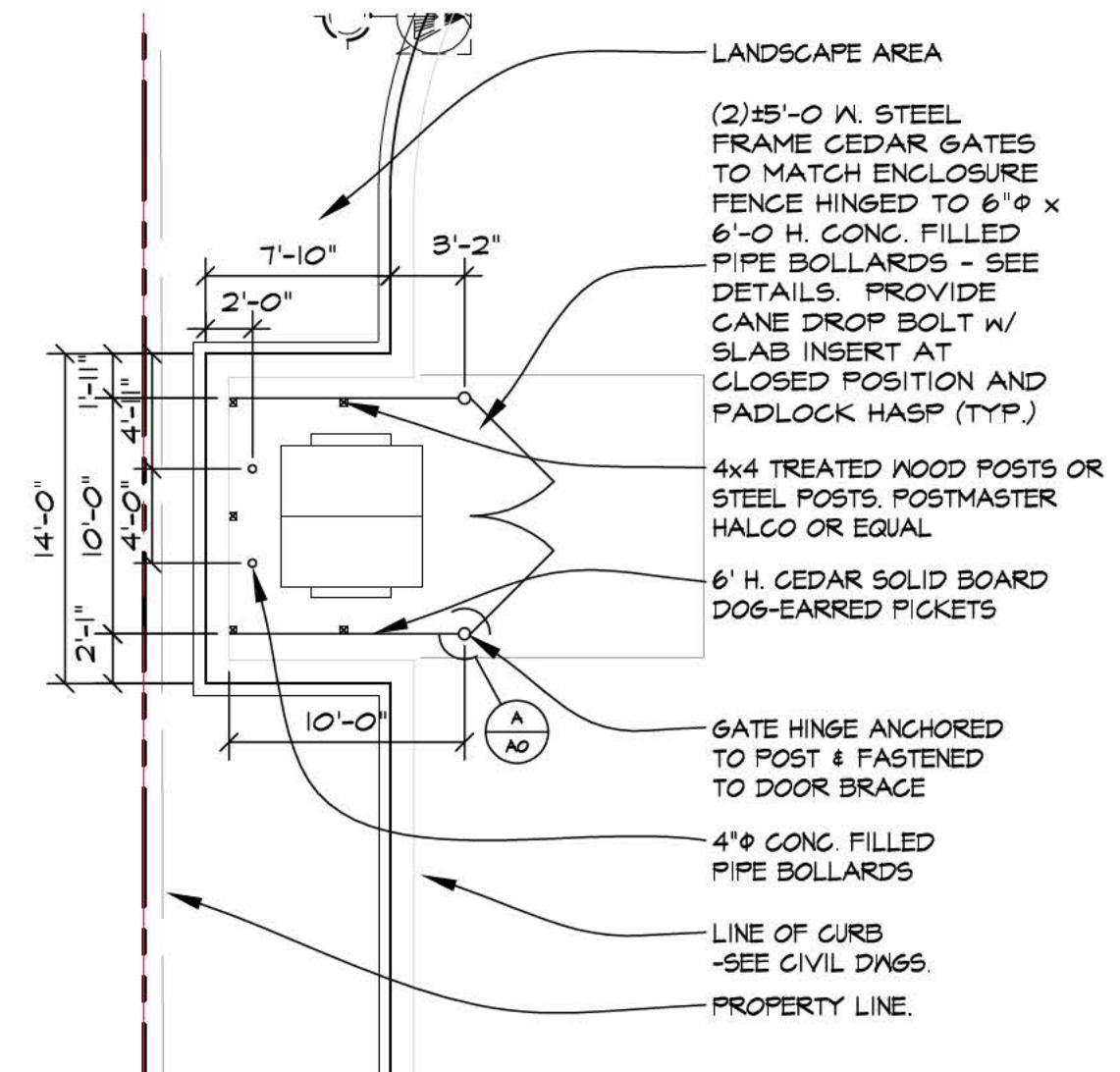
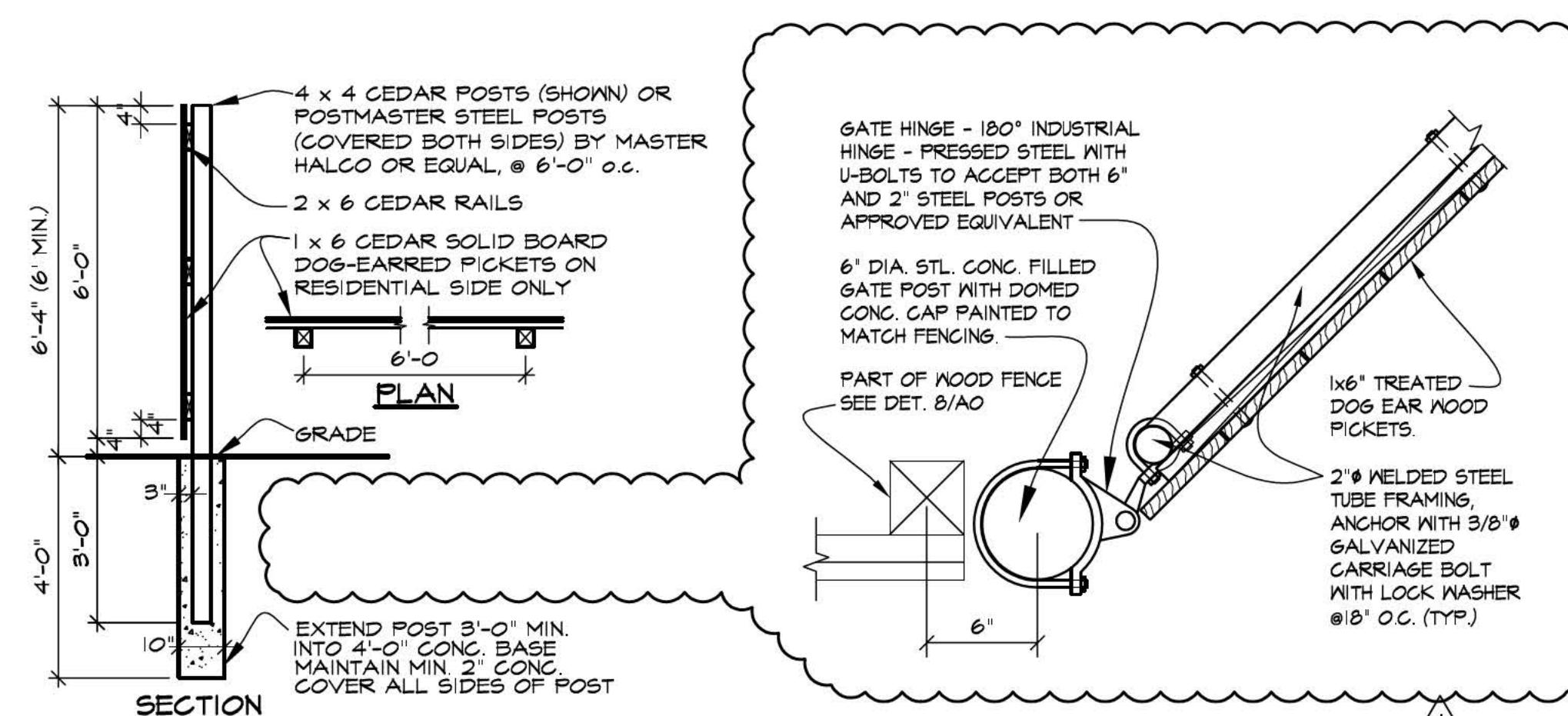


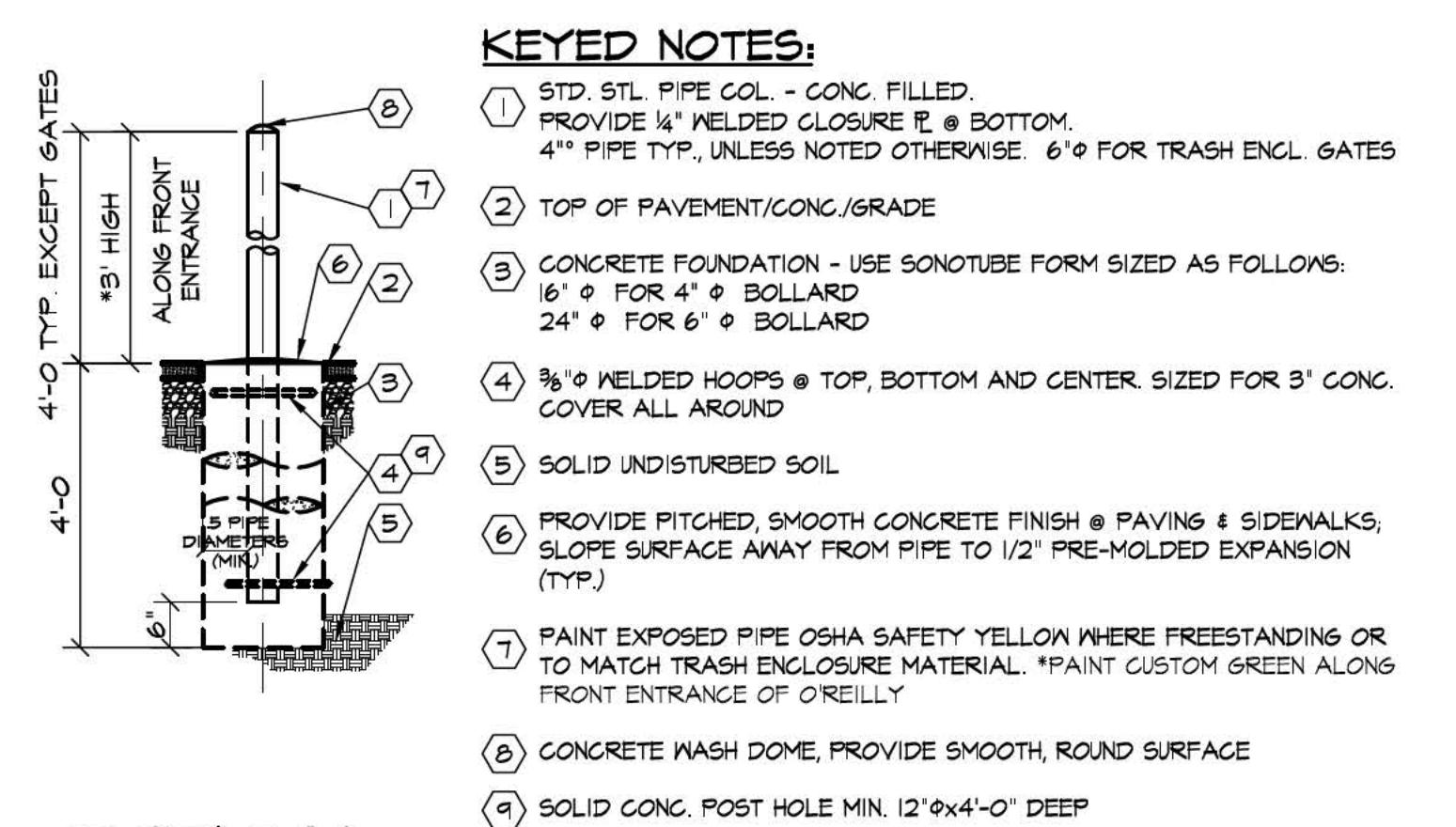
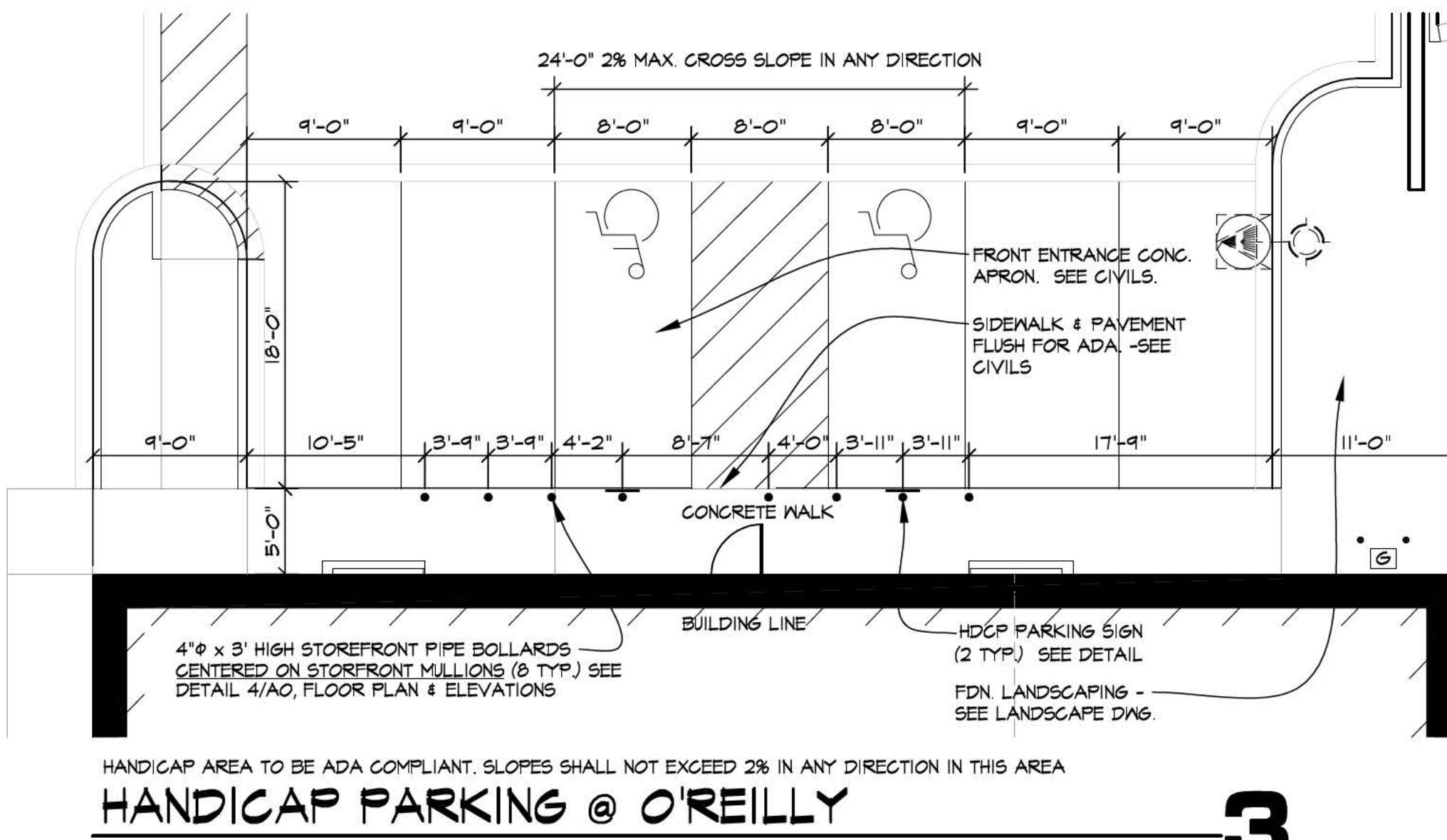
TRANSFORMER PAD DETAIL 5 **TRASH ENCLOSURE PLAN**
SCALE: 1/8" = 1'-0"



