED." CONTRACTOR TO FILL IN BLANK WITH AVAILABLE FAULT CURRENT AS PROVIDED BY POWER COMPANY.
- E. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND THE ELECTRICAL INSPECTOR.
- F. A.I.C. RATING SHOWN AT PANELBOARD IS THE MINIMUM RATING FOR OVERCURRENT PROTECTION DEVICES. EACH DEVICE SHALL BE FULLY RATED OR SERIES RATED WITH UPSTREAM DEVICES AT AFC AS SHOWN ON PANEL SCHEDULES.
- G. ELECTRICAL BOXES AND/OR CONDUIT INSTALLED IN SUSPENDED CEILINGS SHALL NOT EXCEED 100 CUBIC INCHES IN SIZE, AND THEY SHALL EITHER BE FASTENED TO THE FRAME MEMBERS BY BOLTS, SCREWS, RIVETS, OR APPROVED CLIPS, OR SECURED TO THE CEILING SUPPORT.

## ELECTRICAL BIDDERS NOTES:

- A. EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD BEFORE SUBMITTING BID. CONTRACTOR SHALL ADJUST FOR ACTUAL FIELD CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- B. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL TRADES WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO COORDINATE AS REQUIRED FOR INSTALLATION OF NEW WORK AND IN COMPLIANCE WITH NEC CODES.
- C. MAINTAIN CONTINUITY OF ALL NEW CIRCUITS AS NEEDED TO PROVIDE POWER/LIGHTING TO DEVICES BEING USED AS TEMPORARY
- D. SEE ADDITIONAL SHEETS FROM CIVIL/ARCHITECTURAL MECHANICAL PLANS AND COORDINATION WITH NEW WORK REQUIRED UNDER BASE BID.
- E. PROVIDE CADDY ADJUSTABLE FAR SIDE SUPPORTS OR EQUIVALENT ON ALL ELECTRICAL BOXES IN THE WALLS TO ASSURE TIGHT FITTING, SECURE BOXES. SECTION 21.107(A)(8).
- F. ALL ELECTRICAL WORK SHALL COMPLY WITH ADOPTED AMENDMENTS OF THE LOCAL AUTHORITY AND THE NATIONAL ELECTRICAL CODE.
- G. THE USE OF ALUMINUM SHALL NOT BE ACCEPTED IN ANY FORM.
- H. CONDUIT RUN UNDER THE ROOF SHALL COMPLY WITH NEC 300.14 (E).
- I. GARVIN COVER OUTLETS SHALL HAVE A BONDING JUMPER INSTALLED TO BOX.
- J. MOGUL LB. SHALL BE USED FOR ALL CONDUCTORS LARGER THAN #8.
- K. NO TANDEM, BUDDY, DUPLEX, PIGGYBACK CIRCUIT BREAKERS.
- L. ALL CONDUIT SYSTEMS AND RACEWAYS AND ETC. SHALL HAVE A GREEN GROUNDING CONDUCTOR PER NEC 250.122.
- M. FLEXIBLE METAL CONDUIT, TYPE FM, IS PERMITTED ONLY FOR INDOOR USE AND LIMITED TO A MAXIMUM OF 6'-0" IN LENGTH.
- N. WIRE TERMINATED ON RECEPTACLES OR SWITCHES SHALL BE UNDER THE SCREW OF DEVICE. BACKSTABBING NOT ALLOWED.
- O. ALL VOLTAGE OVER 24 VOLTS SHALL BE IN CONDUIT WHERE NOT ACCESSIBLE.

## EXIT SIGN DETAIL

SCALE: NONE



APPROVED EQUIPMENT NOTE:

ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BE LISTED AND LABELED FOR INSTALLATION BY A RECOGNIZED ELECTRICAL TESTING LABORATORY. IT SHALL BE THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR TO COMPLY.

NOTE: SEE SITE UTILITIES PLAN FOR METER AND TRANSFORMER PAD MOUNTED LOCATIONS, BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT INCLUDING METER ENCLOSURE TO GROUNDING ELECTRODE AS REQUIRED PER NEC 250.92

3. ALL ELECTRICAL SERVICE EQUIPMENT, PANELBOARDS, CIRCUIT BREAKERS AND FUSED SWITCHES SHALL HAVE A MINIMUM 10 KIC INTERRUPTING RATING IN ACCORDANCE WITH NEC CODE, NEC 250.9

4. THE GROUNDING NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECT MEANS ENCLOSURE IN ACCORDANCE WITH NEC CODE, NEC 250.24

5. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC CODE, NEC 250.96

6. ALL DEVICES SHALL BE WYE GROUNDED NEUTRAL.

#6 AWG SHALL TERMINATE IN A LISTED METERSYSTEM BONDING ENCLOSURE (LOCATED AT METER EQUIPMENT ENCLOSURE), WITH A MINIMUM OF THREE (3) TERMINATIONS FOR GROUNDING OTHER BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO: OPTICAL FIBER, COMMUNICATIONS, CATV, BROAD BAND SERVICES. REFER TO SECTION 250.94 OF THE NEC.

SUPERVISOR'S EQUIPMENT PROVIDES ELECTRICAL ISOLATION BETWEEN BONDED AND UNBONDED SEGMENTS OF METAL GAS PIPING.

1 AWG CU. BONDING JUMPER TO NEAREST METAL GAS PIPING PER NEC CODE, 250.104 E.G. SHARE VENT WITH GAS

SUPERVISOR'S EQUIPMENT PROVIDES ELECTRICAL ISOLATION BETWEEN BONDED AND UNBONDED SEGMENTS OF METAL GAS PIPING.

PROVIDE #20 GROUNDING CONDUCTOR THAT WILL TERMINATE ON THE STREET SIDE OF THE WATER MAIN WITHIN 5'-0" WHERE THE WATER MAIN ENTERS THE BUILDING.

PROVIDE #20 GROUNDING CONDUCTOR AND PROVIDE ISOLATED GROUND BUS TIED IN.