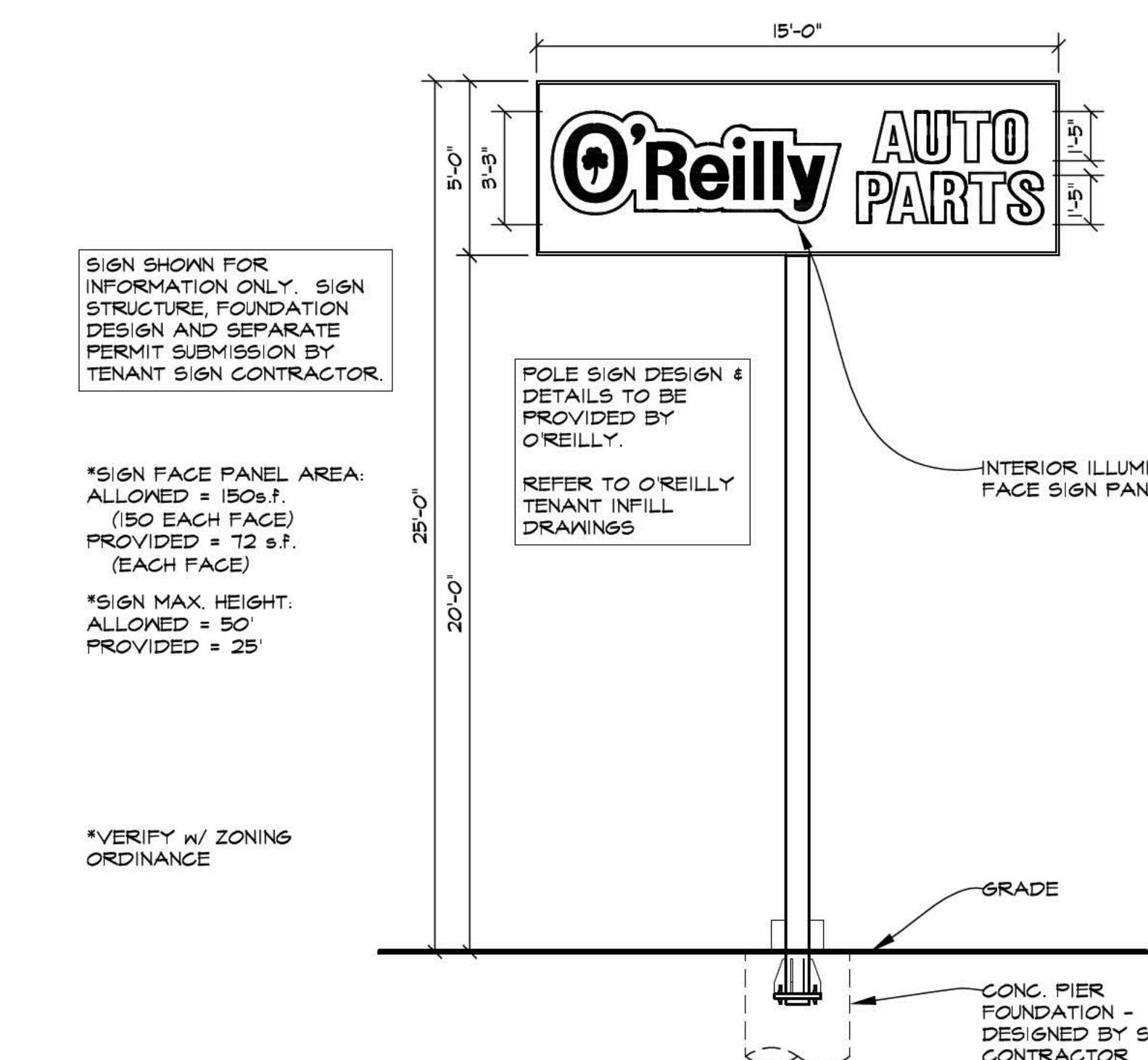
NOT USED
SCALE: 1" = 1'-0"



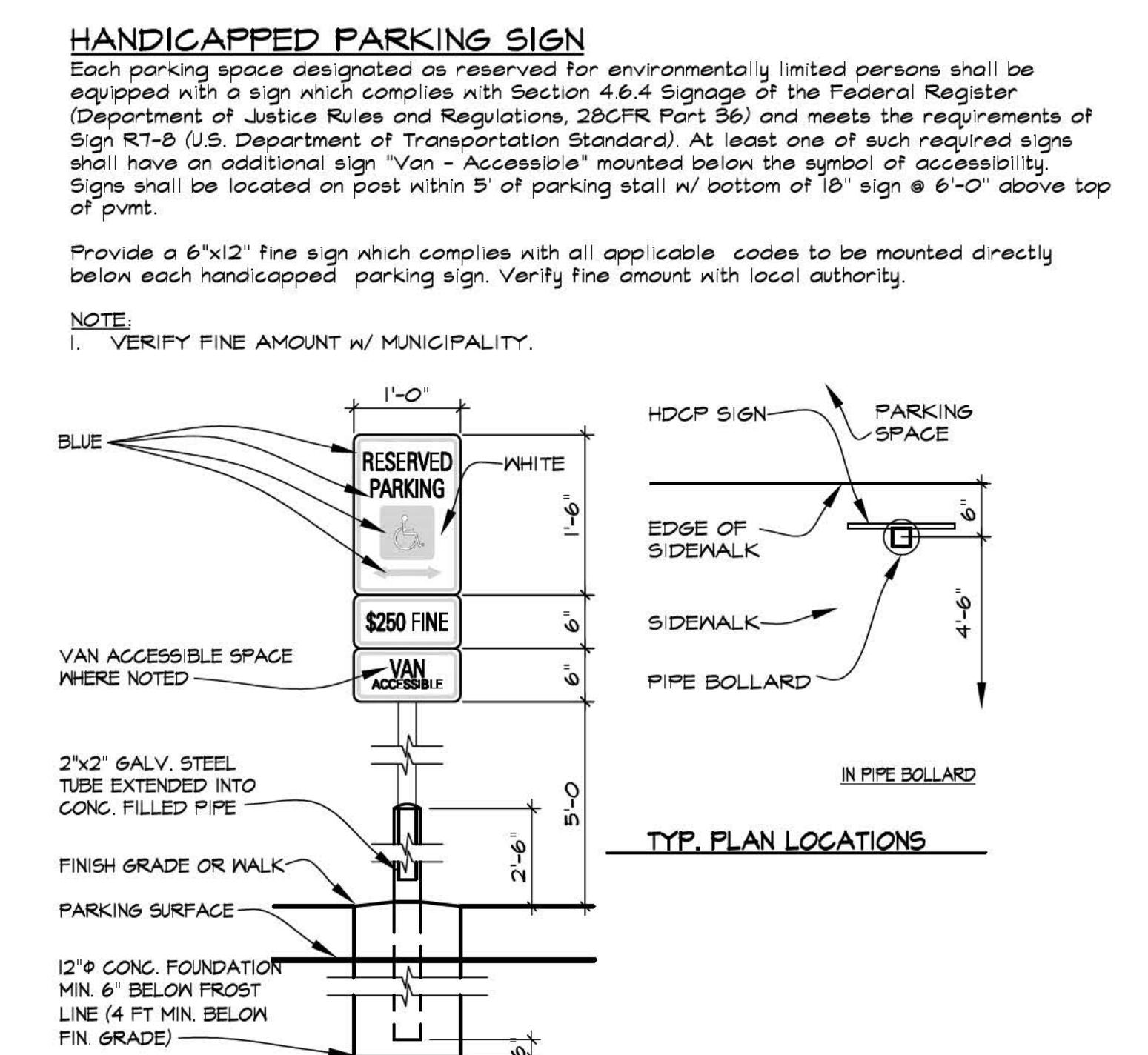
TRASH ENCLSR. FENCE DETAIL 8 **SECTION @ TRASH GATE POST**
SCALE: 3/8" = 1'-0"



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

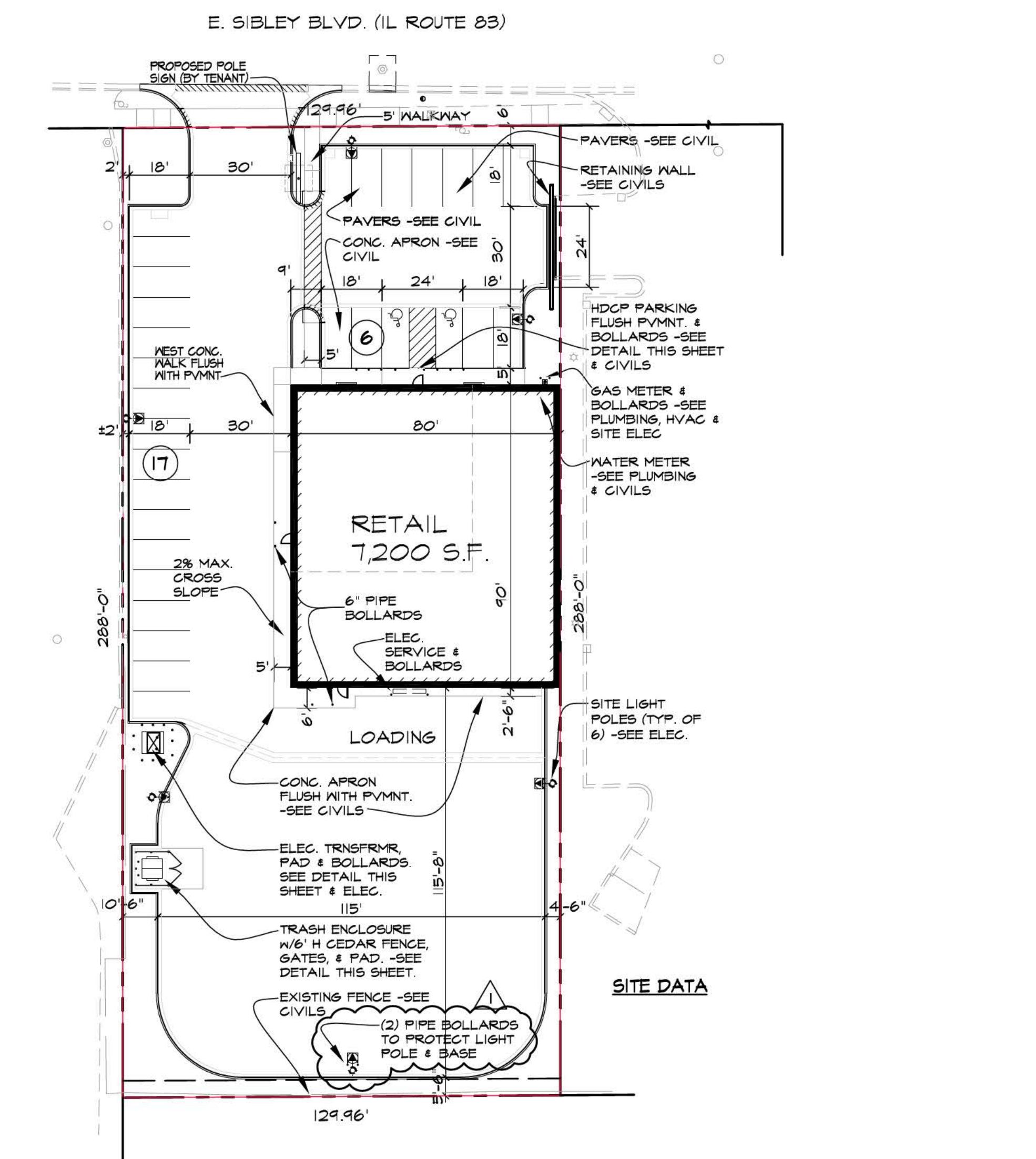


POLE SIGN ELEVATION
SCALE: 1/4" = 1'-0"



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

ZONING DISTRICT: BUSINESS DISTRICT LIMITED RETAIL
GROSS LAND AREA: 31,429 SF.
BLDG. AREA: 7,200 SF.
PARKING REQUIRED: 24 CARS (1 CAR/250)
PARKING AVAILABLE: 30



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

1/13/20
REVISIONS

T-1B DRAWING
NOT FOR CONSTRUCTION
FOR BIDDING
FOR PERMIT
NOT FOR CONTRACTING
NOT FOR CONSTRUCTION

KMA & ASSOCIATES, INC. ARCHITECTS
11121 LAKE COOK ROAD
DEERFIELD, ILLINOIS 60015-5235
(847)945-6869 FAX(847)945-0284+

1/17/20

REVISIONS

THIS DRAWING

NOT FOR COORDINATION

FOR BIDDING

1/1/21

FOR CONTRACTING

1/1/21

NOT FOR CONSTRUCTION

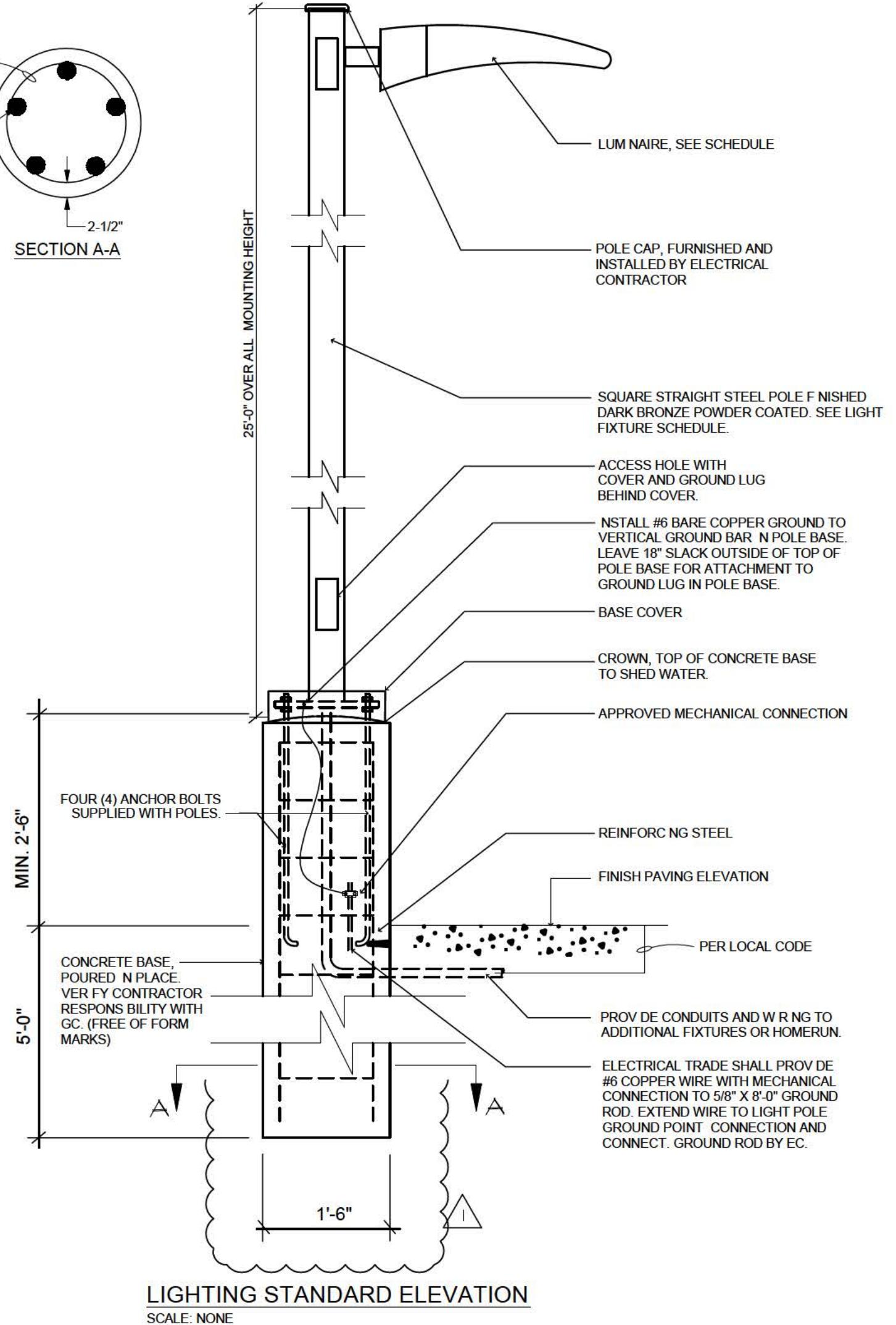
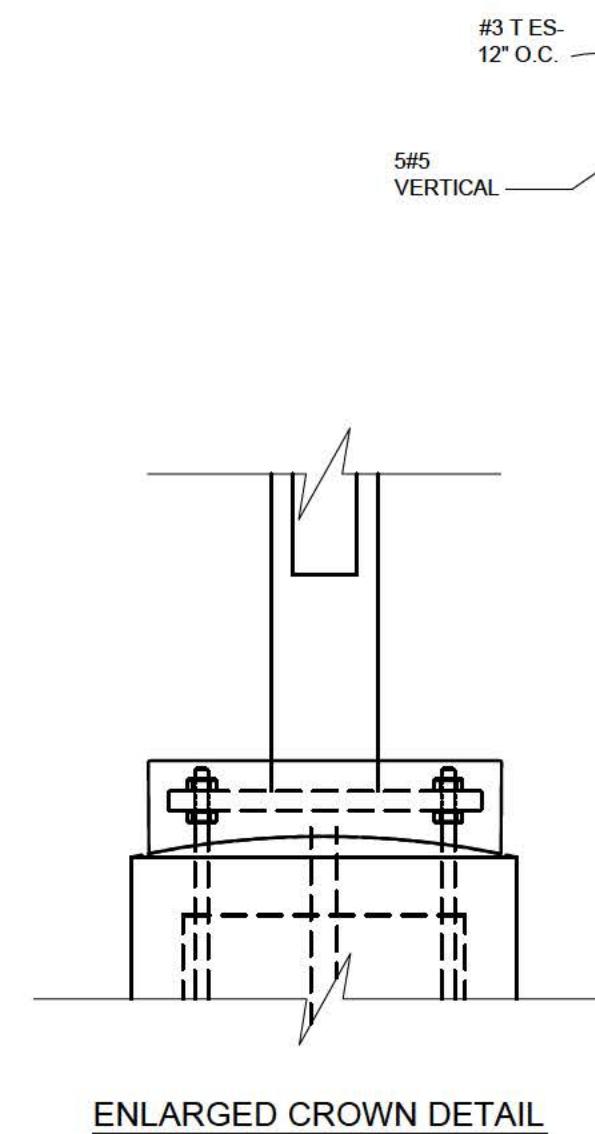
1/1/21