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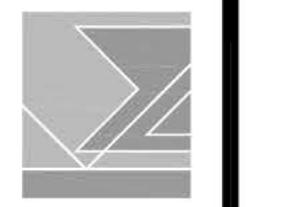
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TH-18 DRAWING	NOT FOR COORDINATION	1/1/21
NOT FOR BIDDING	FOR PERMIT	1/1/21
NOT FOR CONTRACTING	NOT FOR CONSTRUCTION	

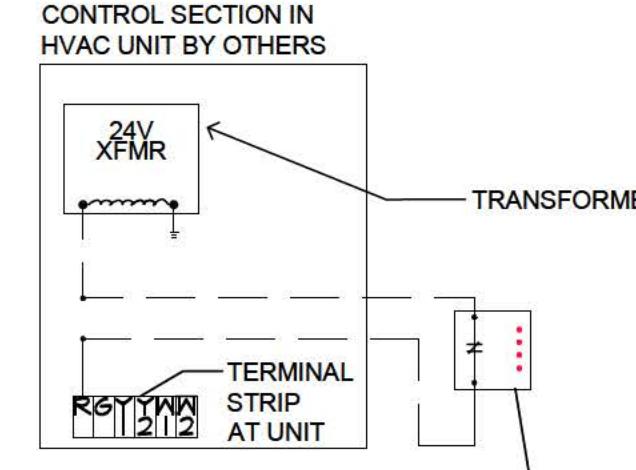
KMA & ASSOCIATES, INC. ARCHITECTS  
SUITE F  
60015-5235  
FAX(847)945-6669



O'REILLY AUTO PARTS  
DOLTON PLAZA  
1317 E. SIBLEY BLVD., DOLTON, IL 60419  
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE  
ELECTRICAL GENERAL PLAN  
ELECTRICAL SHEET  
ELECTRICAL SCHEDULES

PANELBOARD: MP										
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 120/208V, 3PH, 4W TYPE SQ.D. LINE, NO.										
A/C RATING: 22AIC SERVES: GENERAL POWER										
GRAYBAR ELECTRICAL CO. INC. 11685 LACKLAND ROAD ST.LOUIS, MO 63146										
CIRCUIT BREAKER SCHEDULE										
CIRCUIT NO.	DESCRIPTION	VOLTAMPS/PHASE	WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE	DESCRIPTION	CIRCUIT NO.
1	SPARE	12	1	3	45	8	3600	RTU 1	4	2
3	GENERAL LIGHTING	3	12	29	11		3600	3600		4
6	SPARE	12	20	1			3600	3600		6
7	SPARE	12	20	1	50	8	4920	4920		7
9	SPARE	12	20	1	50	8	4920	4920		9
11	SPARE	12	20	1	50	8	4920	4920		11
13	GENERAL LIGHTING	449	12	20	1	3	45	8	3600	14
15	SPARE	12	20	1	3	45	8	3600	3600	15
16	SPARE	12	20	1	3	45	8	3600	3600	16
18	SPARE	12	1	1	15	12	50		SPARE	18
21	SPARE	12	1	1	1	1		SPARE	22	21
23	BUILDING LIGHTING	210	12	20	1	1		SPARE	24	23
26	SITE LIGHTING	600	10	20	1	1		SPARE	26	26
27	SECURITY LIGHTING	300	10	20	1	1		SPARE	28	27
28	SITE SIGN	1300	6	20	1	1		SPARE	30	28
31	SITE SIGN	1300	6	20	1	1		SPARE	32	31
33	SPARE	20	1	1				SPARE	34	33
36	SPARE	20	3	1				SPARE	36	36
38	SPARE	20	1	1				SPARE	38	38
41	SPARE	20	1	1	20			SPARE	40	41
SUBTOTAL										
TOTAL PHASE A-VA	15619	LOAD	CONN VA	0	ACCESSORIES:					
AMPS	129.3	COOLING	36360	1.00	1 EQUIPPED GROUND BAR					
TOTAL PHASE B-VA	12475	HEATING	N/A		2 ISOLATED GROUND BAR					
AMPS	105.2	WATER	5000		3 SG D #Q01PA - LOCKABLE CLIPS					
TOTAL PHASE C-VA	14170	GEN RECEPTS	1640	1.00	4 CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"					
AMPS	118.0	MOTORS	N/A		5 CIRCUIT TO BE ROUTED THROUGH TIME CLOCK					
TOTAL PANEL-VA	42162	APPLIANCES	N/A		6 CIRCUIT TO BE ROUTED THROUGH					
AMPS	117.1	MISC EQUIP	N/A		7 PANEL TO BE SUPPLIED WITH FEED THRU LUGS					
SUBTOTAL										
PANELBOARD: PLP										
BUS AMPS: 400A MAIN SIZE/TYPE: MLO VOLTS/PHASE: 120/208V, 3PH, 4W TYPE SQ.D. LINE, NO.										
A/C RATING: 22AIC SERVES: GENERAL POWER										
GRAYBAR ELECTRICAL CO. INC. 11685 LACKLAND ROAD ST.LOUIS, MO 63146										
CIRCUIT NO.	DESCRIPTION	VOLTAMPS/PHASE	WIRE NO.	BKR AMP	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE	DESCRIPTION	CIRCUIT NO.
1	SPARE	12	20	1	1	20			SPARE	1
3	SPARE	12	20	1	1	20			SPARE	4
6	SPARE	12	20	1	1	20			SPARE	5
7	SPARE	12	20	1	1	20			SPARE	6
9	SPARE	12	20	1	1	20			TIME CLOCK	10
11	SPARE	12	20	1	1	20			RTU RECEP/TACLES	12
13	SPARE	12	20	1	1	20			RTU RECEP/TACLES	14
15	SPARE	12	20	1	1	20			RTU RECEP/TACLES	15
17	SPARE	12	20	1	1	20			RTU RECEP/TACLES	16
18	SPARE	12	20	1	1	20			RTU RECEP/TACLES	17
21	SPARE	12	20	1	1	20			RTU RECEP/TACLES	18
23	SPARE	12	20	1	1	20			RTU RECEP/TACLES	19
26	RECEPTACLES/ILLUMINAT.	1000	12	20	1	1			RTU RECEP/TACLES	20
27	SPARE	12	20	1	1	20			RTU RECEP/TACLES	21
28	SPARE	12	20	1	1	20			RTU RECEP/TACLES	22
31	SPARE	12	20	1	1	20			RTU RECEP/TACLES	23
33	SPARE	12	20	1	1	20			RTU RECEP/TACLES	24
37	SPARE	12	20	1	1	20			RTU RECEP/TACLES	25
38	SPARE	12	20	1	1	18			RTU RECEP/TACLES	26
41	SPARE	12	20	1	1	20			RTU RECEP/TACLES	27
SUBTOTAL										
TOTAL PHASE A-VA	1000	LOAD	CONN VA	0	ACCESSORIES:					
AMPS	84.3	COOLING	N/A		1 EQUIPPED GROUND BAR					
TOTAL PHASE B-VA	98	HEATING	N/A		2 ISOLATED GROUND BAR					
AMPS	41	LIGHTING	N/A		3 GFCI BREAKER CKT #23#16					
TOTAL PHASE C-VA	540	GEN RECEPTS	1500	1.00	4 MUST BE TYPE "HACR" BREAKER					
AMPS	4.5	MOTORS	N/A		5 CIRCUIT TO BE ROUTED THROUGH TRANSFER SWITCH "E"					
TOTAL PANEL-VA	1890	APPLIANCES	N/A		6 CIRCUIT TO BE ROUTED THROUGH					
AMPS	4.4	MISC EQUIP	N/A		7 SQ D #Q01PA - LOCKABLE CLIPS					
SUBTOTAL										



NOTES:  
A. DUCT DETECTOR SHALL BE FURNISHED BY RTU SUPPLIER AND MOUNTED BY M.C. WIRED BY THE E.C.  
B. ALL EQUIPMENT & WIRING SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

## HVAC CONTROL WIRING SCHEMATIC

SCALE: NONE

NOTE:  
BUILD-OUT LIGHTING FIXTURES INCLUDING STRIP, RECESSED LIGHTING, ADDITIONAL EMERGENCY AND EXIT SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:  
BUILD-OUT GENERAL POWER INCLUDING RECEPTACLES, EXHAUST FANS, DISPLAY OUTLETS AND ETC SHALL BE FURNISHED AND INSTALLED UNDER SEPARATE PERMIT SUBMITTAL.

NOTE:  
ELECTRICAL TRADE SHALL WIRE EXIT LIGHTING TO SEPARATE INDEPENDENT UN-SWITCHED CIRCUIT. WIRE IN SEPARATE RACEWAY. WIRING IS NOT SHOWN FOR CLARITY. NO APPLIANCES, LAMPS OTHER THAN THOSE SPECIFIED AS REQUIRED FOR EMERGENCY USE. SHALL BE SUPPLIED BY EMERGENCY CIRCUITS.

GROUNDBING NOTE:  
ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDBING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTOR, SIZE IN ACCORDANCE WITH TABLE 250.12 OF THE N.E.C. ELECTRICAL SHALL PROVIDE SEPARATE ISOLATED AND GFI GROUNDBING CONDUCTOR AS NOTED ON PLANS. ISOLATED AND GFI ARE NOT TO BE USED AS EQUIPMENT GROUNDS.

TEMPORARY LIGHTING INSTALLED IN OPEN SPACE TO BE EXPOSED TO STRUCTURE. FIXTURES TO BE INSTALLED AT 12'-0" AFF.

EXTERIOR DOOR FIXTURES W/ REMOTE MOUNTED PHOTO CONTROL WIRED TO LOCAL C.R. OUTLET.

WALL MOUNTED EXIT FIXTURES WP-1 SHALL PROVE A MINIMUM OF 1.0 FC'S AT THE MEANS OF EGRESSES EXIT.



DIVISION 16  
ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

A. THE GENERAL, SPECIAL, AND OTHER CONDITIONS OF THE ARCHITECTURAL DOCUMENTS SHALL BE CONSIDERED AN INTEGRAL PART OF THESE ELECTRICAL SPECIFICATIONS.

B. REFERENCE TO "CONTRACTOR" IN THIS SPECIFICATION SHALL MEAN "ELECTRICAL CONTRACTOR", UNLESS OTHERWISE NOTED.

1.02 DRAWINGS AND DOCUMENTS

A. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL FORM A SET OF PLANS FOR THE ELECTRICAL WORK. NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER. ANY ITEM SHOWN ON THE DRAWINGS OR SPECIFIED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS SHOWN AND SPECIFIED ON BOTH.

B. ANY QUESTIONS REGARDING THE INTENT OF THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AS SOON AS POSSIBLE. IF DIRECTION FROM THE ENGINEER CANNOT BE OBTAINED DUE TO TIME OR COMMUNICATION LIMITATIONS, THE GREATER QUANTITY, HIGHER QUALITY OR CONDITION IS MOST FAVORABLE TO THE OWNER. THE ASSUMED CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND OTHER ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION, AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS.

C. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. COORDINATE ALL SHAFTS, CHASES, FURPED SPACES, SUSPENDED CEILINGS, LOCATIONS OF EQUIPMENT, ETC.

D. ELECTRICAL CONTRACTOR SHALL COORDINATE ROUTING OF ALL CONDUIT AND WIRE WITHIN SOFFITS PROVIDED BY THE GENERAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SOFFITING REQUIRED TO COVER INSTALLATIONS NOT COORDINATED OR SPECIFICALLY APPROVED BY THE ARCHITECT AND ENGINEER.

E. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION ONLY. PLACEMENT OF ELECTRICAL EQUIPMENT AND DEVICES SHALL NOT INTERFERE WITH LOCATIONS OR CLEARANCES OF OTHER TRADES' MATERIALS OR EQUIPMENT.

F. DIMENSIONS GIVEN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALLED DIMENSIONS. DIMENSIONS, WHETHER GIVEN IN FIGURES OR SCALDED, SHALL BE VERIFIED ON THE FIELD.

G. CONTRACTOR SHALL VERIFY THAT THE EQUIPMENT TO BE FURNISHED UNDER CONTRACT WILL FIT WITHIN THE AVAILABLE SPACE.

H. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN ELECTRICAL, ARCHITECTURAL, AND MECHANICAL DRAWINGS.