KIVA & ASSOCIATES, INC. ARCHITECTS
1112 LAKE COOK ROAD SUITE F
DEERFIELD, ILLINOIS 60015-5235
(847) 945-6869 FAX (847) 945-0284

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

SHEET TITLE
ELECTRICAL SITE PLAN DETAILS
ELECTRICAL SITE PLAN

1906

EO
1

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 VERIFY ACTUAL LENGTH WITH LOCAL CODE #10 CU. MINIMUM U.N.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.

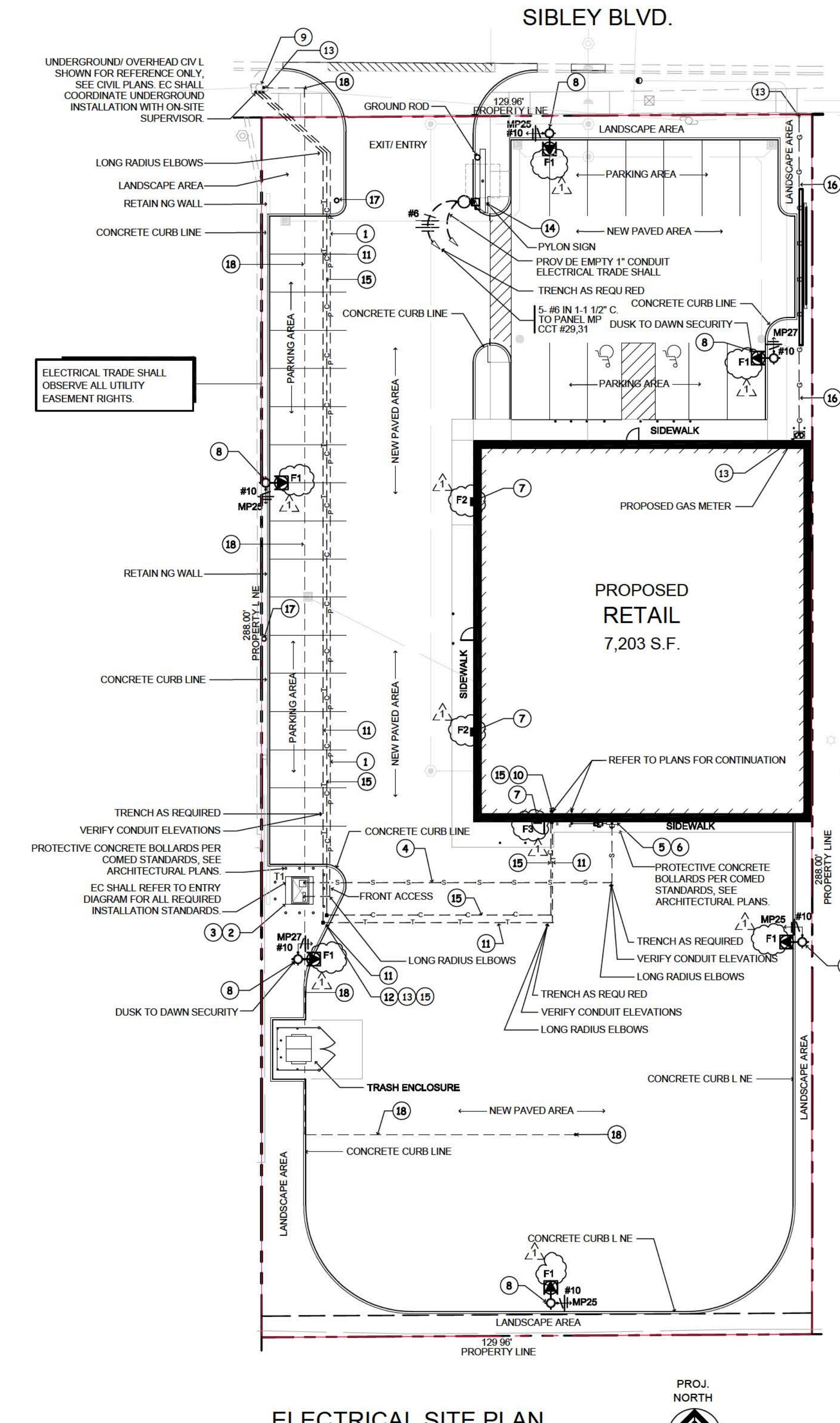
CONSTRUCTION NOTE:
A METAL IDENTIFICATION TAG SHALL BE INSTALLED WHERE THE GROUNDING CONDUCTOR IS CONNECTED TO THE GROUNDING ELECTRODE WITH A APPROVED GROUND STRAP. ALL GROUNDING ELECTRIC CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING, RIGID HEAVY WALL CONDUIT, TYPICAL.

KEYED NOTES:

1. 1/4" 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 STRING. 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 SHALL COORDINATE WITH POWER COMPANY ENGINEER FOR TRANSFORMER ACCESS AND FINAL CONNECTIONS. CONDUIT TO BE INSTALLED 36" BELOW GRADE FINISHED GRADE. CONDUITS TO BE ROUTED IN EASEMENT.
2. PROPOSED LOCATION FOR PAD MOUNTED POWER COMPANY TRANSFORMER T1. PROVIDED APPROVED CONCRETE PAD AND GROUND NUT. VERIFY EXACT LOCATION PER COMPANY REQUIREMENTS. MAY NEED TO ADJUST LOCATION TO EASEMENT. LOCATION TO BE LOCALLY APPROVED. ELECTRICAL SHALL PROVIDE SECONDARY SIDE CONNECTION TO TRANSFORMER. PROVIDED PROPER GROUNDING PER POWER COMPANY REQUIREMENTS. SEE APPROVED TRANSFORMER PAD SPECIFICATIONS PROVIDED BY POWER COMPANY. PROVIDED PROTECTIVE BALLARDS PER COMED STANDARDS.
3. ALL ASSOCIATED CONDUIT BENDS AT TRANSFORMER PAD FOR POWER COMPANY PRIMARY CABLES SHALL BE 4" dia., 90 DEGREES, 36" MINIMUM RADIUS. HOT GALVANIZED STEEL BENDS WITH GROUNDING 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 CIR CABINET 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 PLANS FOR ELEVATIONS. PROVIDED 2-1/2" FULL SIZE GROUND TO PANEL MP23. REFER TO BUILD-OUT PLANS FOR ADDITIONAL INFORMATION.
8. PROVIDED W BOX FOR SITE LIGHTING FIXTURE. COORDINATE EXACT REQUIREMENTS WITH APPROVED VENDOR. EC SHALL FIELD COORDINATE THE INSTALLATION OF THE BASE WITH ALL UNDERGROUND CONDUITS AND ADJUST AS REQUIRED.
9. EXISTING LOCATION OF UTILITY JOINT POLE POINT OF SERVICE. COORDINATE FINAL INSTALLATION WITH LOCAL UTILITIES AND MAINTAIN IN PROPER CLEARANCE. EC SHALL EXTEND NEW CONDUITS TO POLE LOCATION AND STUB UP WITH NYLON PULL STRINGS. PROVIDED SW CUTTING AT GROUND WIRE.
10. PROPOSED LOCATION FOR INTERIOR 24X20' ATT TELEPHONE MAIN TERMINAL D-MARK BOX LOCATION. COORDINATE LOCATION INSTALLATION REQUIREMENTS WITH ATT ENGINEER FOR ADDITIONAL WORK REQUIRED BY ELECTRICAL CONTRACTOR. EC SHALL PROVIDED 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. PROVIDED MINIMUM #12 CU GROUND IN ALL PVC PIPE.
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 BUILDING 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



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			
F1	□ -	LSI INDUSTRIES	MRM-LED-18L-SIL-FT-40-UV-70CRI-BRZ-IL	6	1	LED	150	120	DARK BRONZE	POLE MOUNT	NOTES 1,2,3,4,5
F2	□	LSI INDUSTRIES	XWM-3-LED-03L-40-UE-BRZ	2	1	LED	23	120	DARK BRONZE	WALL MOUNT	NOTES 1,5
F3	□	LSI INDUSTRIES	XWM-FT-LED-06L-40-UE-BRZ	1	1	LED	45	120	DARK BRONZE	WALL MOUNT	NOTES 1,5
Z1											

LUMINAIRE SCHEDULE NOTES:

1. ELEC. SHALL FURNISH AND INSTALL ALL POLES, LUMINAIRES AND LAMPS AS SPECIFIED.
2. ELEC. SHALL FURNISH AND INSTALL ALL CONCRETE POLE BASES AS NOTED.
3. ALL POLES AND LIGHTING HEADS SHALL HAVE A SMOOTH FINISH.
4. ELEC. 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 W/ARM 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.

Proposed Improvements for PROPOSED RETAIL DEVELOPMENT

STANDARD SYMBOLS

EXISTING	PROPOSED
—>— >—	STORM SEWER
—>— >—	SANITARY SEWER
—>— >—	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
795.20 790.25	SUMMIT / LOW POINT
—>—	RIM ELEVATION INVERT ELEVATION
—>—	DITCH OR SWALE
—>—	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
—>—	ELECTRICAL EQUIPMENT
—>—	TELEPHONE EQUIPMENT
—>—	CHAIN-LINK FENCE
—>—	SPOT ELEVATION
—>—	BRUSH/TREE LINE
—>—	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)
—>—	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)
—>—	SILT FENCE
—>—	RETAINING WALL
—>—	WETLAND

ABBREVIATIONS

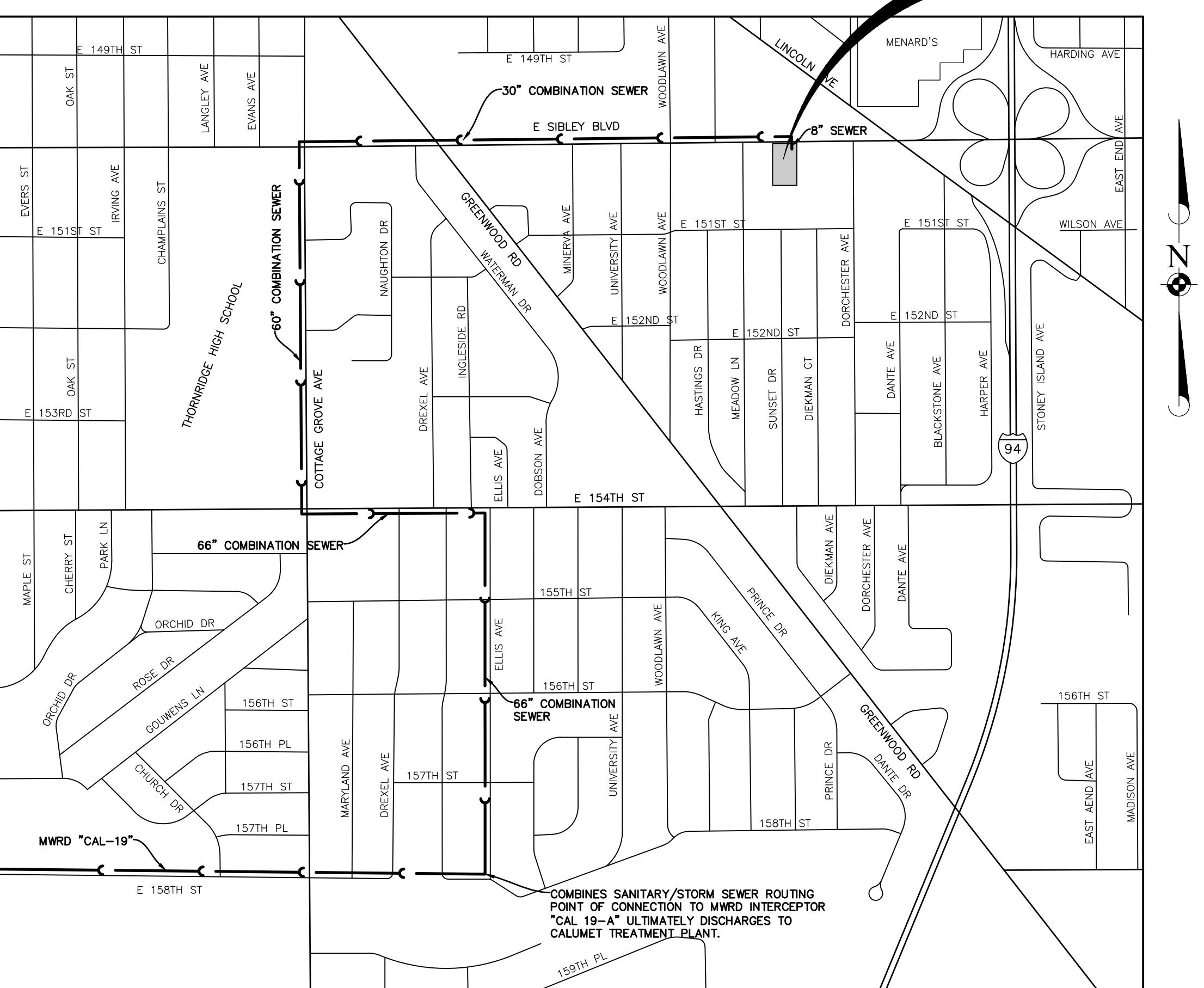
ADJ	ADJUST	F/L	FLOW LINE	R.O.W.	RIGHT-OF-WAY
AGG.	AGGREGATE	FM	FORCE MAIN	RCP	REINFORCED CONCRETE
ARCH	ARCHITECT	G	GROUND	REM	REMOVAL
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	G/F	GRADE AT FOUNDATION	REV	REVERSE
B-B	BACK TO BACK	GW	GUY WIRE	RR	RAILROAD
B/C	BACK OF CURB	HDWL	HEADWALL	RT	RIGHT
B/P	BOTTOM OF 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
¢	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 Edlin*, 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.