I. VERIFY ITEMS SUCH AS DOOR SWINGS, WINDOW LOCATIONS, CASEWORK, ETC., BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT OR DEVICES. ALL DEVICES CONFLICTING WITH AND OTHER TRADES WORK DUE TO LACK OF COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

1.03 SCOPE OF WORK

A. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER ITEMS NECESSARY FOR OR INCIDENTAL TO THE INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS REQUIRED FOR THIS PROJECT.

1.04 CODES, INSPECTIONS, AND FEES

A. THE COMPLETED ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, REGULATIONS, AND STANDARDS, INCLUDING INTERPRETATIONS OF THESE BY APPROPRIATE AUTHORITIES HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR WORKMANSHIP OR MATERIALS IN EXCESS OF CODE OR REGULATORY REQUIREMENTS, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN.

B. THE WORK SPECIFIED HEREIN SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED REPRESENTATIVES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, AND THE ENGINEER. THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS TO HAVE THE ELECTRICAL WORK INSPECTED BY APPROPRIATE INSPECTOR(S) AND SHALL PROVIDE TWO (2) COPIES OF EVERY FINAL SIGNED "CERTIFICATE OF INSPECTION" TO THE OWNER.

C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES AND PERMITS, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED BY THE CONTRACTOR, AND PAY ALL FEES AND CHARGES levIED BY THE ELECTRIC UTILITY COMPANY FOR CONNECTION TO ELECTRIC SERVICES.

1.05 INSPECTION OF SITE

A. DIVISION 16 CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL Existing CONDITIONS IN REGARD TO THE REQUIREMENTS OF THIS CONTRACT. ANY VISIBLE OR EASILY ATTAINABLE INFORMATION AVAILABLE AT THE SITE, EVEN IF DERIVED FROM THESE DOCUMENTS, WILL NOT RESULT IN EXTRA COMPENSATION AFTER TIME OF BID. ANY DISCREPANCIES FROM THESE DOCUMENTS, SHOULD BE REPORTED TO THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE.

1.06 TEMPORARY ELECTRICAL SERVICE

A. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY LIGHTING AND POWER SYSTEM AT A LOCATION SPECIFIED BY THE GENERAL CONTRACTOR. THE SERVICE SHALL BE 120-VOLT, 1-PHASE, 60-HZ, WITH APPROPRIATE METERS AND PROTECTIVE EQUIPMENT. COMPONENTS OF THE TEMPORARY SYSTEM SHALL BE AS REQUIRED BY THE GENERAL CONTRACTOR. THE SYSTEM SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL REMOVE THE TEMPORARY SYSTEM WHEN IT IS NO LONGER NEEDED.

1.07 MATERIALS AND EQUIPMENT

A. UNLESS OTHERWISE SPECIFIED, ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND MANUFACTURED BY RECOGNIZED MANUFACTURERS. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF GOVERNING CODES.

B. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC. (UL) AS CONFORMING TO ITS STANDARDS. IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THAT TYPE OF MATERIAL OR EQUIPMENT.

C. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL TO USE ANY PROPOSED SUBSTITUTE MATERIAL OR EQUIPMENT BEFORE CONTRACTING TO PURCHASE SUCH MATERIALS. THE CONTRACTOR SHALL NOT REMOVE OR REPLACE THE REMAINDER OF ANY MATERIAL OR EQUIPMENT WHICH DOES NOT HAVE THIS WRITTEN APPROVAL AND WHICH DOES NOT COMPLY WITH THE SPECIFICATIONS, REGARDLESS OF THE STATE OF INSTALLATION OF SUCH EQUIPMENT.

D. WHERE EQUIPMENT SUPPLIED BY THE CONTRACTOR HAS CHARACTERISTICS OTHER THAN AS SPECIFIED HEREIN, THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, MAKE ALL CHANGES IN THE ELECTRICAL WORK NECESSITATED BY THE SUBSTITUTION.

1.08 WORKMANSHIP

A. THE INSTALLATION SPECIFIED HEREIN SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY PERSONS EXPERIENCED AND SKILLED IN THE TRADE. ONLY THE BEST QUALITY WORKMANSHIP WILL BE ACCEPTED. ALL EXPOSED COMPONENTS OF THE ELECTRICAL SYSTEMS SHALL BE SQUARE AND TRUE WITH BUILDING LINES AND SURFACES.