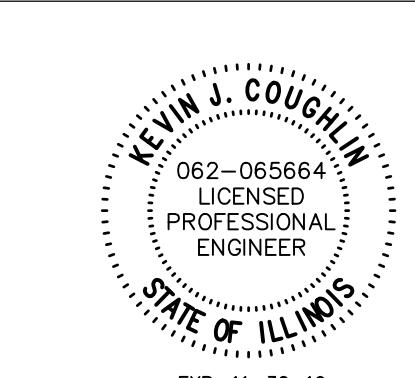
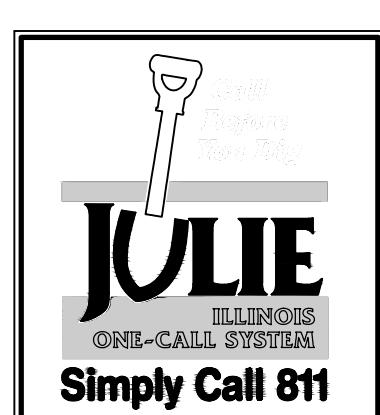
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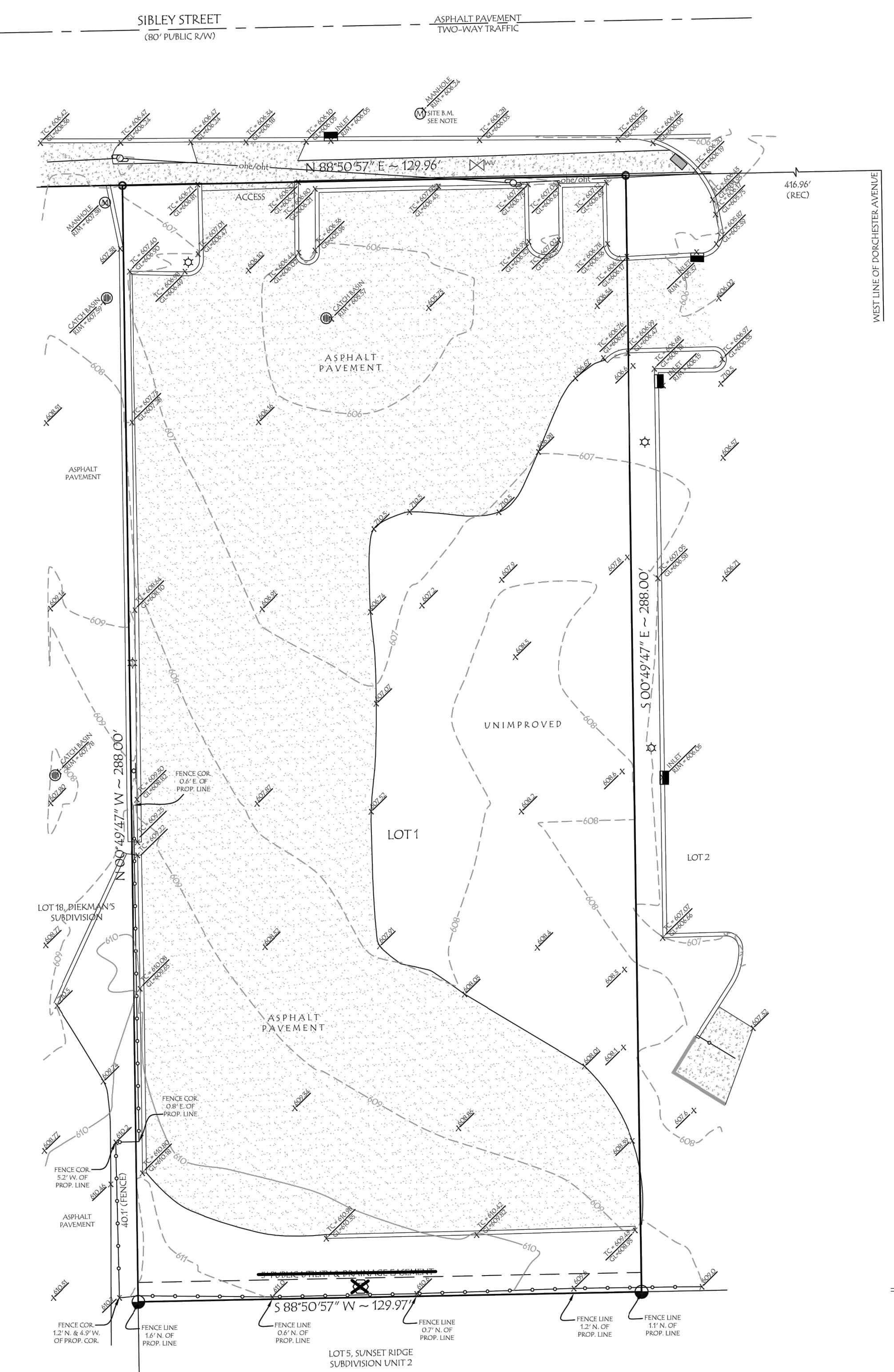
- 1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 9, 2019. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF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

BENCHMARKS:

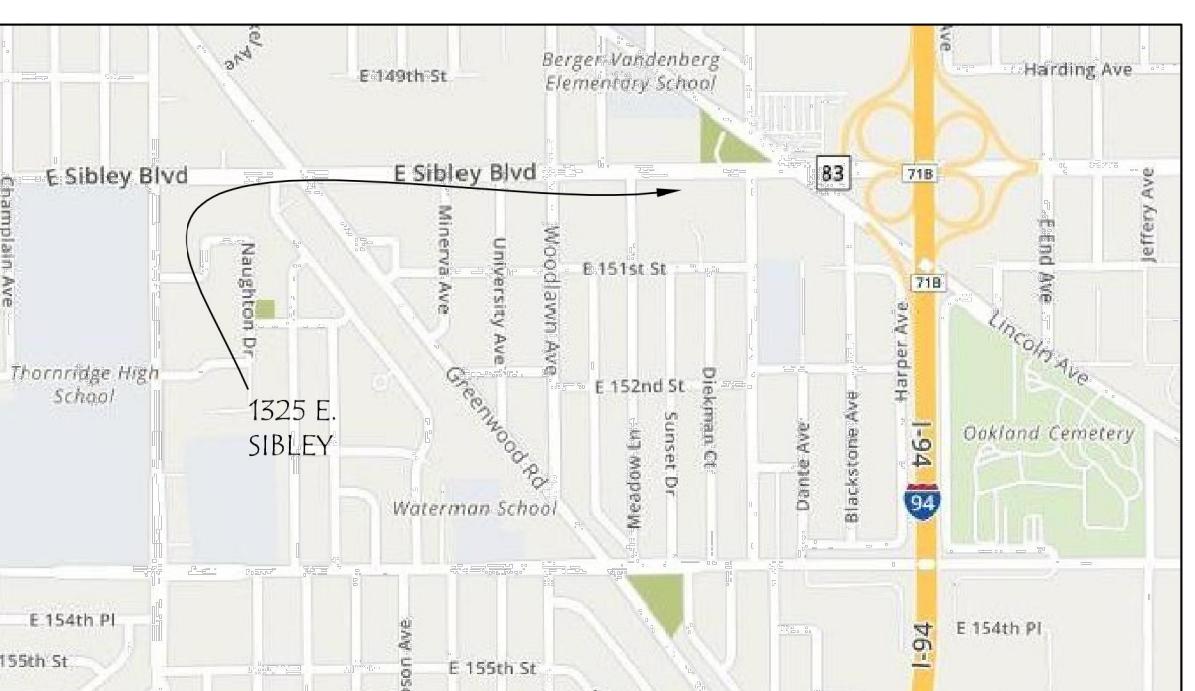
SITE BENCHMARK IS RIM OF MANHOLE IN SIBLEY BOULEVARD AT APPROXIMATE MIDPOINT OF LOT 2. ELEVATION = 606.34

<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 ERIR STREET CHICAGO, IL. 60611 (773) 266-3538





Graphic Scale



VICINITY MAP
no scale

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

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. Ross & Associates, order no. 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
<http://www.dolton.il.us/department/building/>

FLOOD 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:

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. 19CSCO062421P 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.

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.

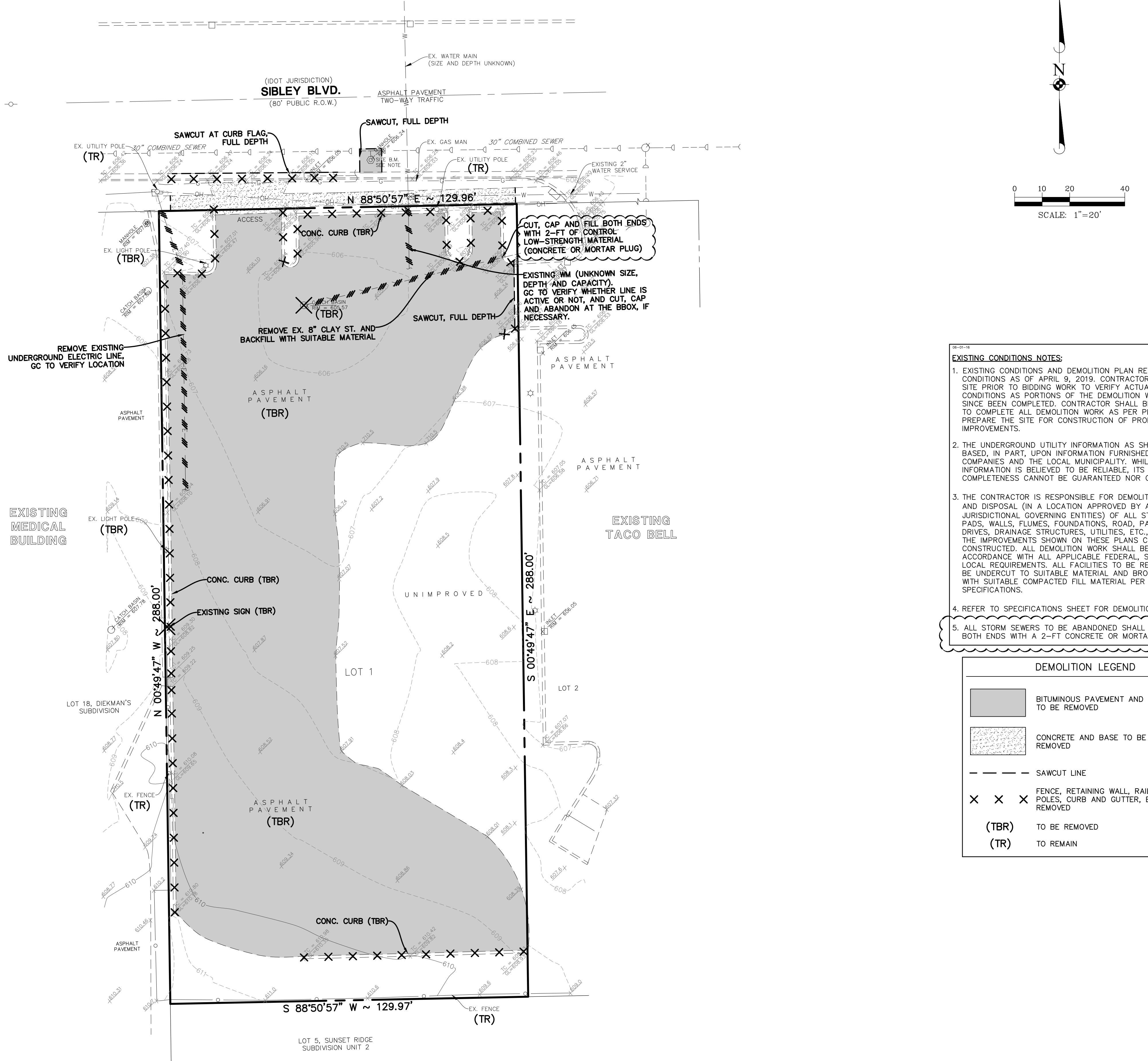
For building restrictions and/or easements refer to your deed, contract, title policy, and/or zoning regulations. This plat is valid only if it contains the original signature and seal of the surveyor. If you have any questions regarding this plat do not hesitate to contact us.