- 1.09 CORRELATION OF WORK
- A. THE CONTRACTOR SHALL GIVE CAREFUL CONSIDERATION TO THE WORK OF THE GENERAL, MECHANICAL, AND ALL OTHER CONTRACTORS AND SUBCONTRACTORS ON THE PROJECT AND SHALL ORGANIZE THE ELECTRICAL WORK SO THAT IT WILL NOT INTERFERE WITH THE WORK OF OTHER TRADES.
- B. DRAWINGS AND SPECIFICATIONS FOR OTHER TRADES AND GENERAL CONSTRUCTION DRAWINGS SHALL BE CONSULTED FOR CORRELATION INFORMATION, DETAILS, DIMENSIONS, ETC.
- C. THE LOCATION OF ALL OUTLETS, WIRING, AND EQUIPMENT SHALL BE VERIFIED.
- D. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR MOVING MISPLACED ELECTRICAL SYSTEM COMPONENTS.
- 1.10 MAINTENANCE MANUAL
- A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH TWO (2) COPIES OF A MANUAL COVERING THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT. THE MANUALS SHALL BE 3-RING, LOOSE LEAF, HEAVY DUTY, STEEL PIANO HINGED NOTEBOOKS, HYTONE #8711 OR EQUAL, AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL. EACH MANUAL SHALL CONTAIN THE FOLLOWING:
1. COMPLETE MANUFACTURER CATALOG DATA, MANUFACTURER'S LITERATURE, WIRING DIAGRAMS, DETAILED OPERATING INSTRUCTIONS, AND A COMPLETE LISTING OF SUPPLIERS AND DISTRIBUTORS WHERE REPLACEMENT PARTS AND MAINTENANCE SERVICES ARE AVAILABLE FOR ALL EQUIPMENT.
  2. INSPECTION PLATES, SPECIFICATIONS, AND APPROPRIATE INSPECTOR'S SHEET, REFERRED TO IN THE MAINTENANCE MANUAL.
  3. AS WORK PROGRESSES, THE CONTRACTOR SHALL MARK A SET OF CONSTRUCTION DOCUMENTS TO SHOW ACTUAL CIRCUIT ROUTING AND MAKEUP, EQUIPMENT LOCATION CHANGES, AND ANY OTHER CHANGES OR DEVIATIONS BETWEEN PROJECT WORK AS BUILT, AND THE CONTRACT DOCUMENTS. MARKINGS SHALL BE NEAT, LEGIBLE, AND PERMANENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL SIMILARLY MARK A SECOND SET OF DOCUMENTS AND PROVIDE BOTH SETS OF AS-BUILT DOCUMENTS TO THE OWNER WITH THE MAINTENANCE MANUALS.
- 1.12 GUARANTEE
- A. THE CONTRACTOR SHALL FURNISH THE OWNER WITH A WRITTEN GUARANTEE FOR THE PERIOD OF ONE (1) YEAR AGAINST THE FAILURE OF ANY PART OF THE ELECTRICAL SYSTEM INSTALLED UNDER THE SPECIFICATIONS DUE TO DEFECTS IN MATERIAL OR WORKMANSHIP. THE GUARANTEE PERIOD SHALL START UPON SUBSTANTIAL COMPLETION OR AS SPECIFIED UNDER GENERAL AND SPECIAL CONDITIONS. LAMP BULBS SHALL BE OPERABLE ON THE START DATE OF, BUT EXCLUDED FROM THE GUARANTEE.
- B. THE CONTRACTOR SHALL ASSURE THAT ANY EXTENDED WARRANTIES TO WHICH THE OWNER IS ELIGIBLE ARE PASSED ON TO THE OWNER.
- 1.13 CUTTING AND PATCHING
- A. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR THE COMPLETION OF THE ELECTRICAL WORK FOR THIS PROJECT. NO STRUCTURAL MEMBERS SHALL BE DISTURBED WITHOUT OBTAINING WRITTEN PERMISSION OF THE ENGINEER.
- B. ANY SURFACE WHICH IS DISTURBED IN ANY WAY BY THE CONTRACTOR SHALL BE REPAVED AND REFINISHED TO PROVIDE A SURFACE EQUAL IN STRENGTH, DURABILITY, AND APPEARANCE TO THE ORIGINAL SURFACE.
- C. WHERE IT IS NECESSARY TO DRILL OR CUT CONCRETE SURFACES, THE EDGES SHALL BE SHARPLY DEFINED. HOLES SHALL BE MADE WITH A ROTARY DRILL. CUTS SHALL BE MADE WITH A CONCRETE SAWS UNLESS SOME OTHER METHOD OF MAKING SPECIFIC CUTS IS APPROVED BY THE ENGINEER.
- D. PENETRATIONS THROUGH SMOKE, FIRE, HAZARDOUS AREA, OR OTHER RATED SEPARATIONS SHALL BE SEALED TO PRESERVE THE RATINGS OF THE SEPARATIONS.
- E. ALL CUTTING, DRILLING, PATCHING, REPAIRING, AND REFINISHING SHALL BE DONE BY PERSONS SKILLED IN APPROPRIATE TRADES.
- F. THE CONTRACTOR SHALL CLEAN AWAY ALL RUBBISH AND LITTER GENERATED DURING ELECTRICAL INSTALLATION.
- 1.14 DEMOLITION
- A. WHERE ELECTRICAL WORK TO REMAIN IS DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY, AND FUNCTIONALITY.
- B. ACCESSIBLE WORK INDICATED TO BE DEMOLISHED: REMOVE EXPOSED ELECTRICAL INSTALLATION IN ITS ENTIRETY.
- C. ABANDONED WORK: CUT AND REMOVE BURIED RACEWAY AND WIRING INDICATED TO BE ABANDONED IN PLACE, 2 INCHES FROM THE SURFACE OF ADJACENT CONSTRUCTION. CAP AND PATCH SURFACE TO MATCH EXISTING FINISH.
- D. REMOVAL: REMOVE DEMOLISHED MATERIAL FROM THE PROJECT SITE.
- E. TEMPORARY DISCONNECTION: REMOVE, STORE, CLEAN, REINSTALL, RECONNECT, AND MAKE OPERATIONAL COMPONENTS INDICATED FOR RELOCATION.
- 1.15 GENERAL RACEWAY REQUIREMENTS
- A. ELECTRICAL CONDUCTORS INSTALLED UNDER THESE SPECIFICATIONS SHALL BE IN ELECTRICAL RACEWAY. ALL RACEWAYS SHALL BE INSTALLED IN ACCORDANCE WITH THESE GENERAL REQUIREMENTS.
- B. RACEWAY SHALL BE COMPLETE WITH NECESSARY COUPLINGS, CONNECTORS, BOXES, SUPPORTS, FITTINGS, AND ALL OTHER COMPONENTS NEEDED FOR A COMPLETE AND INTEGRAL RACEWAY SYSTEM. SYSTEM COMPONENTS SHALL BE DESIGNED FOR INTERCONNECTION AND SHALL BE INSTALLED TO PROVIDE A NEAT APPEARING, MECHANICALLY FIRM ASSEMBLY ADHERING TO CODES AND PRINCIPLES OF GOOD ELECTRICAL PRACTICE, AND CONFORMING WITH RECOMMENDATIONS OF THE RACEWAY AND CONDUCTOR MANUFACTURERS.
- C. RACEWAY RUNS SHALL ORIGINATE AND TERMINATE AT LOCATIONS APPROXIMATELY AS SHOWN ON THE DRAWINGS. RUNS SHALL BE STRAIGHT AND TRUE WITH ELBOWS, OFFSETS AND BENDS, UNIFORM AND SYMMETRICAL. IN GENERAL, EXPOSED RUNS OF RACEWAY SHALL BE PARALLEL OR PERPENDICULAR TO SURROUNDING BUILDING LINES AND SURFACES. RUNS SHALL BE INSTALLED SO THAT THEY DO NOT INTERFERE WITH AISLES, PASSAGES, DOORWAYS, HATCHWAYS, WORKING AREAS, AND FLOORS.
- D. SUFFICIENT PULL AND JUNCTION BOXES OF ADEQUATE SIZE SHALL BE LOCATED AS NECESSARY TO ENSURE EASY INSTALLATION AND SPLICING OF CONDUCTORS. BOXES SHALL BE SIZED TO PROVIDE ADEQUATE FREE SPACE FOR ALL ENCLOSED CONDUCTORS. BOX SIZES SHALL NOT BE DETERMINED BY SCALING THE DRAWINGS.
- 1.16 METAL CONDUIT RACEWAY
- A. RIGID METAL CONDUIT SHALL BE INSTALLED WHERE EXPOSED TO WEATHER, OR WHERE IMBEDDED OR PASSING THROUGH CONCRETE, NONMETALLIC CONDUIT MAY BE USED FOR PYON SIGN AND PARKING LOT LIGHTING ONLY. FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTION TO ELECTRICAL EQUIPMENT SUBJECT TO MOVEMENT. EMT SHALL BE USED ELSEWHERE UNLESS OTHERWISE NOTED.
- B. ALL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SUCH AS CONDUIT, SEAL TIGHT CONDUIT, BOXES, SUPPORTS AND FITTINGS SHALL MEET THE LATEST APPLICABLE STANDARD OF UNDERWRITERS LABORATORIES, INC. ALL STEEL COMPONENTS OF CONDUIT RACEWAY SYSTEMS SHALL BE HOT-DIPPED GALVANIZED, METALIZED, SHERADIZED, OR ZINC-COATED BY SOME OTHER APPROVED MEANS. SEAL TIGHT CONDUIT AND PVC CONDUIT SHALL HAVE SEPARATE GROUND CONDUCTOR.
- 1.17 PULLBOXES
- A. PULLBOXES SHALL BE INSTALLED AS REQUIRED IN LONG RUNS OR WHEN MORE THAN FOUR QUARTER BENDS OCCUR IN ANY CONDUIT RUN. ALL PULLBOXES SHALL BE SIZED TO CONFORM TO THE REQUIREMENTS OF ARTICLE 370 OF THE NATIONAL ELECTRICAL CODE. PULLBOXES SHALL BE RECESSED IN ALL FINISHED PORTIONS OF THE BUILDING.
- 1.18 OPERATING INSTRUCTIONS & TESTING
- A. THE CONTRACTOR SHALL FURNISH INSTRUCTION IN THE CARE, ADJUSTMENT, OPERATION, AND MAINTENANCE OF ALL PARTS OF THE ELECTRICAL EQUIPMENT. INSTRUCTION SHALL BE GIVEN TO EMPLOYEES DESIGNATED BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER, AND AT A TIME ACCEPTABLE TO THE OWNER, JUST PRIOR TO ACCEPTANCE OF THE EQUIPMENT BY THE OWNER.
- B. THE CONTRACTOR SHALL TEST THE EQUIPMENT INSTALLED UNDER THIS SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE ENGINEER. NO EQUIPMENT SHALL BE TESTED OR OPERATED FOR ANY PURPOSE UNTIL IT HAS BEEN FULLY PREPARED, CONNECTED, AND READIED FOR NORMAL OPERATION. ANY EQUIPMENT DAMAGED BY IMPROPER OR LL-TIMED OPERATION OR TESTING SHALL BE REPAIRED OR REPLACED, AT THE CONTRACTOR'S EXPENSE, BEFORE FINAL INSPECTION AND ACCEPTANCE.
- 1.19 OTHER
- A. ALL CIRCUITS SPECIFIED ARE DESIGNED ON THE BASIS OF LOAD REQUIREMENTS AND CONTROL PROCEDURES AS INDICATED. THE CONTRACTOR SHALL MAKE THE NECESSARY CHANGES TO THE CIRCUITS AND CONTROL EQUIPMENT WHERE MOTORS, APPLIANCES, AND DEVICES FURNISHED BY THE CONTRACTOR HAVE OTHER RATINGS THAN THOSE INDICATED.
- 1.20 PRODUCTS
- 2.01 DISCONNECT SWITCHES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCHES HAVING THE NUMBER OF POLES AND AMPERE RATINGS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THE EQUIPMENT SCHEDULE.
- B. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, AC, SINGLE THROW SAFETY SWITCHES, BUILT IN ACCORDANCE WITH NEMA REQUIREMENTS WITH A VISIBLE FULL COVER INTERLOCK AND QUICK-MAKE, QUICK-BREAK MECHANISM. EACH SWITCH SHALL BE FUSIBLE UNLESS NONFUSIBLE. DISCONNECT SWITCHES SHALL BE LOCATED IN NEARBY ENCLOSURES, IN A DRY LOCATION, AND NEMA 3 WHERE RELATED TO THE WEATHER. DISCONNECT SWITCHES SHALL BE "HEAVY DUTY" AS MANUFACTURED BY WESTINGHOUSE, OR SQUARE-D.
- C. DISCONNECT SWITCHES RATED AT 20A SHALL BE GENERAL USE, 20A, AC, SNAP SWITCH WIRING DEVICES.
- 2.02 FUSES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL FUSES OF THE TYPES AND RATINGS DESIGNATED IN THE DRAWINGS AND SPECIFICATIONS IN EACH FUSIBLE DEVICE INSTALLED BY THE CONTRACTOR. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND STORE, AT A LOCATION DIRECTED BY THE OWNER, THREE (3) SPARE FUSES OF EACH SIZE AND TYPE INSTALLED DURING THIS PROJECT. THE CONTRACTOR SHALL PROVIDE TWO (2) COPIES OF THE SPARE FUSE LIST TO THE OWNER FOR OWNERS RECORDS. THE SPARE FUSE LIST SHALL BE TYPED ON THE CONTRACTOR'S LETTERHEAD.
- B. FUSES SHALL BE ONE-TIME CARRIAGE FUSES MANUFACTURED BY BUSSMANN, GOULD, SHAWMUT, OR LITTLE FUSE.
- 2.03 WIRE AND CABLE
- A. ELECTRICAL CONDUCTORS SHALL BE BUILDING WIRE, EXCEPT WHERE SOME OTHER TYPE OF WIRE OR CABLE IS SPECIFICALLY INDICATED.
- B. BUILDING WIRE CONDUCTORS SHALL BE SOFT-DRAWN ANNEALED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% PURE COPPER. CONDUCTOR SIZES ARE AMERICAN WIRE GAUGE (AWG) OR CIRCULAR MILS (CMC). MINIMUM CONDUCTOR SIZE SHALL BE #12 UNLESS OTHERWISE SPECIFIED. CONDUCTORS LARGER THAN #10 SHALL BE STRANDED. CONDUCTORS #10 AND SMALLER SHALL BE SOLID WIRE.
- C. BUILDING WIRE INSULATION SHALL BE 600-VOLT. CONDUCTORS SHALL HAVE TW, THW, THWN, OR THHN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE OR REQUIRED BY CODE OR APPLICATION TO BE OTHERWISE.
- 2.04 WIRING DEVICES
- A. WIRING DEVICES SHALL BE INSTALLED IN METAL CONDUIT DEVICE BOXES.
- B. SWITCHES AND RECEPTACLES SHALL BE HUBBELL, BRYANT, LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL SUBJECT TO APPROVAL BY THE ARCHITECT, COLOR SHALL BE WHITE.
- C. SWITCHES SHALL BE SPECIFICATION GRADE, AC QUET TYPE, 20-AMP, 120/277-VOLT, WITH SILVER ALLOY CONTACTS, EQUAL TO HUBBELL #1221.
- D. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-20R, 20-AMP, 125-VOLT, 3-WIRE GROUNDING TYPE DEVICES, EQUAL TO HUBBELL #562, WITH THE THIRD POLE GROUNDED TO THE OUTLET BOX. EACH RECEPTACLE SHALL BE RIDGELY POSITIONED WITHIN THE BOX SO THAT THE EXPOSED FACE OF THE RECEPTACLE PROTRIDES BEYOND THE FACE OF THE COVER PLATE.
- E. GROUND FAULT CIRCUIT INTERRUPTER (GFI) DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20-AMP DEVICES, EQUAL TO HUBBELL #GF5362, WHITE SO THAT EACH UNIT IS SELF-CONTAINED. GFI RECEPTACLES SHALL NOT BE CONNECTED TO FEED THROUGH UNLESS SPECIFICALLY SO NOTED ON THE DRAWINGS.
- F. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH "WHILE-IN-USE" WEATHERPROOF COVERPLATES.
- 2.05 WALL AND COVER PLATES
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL PLATES FOR ALL FLUSH MOUNTED WIRING DEVICES AND ALL FLUSH MOUNTED SPECIAL SYSTEM OUTLET CONNECTIONS. THESE SHALL BE USED WHERE THE PLATES SHALL BE INSTALLED OVER ALL STEEL STUDS PROVIDED FOR FUTURE USE. WALL PLATES SHALL BE STAINLESS STEEL, AS MANUFACTURED BY EAGLE, BRYANT, GENERAL ELECTRIC, HUBBELL OR LEVITON. WALL PLATES SHALL BE SECURED WITH MATCHING SCREWS. ENGRAVED WALL PLATES SHALL HAVE BACK FILL.
- B. COVER PLATES FOR TELEPHONE, SHALL BE AS SPECIFIED ABOVE.
- 2.06 MANUAL MOTOR STARTERS
- A. MANUAL STARTERS SHALL BE TOGGLE SWITCH TYPE STARTERS. WHERE A RED PILOT LIGHT IS INDICATED, THE LIGHT SHALL BE A NEON BULB INTEGRAL WITH THE STARTER. FLUSH MOUNTING UNITS SHALL HAVE ENGRAVED WALL PLATES. SURFACE MOUNTING UNITS SHALL BE IN NEMA 1 ENCLOSURES, UNLESS SOME OTHER TYPE OF ENCLOSURE IS INDICATED. MANUAL STARTERS SHALL BE CUTLER HAMMER BULLETIN 9101 OR SQUARE-D CLASS 2510.
- 2.08 PANELBOARDS
- A. PANELBOARDS SHALL BE SQUARE D #LINE.
- B. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE WITH ENCLOSURES OF CODE GRADE STEEL. OVERSIZE GUTTERS SHALL BE PROVIDED FOR FEED THROUGH WHERE INDICATED OR REQUIRED. WHERE DOUBLE LUGS ARE NOT PERMITTED BY LOCAL CODE, A SUITABLE PULL BOX OR GUTTER ADJACENT TO PANELS SHALL BE PROVIDED FOR CONNECTIONS. TOP OF PANELBOARD TUBS SHALL BE 6'-6" ABOVE FLOOR.