SHEET 1 OF 1		Denzin Soltanzadeh, LLC 190 S. LaSalle Street Suite 2160 Chicago, Illinois	ALTANSPS LAND TITLE SURVEY 1323 East Sibley Boulevard Dolton, Illinois	ZARKO SEKEREZ & ASSOCIATES, INC. Land Surveyors & Land Planners
				116 WEST CLARK STREET CROWN POINT, INDIANA 46307 ILL. PHONE: (312) 726-1515 ILL. FAX: (312) 226-9506 IND. PHONE: (219) 663-5344 IND. FAX: (219) 663-7282 WWW.SEKEREZ.COM
		DRAWN BY: PS	CHECKED BY: RWD	DATE: April 25, 2019
				ORDER NO.: 11060

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

2 OF **13**
AETDOILO1

ANSWER



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

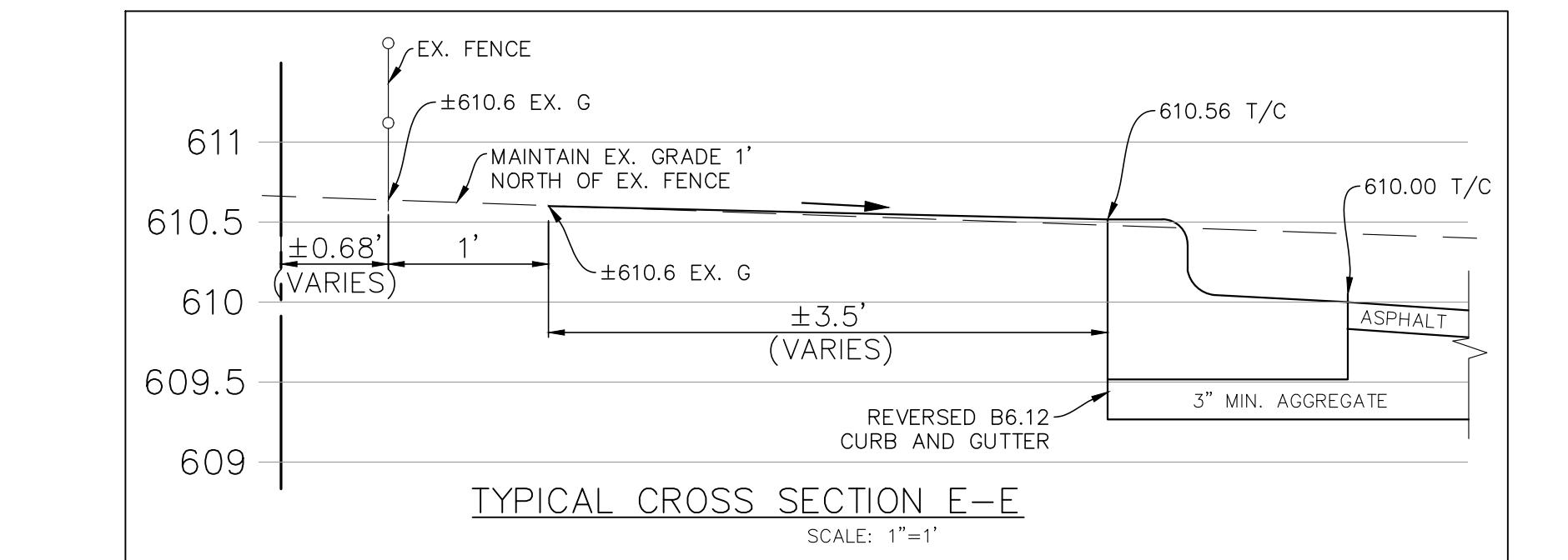
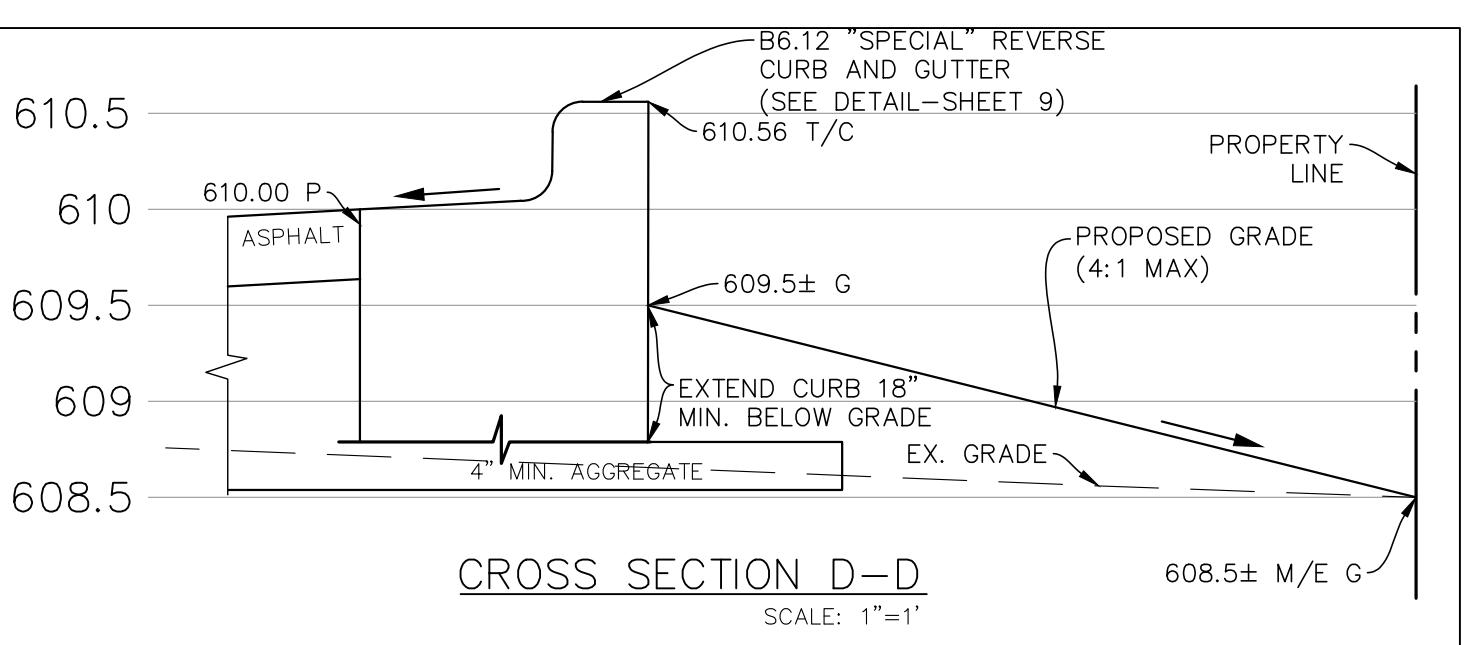
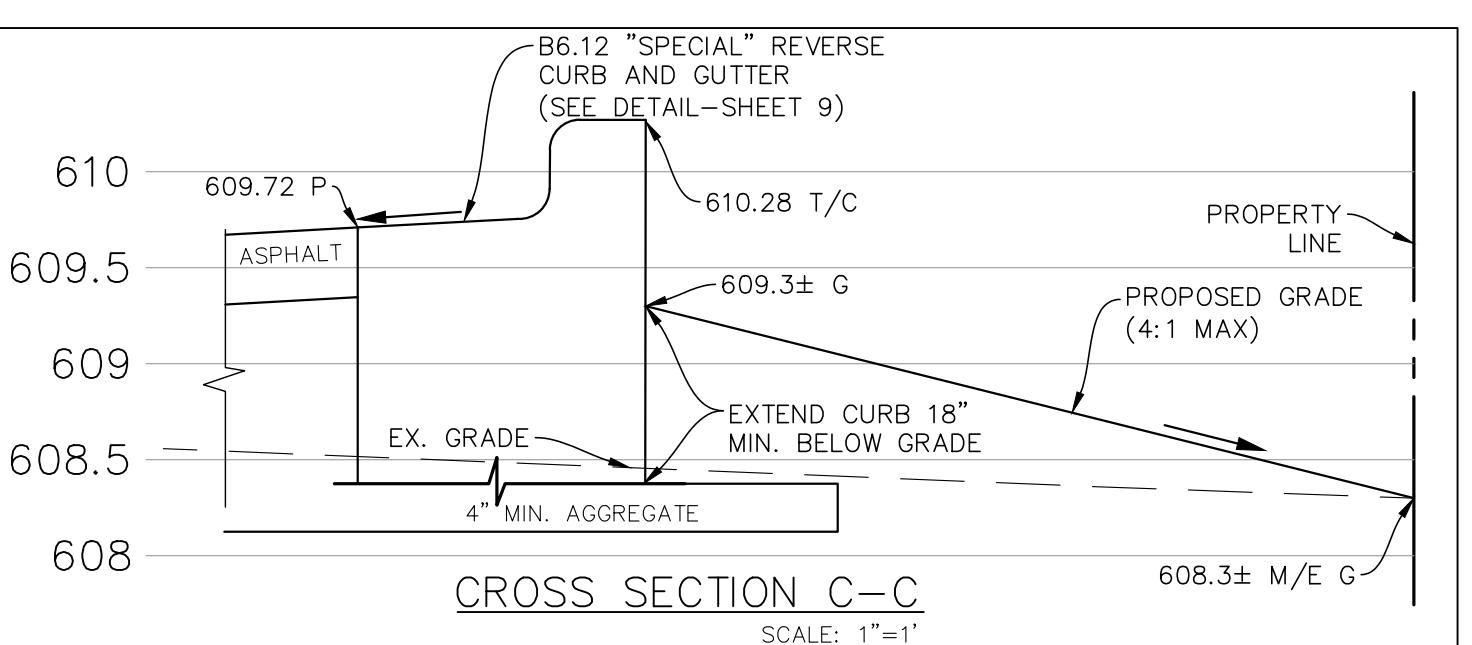
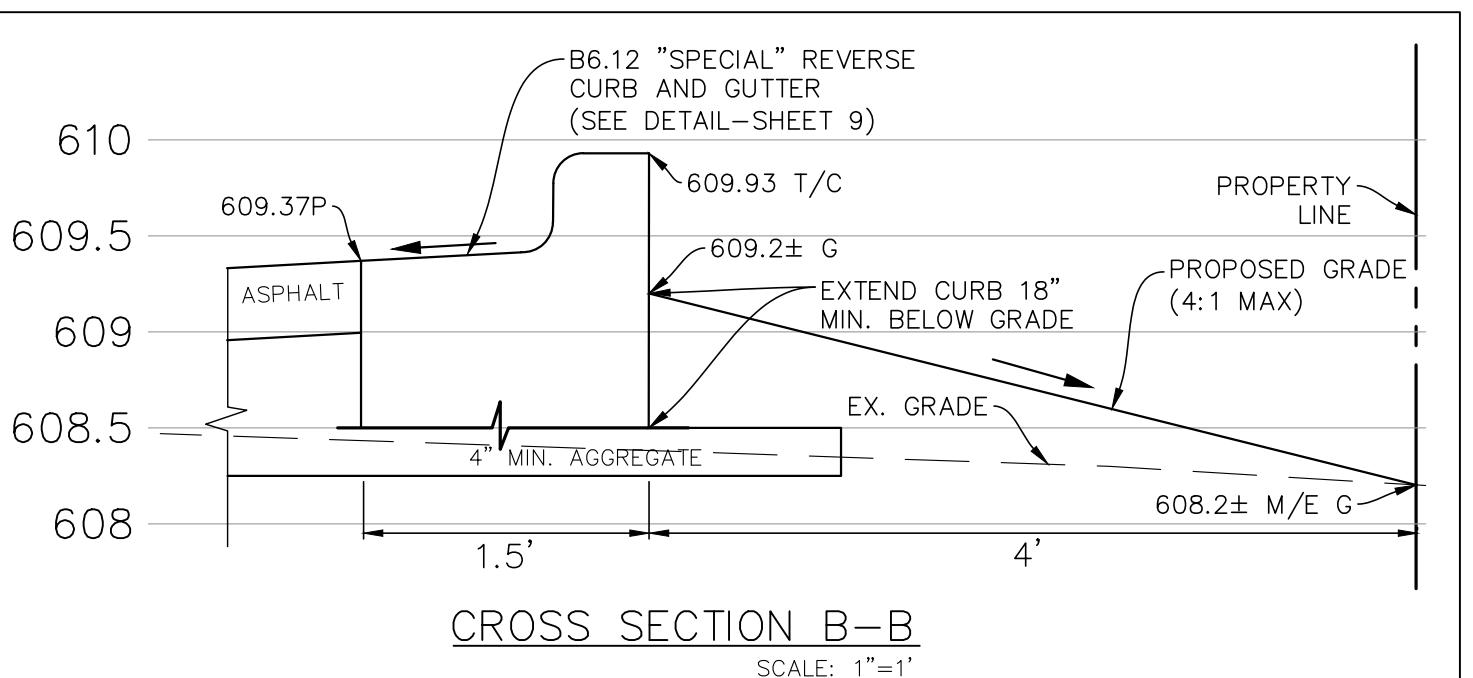
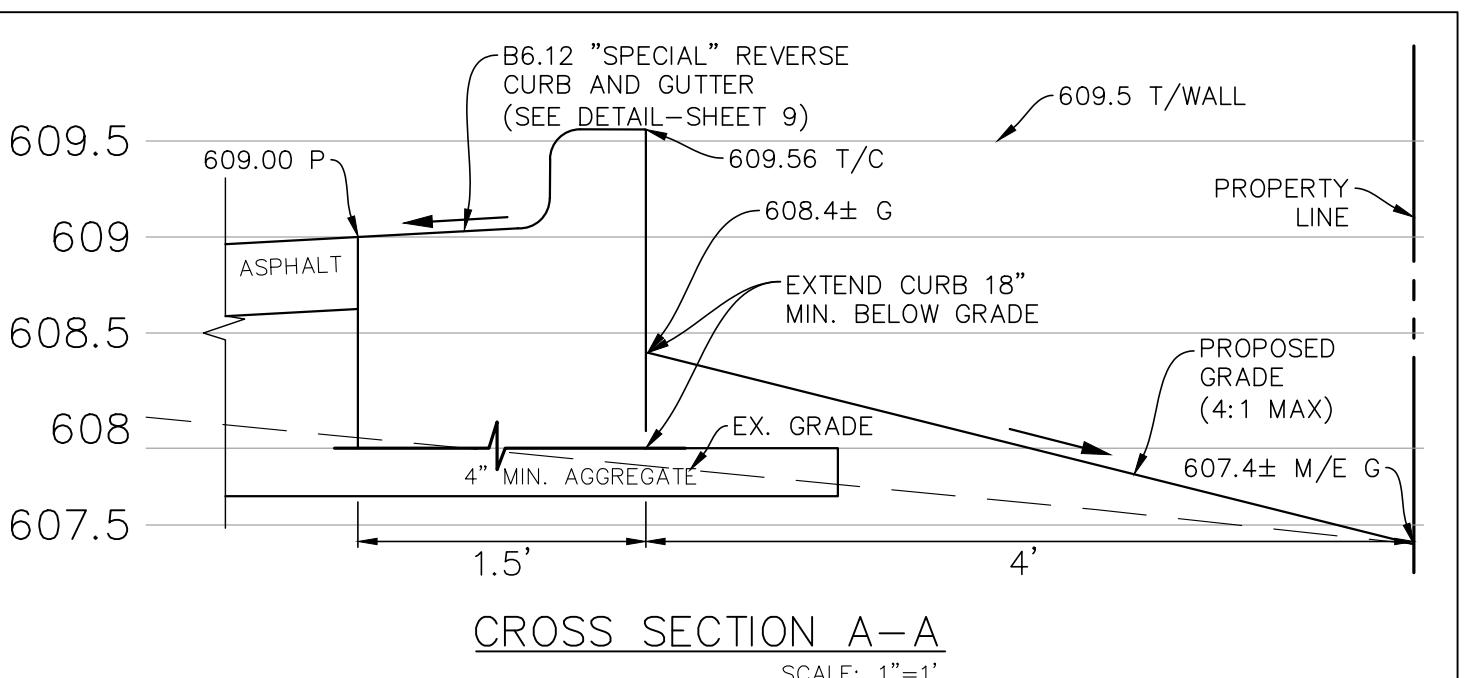
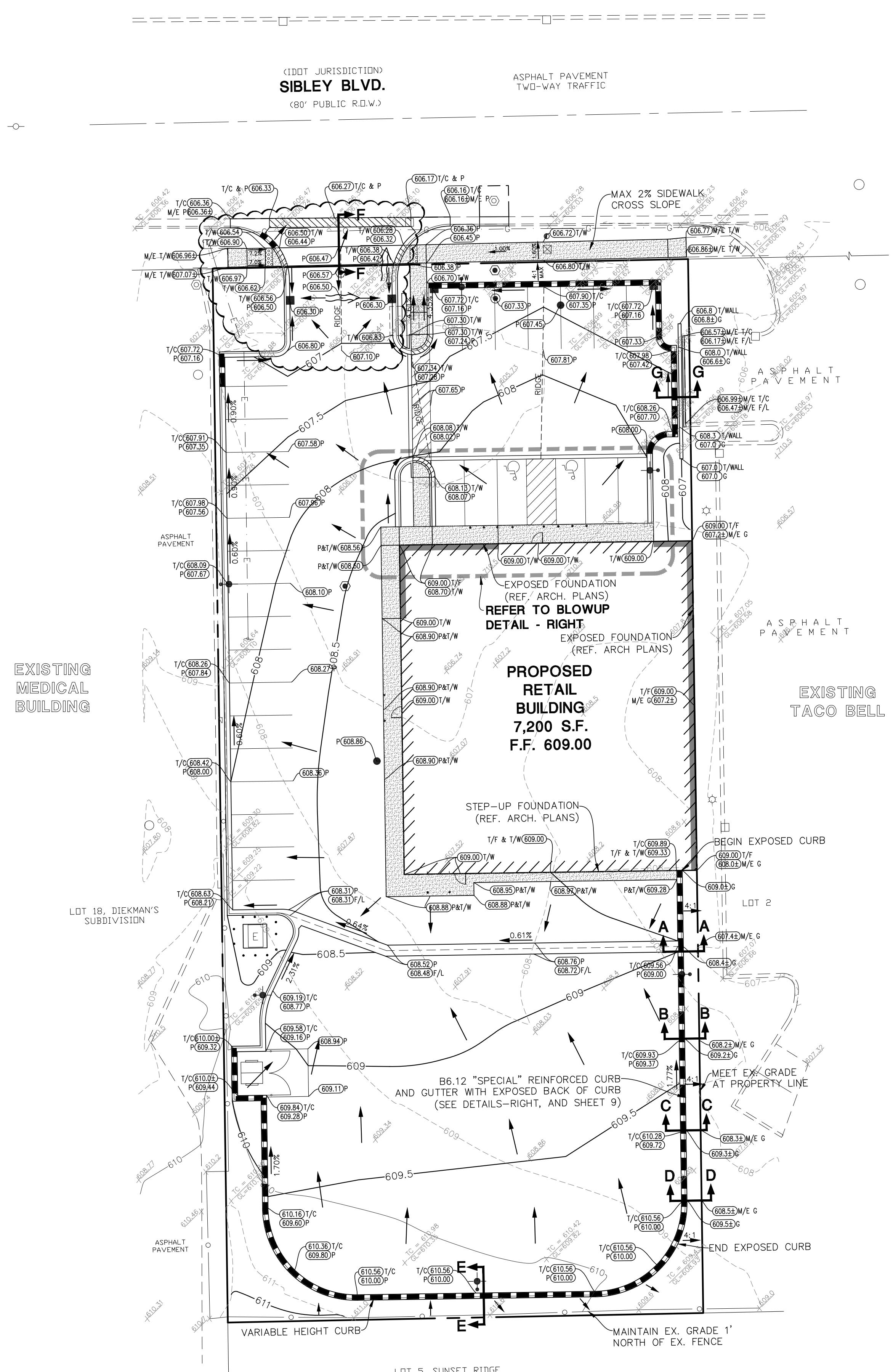
EXISTING CONDITIONS AND DEMOLITION PLAN

EXISTING CONDITIONS AND DEMOLITION PLAN

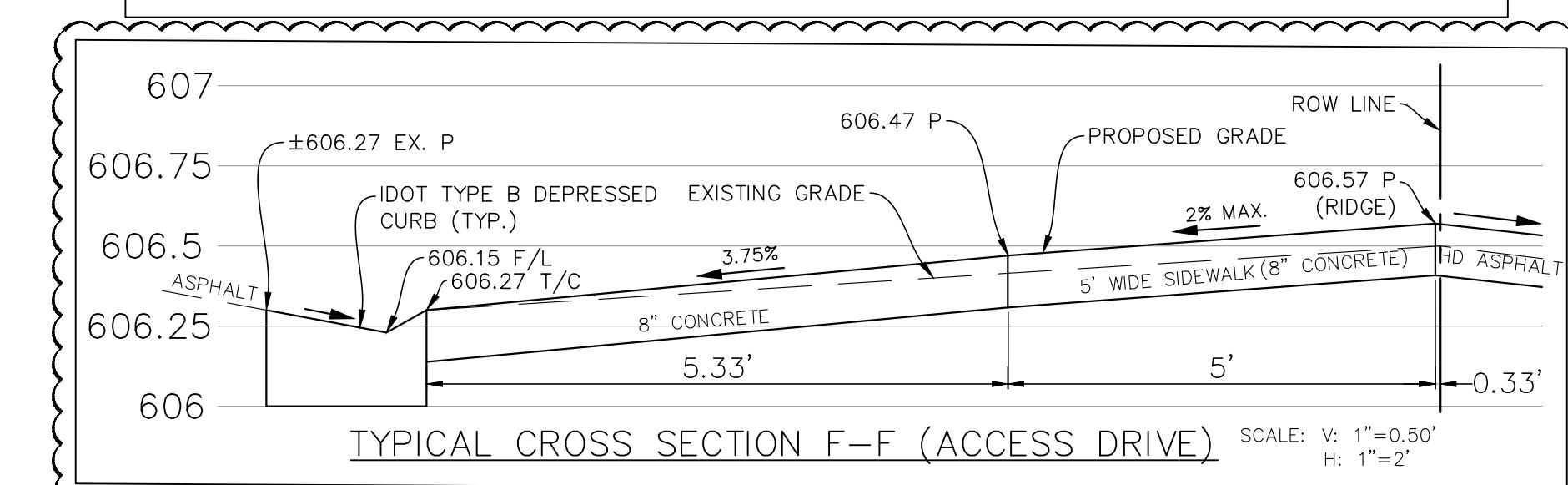
Manhard

One Dovetoe Point, Suite 290, Lincolnshire, IL 60068 ph:847-634-5550 fx:847-634-0095 manhardt.com
**Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners**

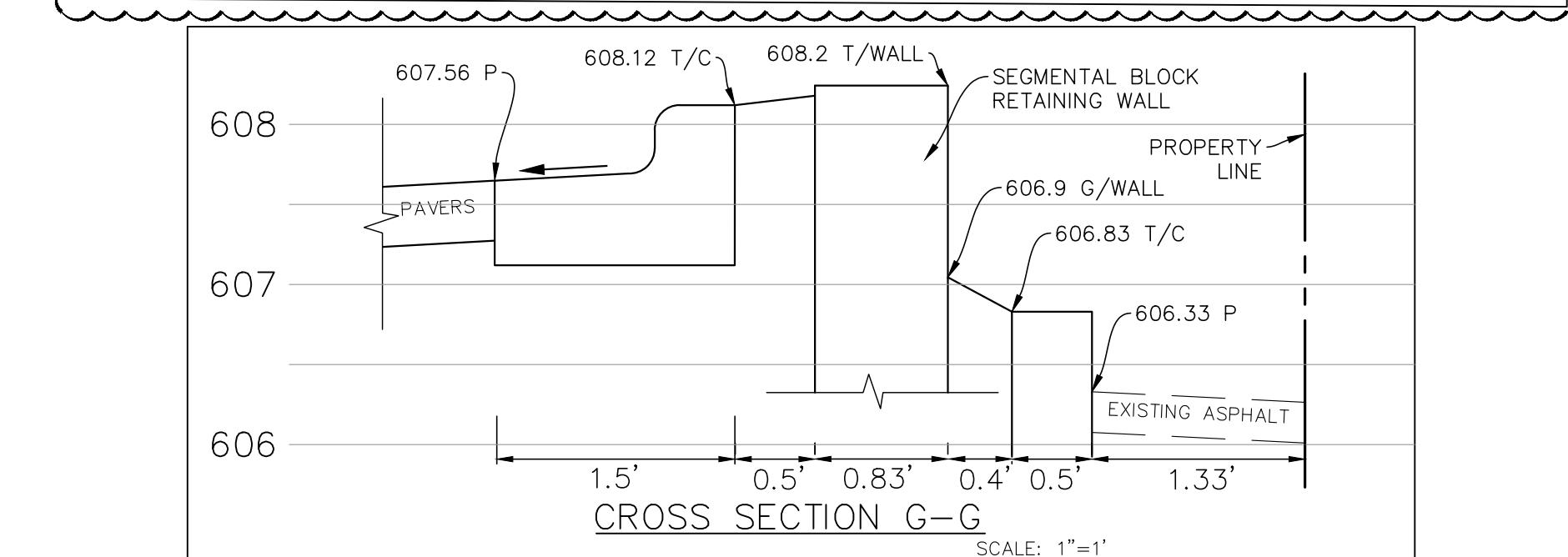
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	10-30-19 REVISED PER INTERNAL REVIEW			
	10-15-19 REVISED PER VILLAGE REVIEW			



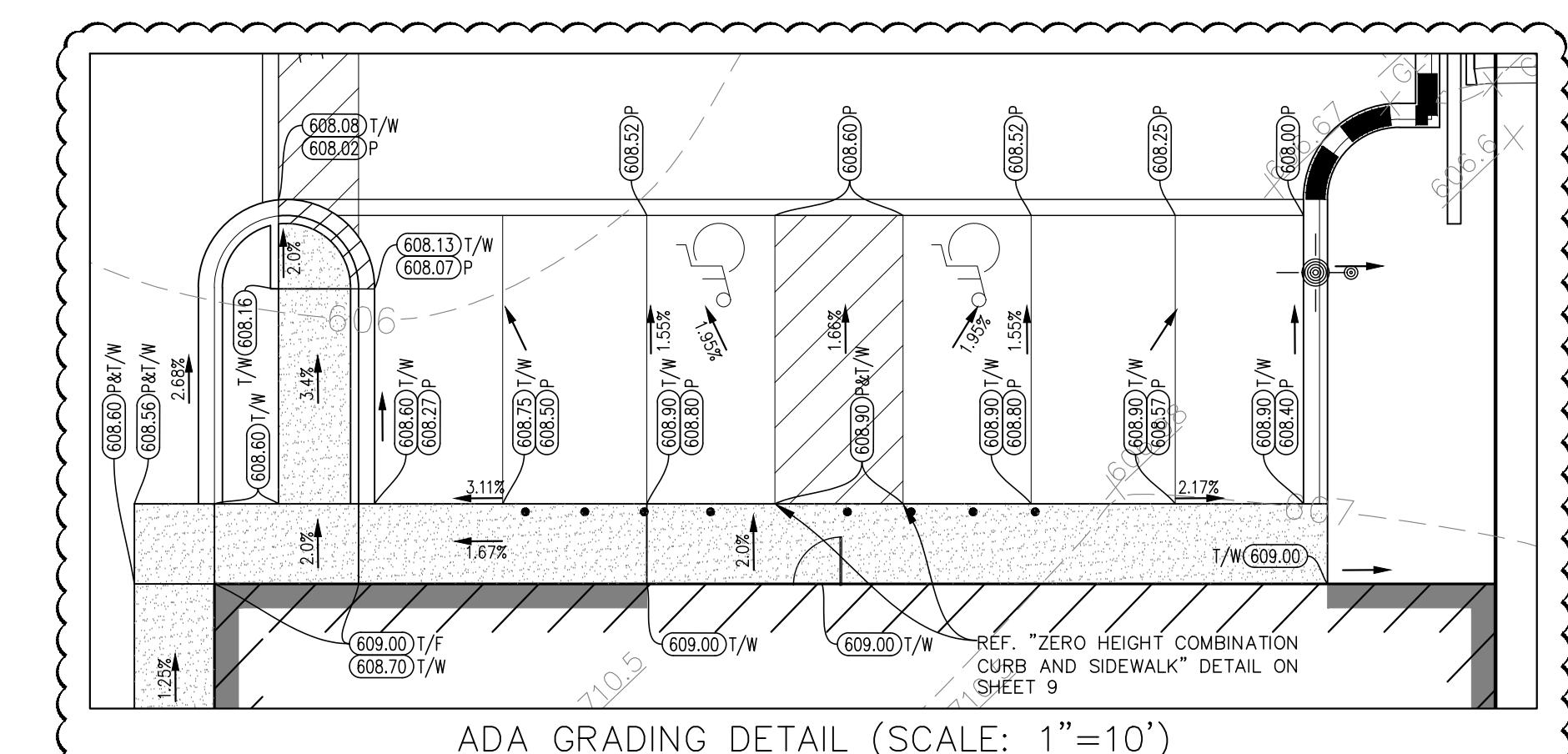
TYPICAL CROSS SECTION E-E



TYPICAL CROSS SECTION E-E (ACCESS DRILLING)



CROSS SECTION G



ADA GRADING DETAIL (SCALE: 1"=10')

06-01-16

GRADING NOTES:

1. RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
2. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
3. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
4. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
5. 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.
6. 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.
7. 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 IN THE FIELD. THE 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.
8. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
9. 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.
10. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY ZARKO SEKEREZ AND ASSOCIATES, INC. ON APRIL 9, 2019. CONTRACTOR SHALL FIELD 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.
11. TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

GRADING PLAN LEGEND	
764	PROPOSED 1 FOOT CONTOURS
792.8 G	PROPOSED SPOT ELEVATION
F.F.	PROPOSED FINISHED FLOOR ELEVATION
G/F	PROPOSED GRADE AT FOUNDATION
P	PROPOSED PAVEMENT ELEVATION
T/C	PROPOSED TOP OF CURB
T/W	PROPOSED TOP OF WALK
T/WALL	PROPOSED TOP OF WALL
M/E	MEET EXISTING
G	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
RIDGE	PROPOSED RIDGE LINE
0.5'	PROPOSED DEPTH OF PONDING
▼	RETAINING WALL
L	PROPOSED SWALE LOW POINT
S	PROPOSED SWALE SUMMIT