- C. PANELBOARDS SHALL HAVE TRIM AND FLAT LOCKING DOORS WITH BOTH HINGES AND TRIM CLAMPS COMPLETELY CONCEALED. DOOR LOCKS SHALL BE FLUSH WITH THE COVER. ALL DOOR LOCKS SHALL BE COMMON KEYED. TWO (2) KEYS SHALL BE PROVIDED FOR EACH PANELBOARD. A CLEAR PLASTIC COVERED TYPEWRI TEN CIRCUIT DIRECTORY SHALL BE MOUNTED IN A CARD HOLDER LOCATED ON THE INSIDE DOOR. DRAFTING PANELBOARDS SHALL HAVE BLACK MICARTA PLATES WITH 1/2 INCH HIGH WHITE CUT LETTERS STATING PANELBOARD NUMBER AND VOLTAGE. WHERE PANELBOARDS ARE IN PUBLIC AREAS, IDENTIFICATION PLATES SHALL BE INSIDE DOOR.
- D. BUSSES SHALL BE MADE FROM 98 PERCENT ELECTROLYTIC COPPER. THE USE OF ALUMINUM SHALL NOT BE ALLOWED, AND SHALL BE INDEPENDENTLY SUPPORTED (WITHOUT TENSION) ON THE CIRCUIT BREAKERS. SOURCE OF POWER SHALL BE ONLY SHOWN ON THE CIRCUIT BREAKER. MAINTENANCE NOTED OTHERWISE IN THE PANELBOARD SCHEDULE. ALL MAIN LUGS SHALL BE CRIMP COMPRESSION TYPE WHERE BREAKERS AND/OR SWITCHES ARE LISTED IN THE SCHEDULES AS "SPACE ONLY", THIS SHALL INCLUDE EXTENDED BUS AND MOUNTING PROVISIONS.