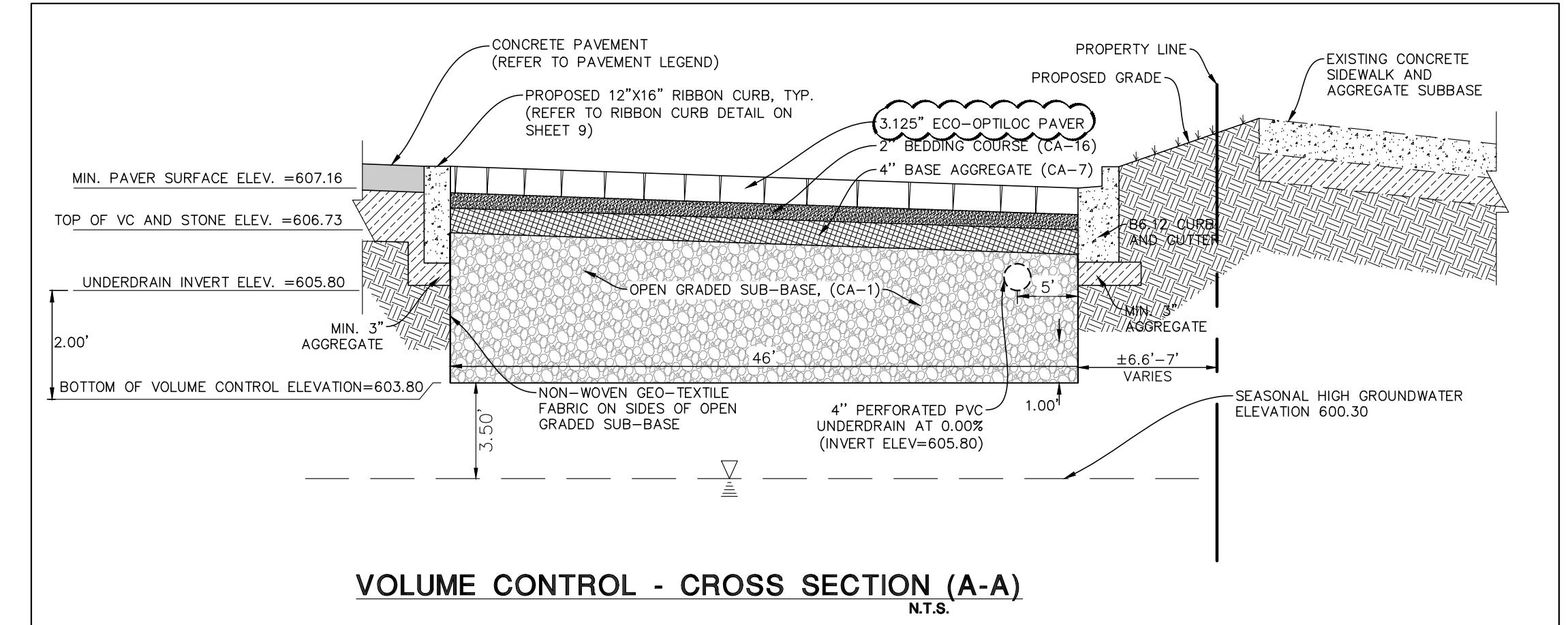
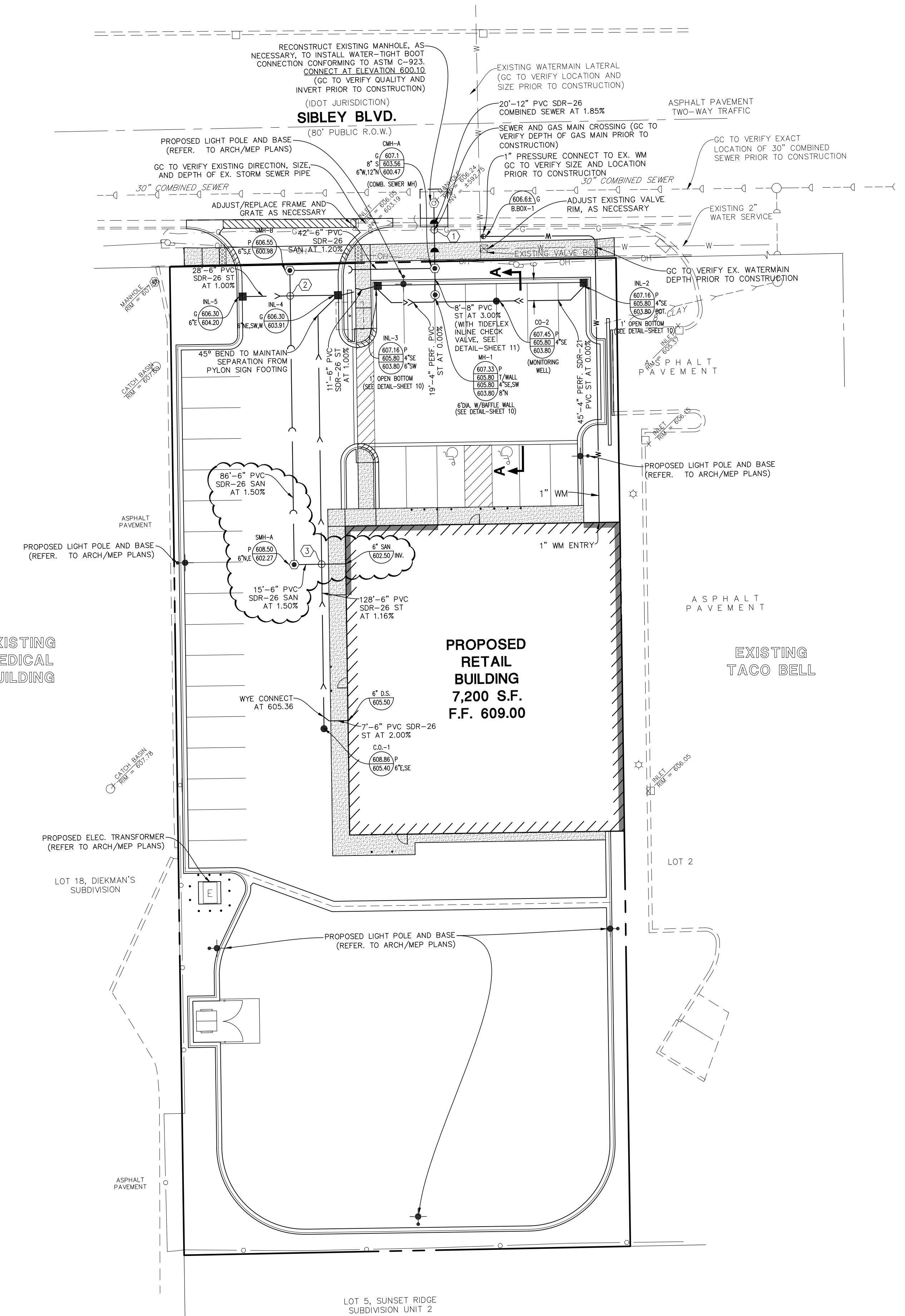
DRAWN BY
REVISIONS
DATE
PER ARCHITECTURE
PER MECHANICAL
PER ELECTRICAL
PER PLANTING
PER VILLAGE REVIEW
JRC
JRC
JRC
JRC

M manhard CONSULTING LTD.
One Devon Park, Box 280, Lisle, IL 60530 • 630-738-1005
One Rutherford Square • Water & Wastewater Engineers • Landscaping Architects • Engineers
Contractors • Environmental Consultants • Environmental Managers

PROPOSED RETAIL DEVELOPMENT

VILLAGE OF DOLTON, ILLINOIS

UTILITY PLAN

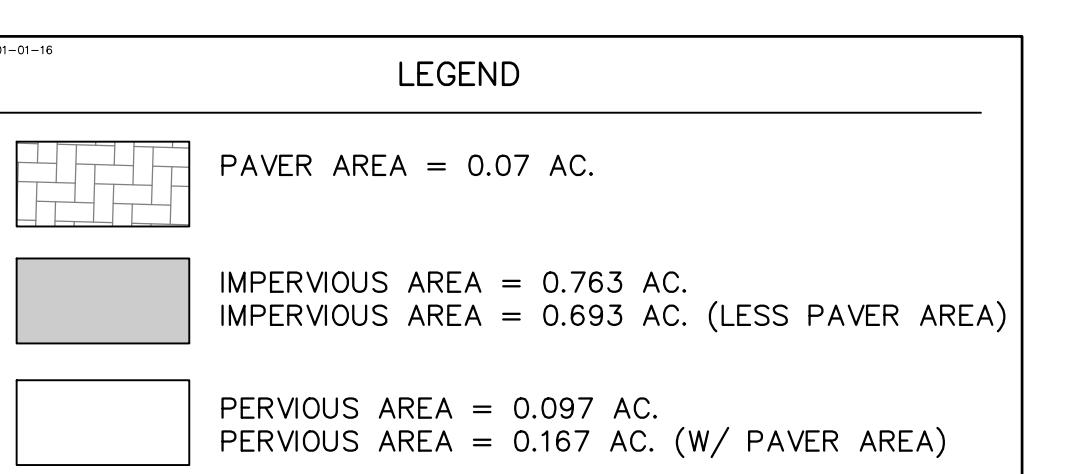
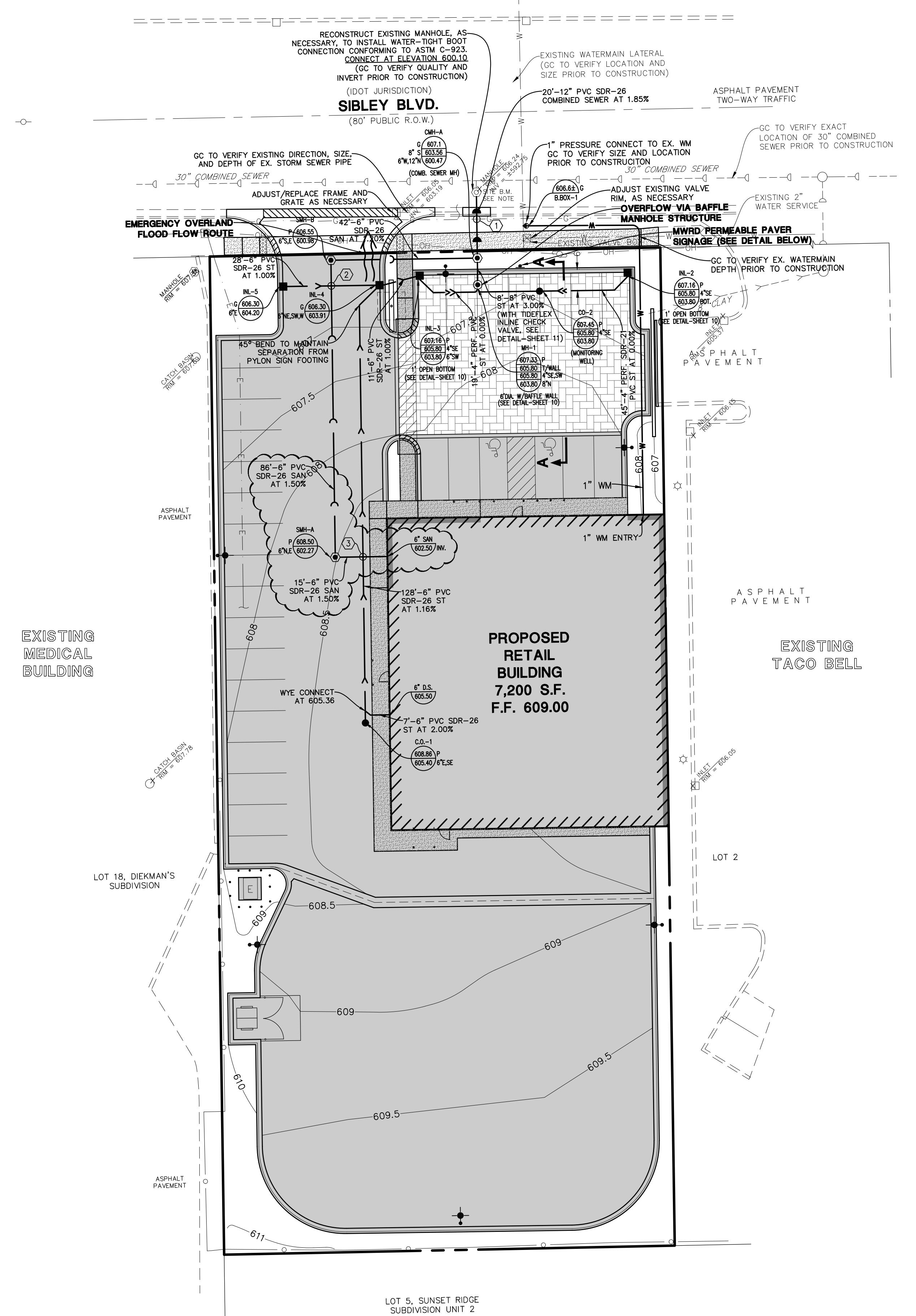


VOLUME CONTROL - CROSS SECTION (A-A)
N.T.S.

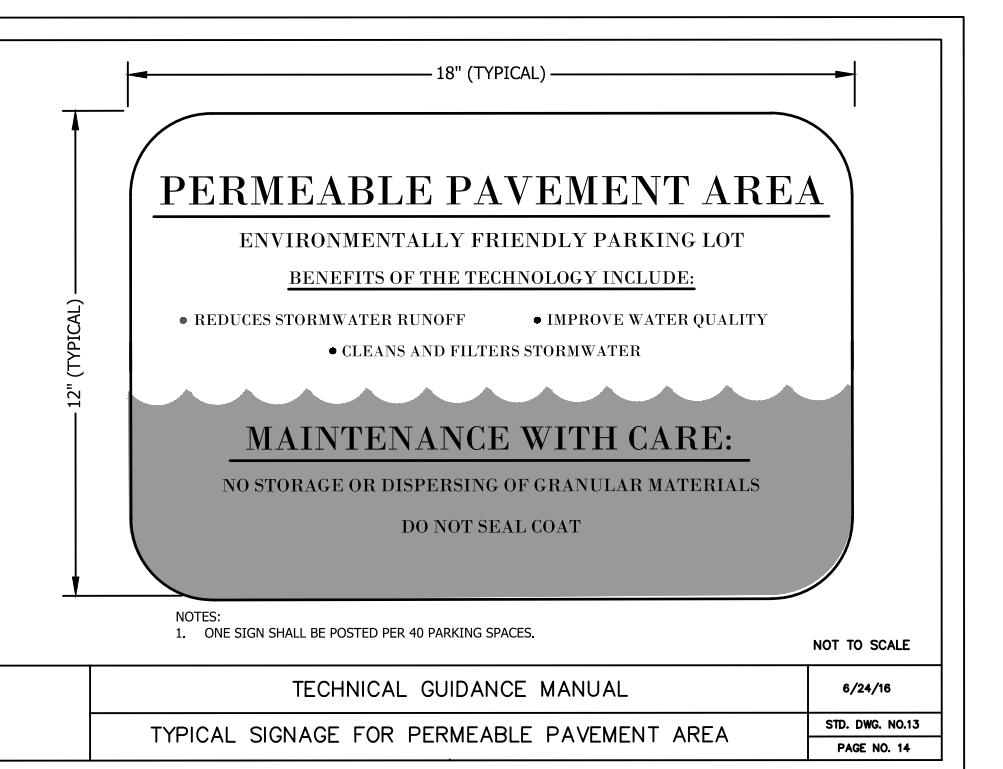
- 06-01-16
UTILITY NOTES:
- ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
 - BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY 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.
 - THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-872-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
 - 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.
 - CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRIP 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.
 - LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
 - THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
 - CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
 - 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.
 - ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
 - ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
 - 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.
 - 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.
 - ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
 - PROVIDE CONCRETE COLLAR FOR ALL DRAINAGE STRUCTURES IN PAVEMENT, NOT ADJACENT TO CURB. SEE CONCRETE COLLAR DETAIL ON DETAIL SHEET.
 - CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
 - EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
 - SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
 - ALL D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.