- E. CIRCUIT BREAKERS SHALL BE BOLT-ON AND SHALL HAVE BOLTED LINE AND LOAD TERMINALS. ALL BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC, COMMON TRIP ON ALL MULTIPOLE BREAKERS AND HAVE A MINIMUM UL SHORT CIRCUIT RATING OF 10,000 SYMMETRICAL RMS. AMPS. EACH BREAKER SHALL HAVE ITS CURRENT RATING ENGRAVED, IN EASY TO READ NUMBERS, ON THE TOGGLE HANDLE. ALL BREAKERS USED FOR FLUORESCENT LIGHTING SWITCHING CONTROL SHALL BE LISTED SWD SWITCHING DUTY.
- F. CIRCUIT NUMBERS APPEARING ON DRAWINGS SHALL BE USED FOR REFERENCE ONLY. ACTUAL CONNECTIONS SHALL BE IN ACCORDANCE WITH PHASING OF THE CABINET, LOAD BALANCE, AND COMMON NEUTRAL REQUIREMENTS. ROOM NUMBERS OR NAMES USED FOR CIRCUIT IDENTIFICATION SHALL CORRESPOND TO NAME PLATES INSTALLED ON ROOM DOORS BY THE GENERAL CONTRACTOR OR AS SELECTED BY THE OWNER AND SHALL BE VERIFIED AS THESE MAY NOT BE THE SAME AS ROOM TITLES ON THE DRAWINGS.
- 2.10 LIGHTING FIXTURES
- A. ALL LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO LIGHT FIXTURE SCHEDULE ON DRAWINGS FOR LIGHT FIXTURE MANUFACTURERS AND FEATURES. LAMPS SHALL BE BY OSRAM-Sylvania, GENERAL ELECTRIC, OR PHILIPS.

- 2.11 GROUNDING SYSTEMS
- A. CIRCUITS, METAL RACEWAY SYSTEMS, AND ALL OTHER PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL BE SOLIDLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE TO FORM A CONTINUOUS, PERMANENT AND EFFECTIVE GROUNDING SYSTEM.
- B. GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE WITH SOLDERLESS PRESSURE-TYPE FITTINGS. WHERE WELDED CONNECTIONS ARE PRACTICAL, CONNECTIONS MAY BE MADE BY THE USE OF A SUITABLE WELDING PROCESS. ALL CONNECTIONS SHALL BE MADE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- C. TO MAINTAIN UNINTERRUPTED ELECTRICAL CONTINUITY, FLEXIBLE RACEWAY SECTIONS MUST HAVE CONDUCTANCE EQUAL TO THAT OF THE SYSTEMS INFLEXIBLE RACEWAY. RACEWAY FITTINGS USED MUST BE SUCH AS TO ENSURE EXISTENCE OF A PERMANENT BOND. GROUNDING BUSHINGS SHALL BE PROVIDED TO GROUND CONDUITS TO CENTER GROUND. ALL NEW EQUIPMENT SHALL BE GROUNDED TO THE EXISTING GROUNDING SYSTEM.
- D. PROVIDE SERVICE GROUNDING AS INDICATED ON ONE-LINE DIAGRAM.
- E. INCLUDE A SEPARATE BARE GROUND CONDUCTOR IN ALL TYPE NM CABLE OF THE SAME SIZE AS PHASE CONDUCTOR.
- F. INCLUDE A SEPARATE GROUND CONDUCTOR IN ALL PVC RACEWAY.
- 2.12 IDENTIFICATION AND LABELING OF ELECTRICAL EQUIPMENT
- A. ALL CONTROL DEVICES AND DEVICE ENCLOSURES SHALL BE LABELED WITH INDIVIDUAL NAME PLATES OR LEGEND PLATES.
- B. INDIVIDUAL NAME OR LEGEND PLATES SHALL BE BLACK LAMINATED PLASTIC OR MICARTA PLATES WITH WHITE CUT LETTERS, PAPER, FOIL, OR TAPE.
- C. MARKERS ATTACHED WITH ADHESIVES SHALL NOT BE USED.
- 2.13 SERVICE TO ELECTRICALLY-POWERED EQUIPMENT
- A. THE CONTRACTOR SHALL FURNISH AND INSTALL OUTLETS FOR AND MAKE FINAL ELECTRICAL CONNECTIONS TO ALL MOTORS AND ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE EQUIPMENT SCHEDULE.
- B. THE CONTRACTOR SHALL OBTAIN EXACT INFORMATION PERTAINING TO LOCATION, ELECTRICAL CHARACTERISTICS, AND WIRING FOR EQUIPMENT FURNISHED BY OTHERS FROM THE CONTRACTOR FURNISHING THE EQUIPMENT. THIS INFORMATION SHALL BE PROVIDED IN THE EQUIPMENT SPECIFICATIONS AND MANUFACTURER'S WIRING DIAGRAMS. ANY DISCREPANCY BETWEEN THE EQUIPMENT REQUIREMENTS AND THE PROVISIONS MADE BY THESE SPECIFICATIONS SHALL BE REPORTED. EQUIPMENT DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBSERVE MANUFACTURERS' REQUIREMENTS SHALL BE REPAIRED OR REPAIRED BY THE CONTRACTOR. THE THERMAL PROTECTION ELEMENTS IN MANUAL STARTERS SHALL BE RECHECKED WITH NAME PLATE DATA AT THE SITE BEFORE OPERATION OF THE EQUIPMENT.