STORM MANHOLE TABLE			
MANHOLE LABEL	SIZE (IN.)	TYPE	FRAME AND GRATE
MH-1	72"	PRECAST CONCRETE OUTLET CONTROL STRUCTURE WITH BAFFLE WALL (PER DETAIL - SHEET 10)	(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

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



VOLUME CONTROL REQUIREMENT	
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 CF

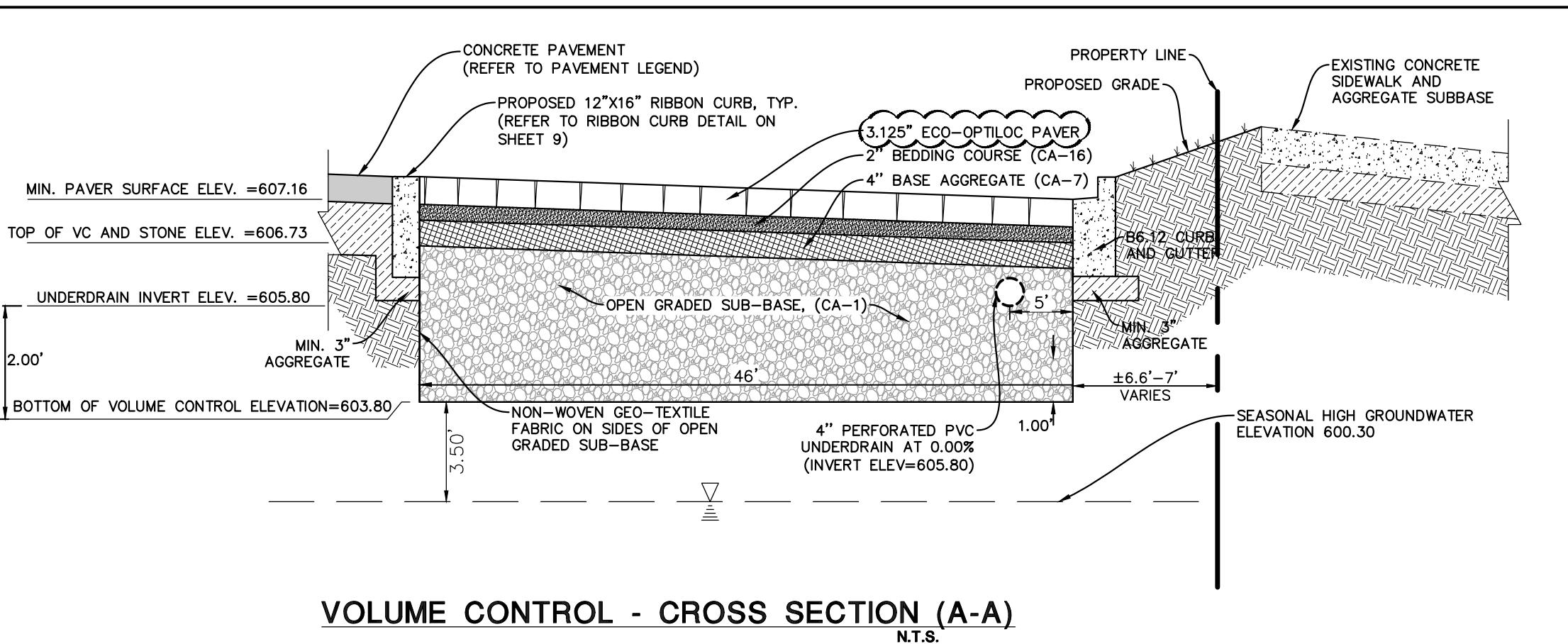


MAINTENANCE SUMMARY

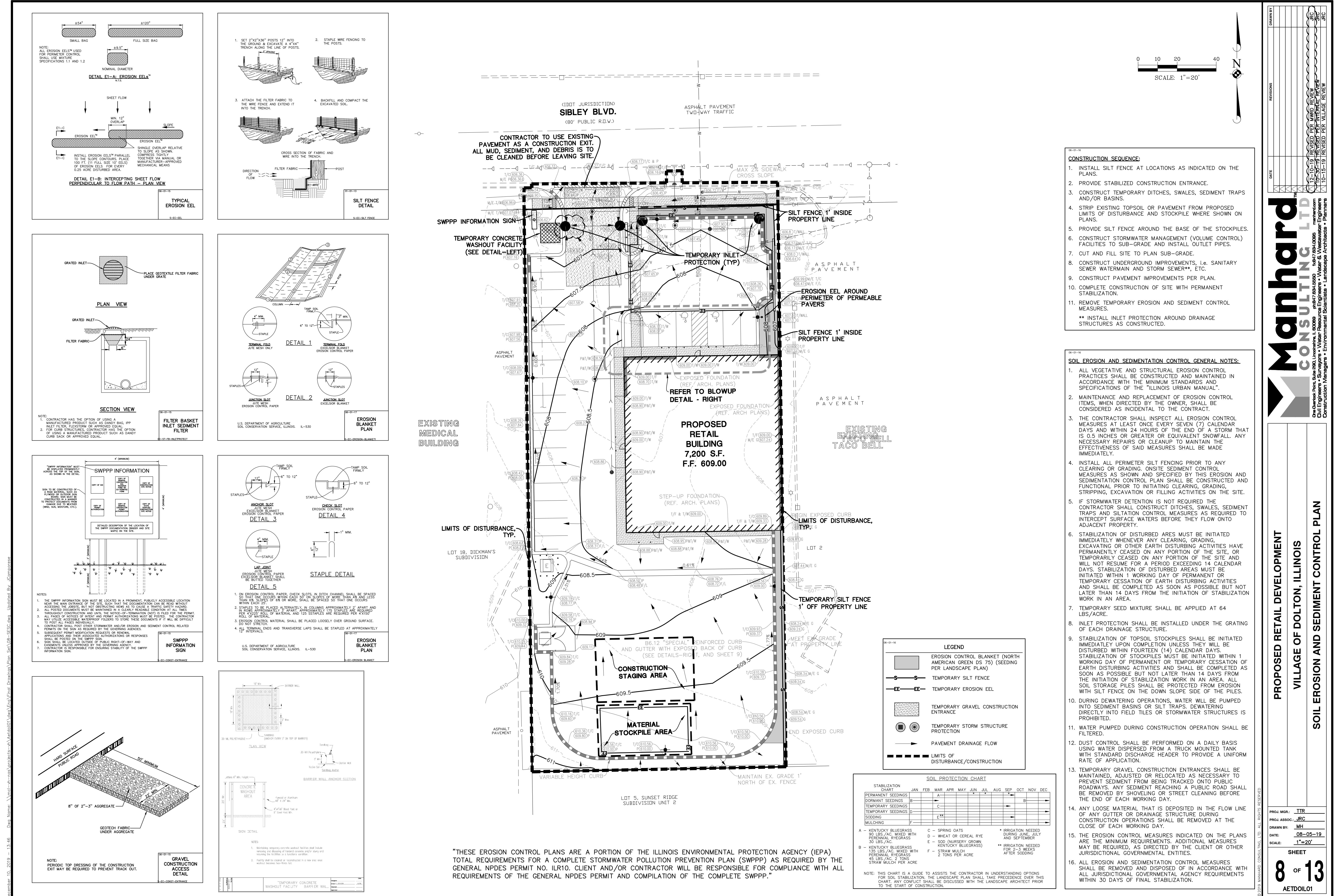
PROPOSED RETAIL DEVELOPMENT

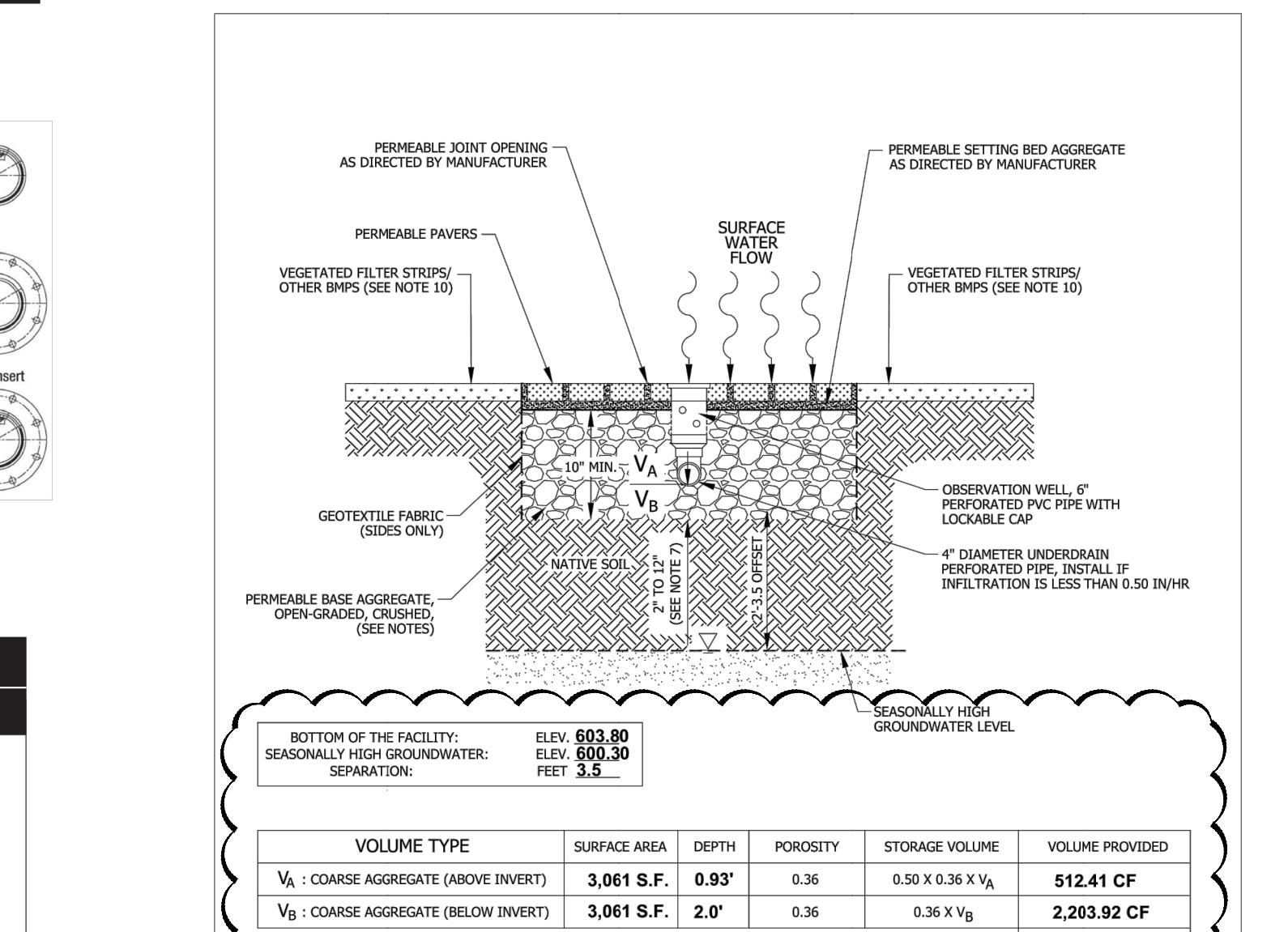
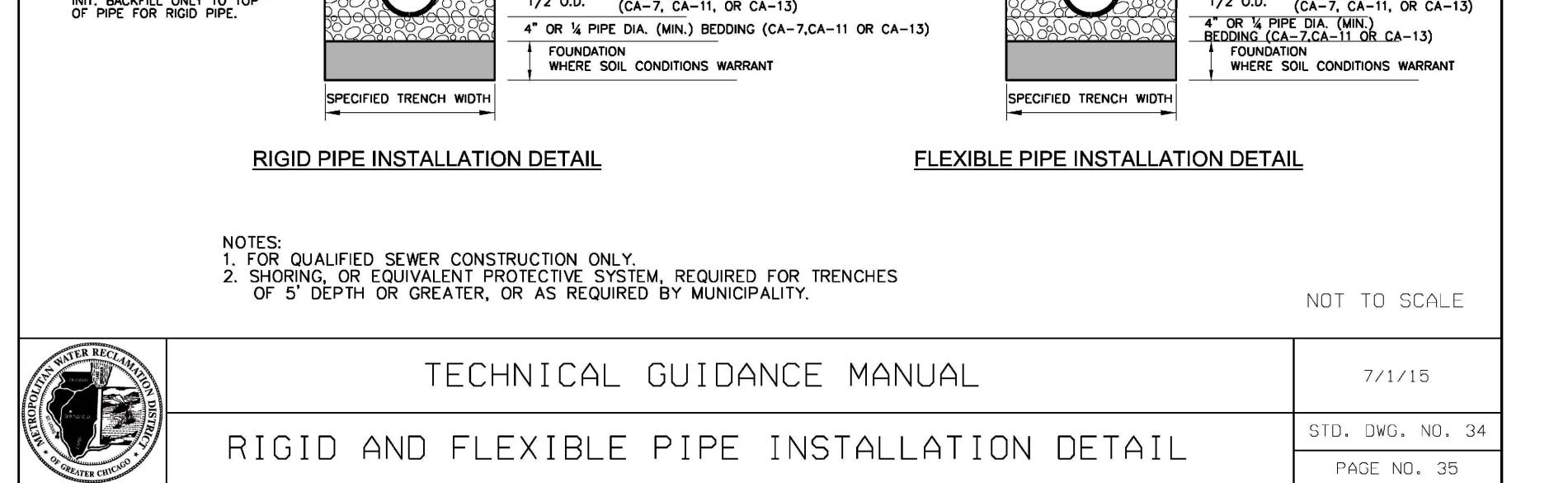
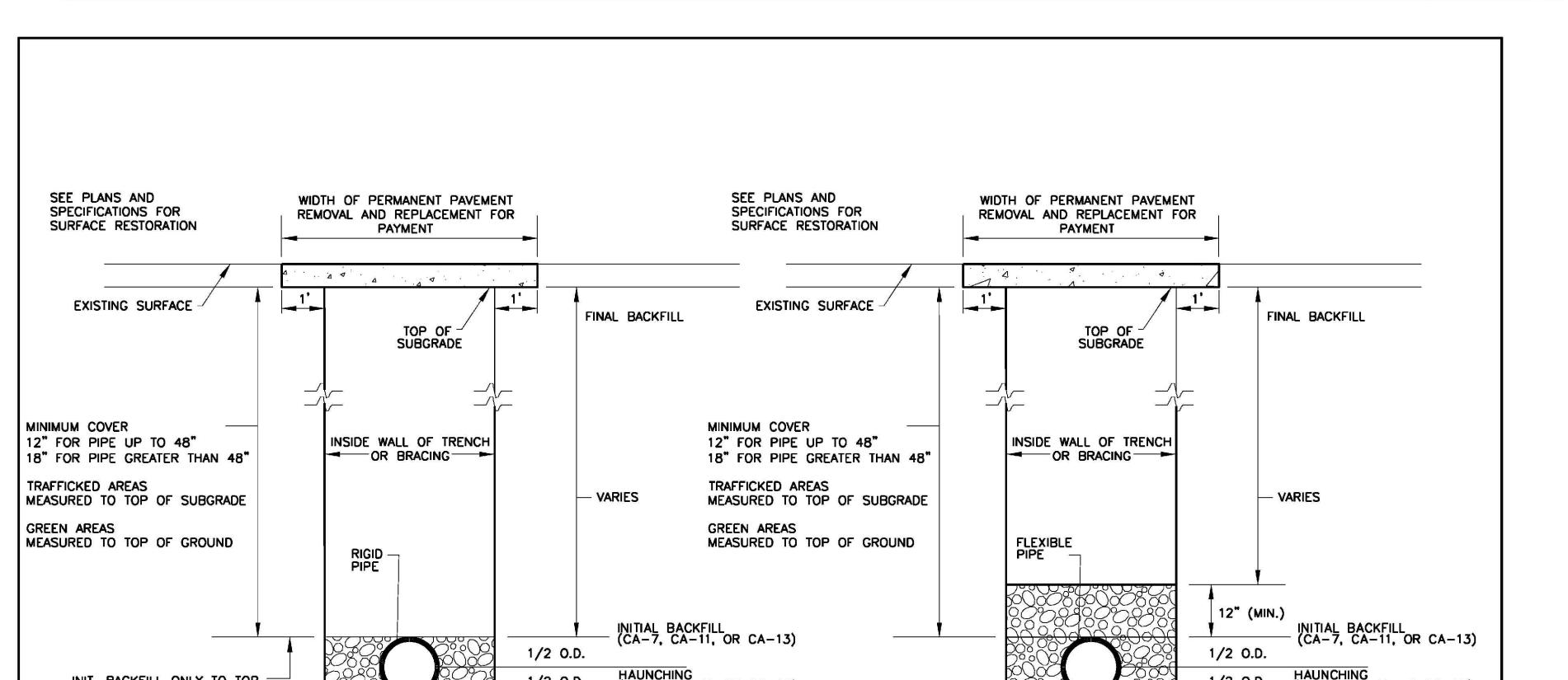
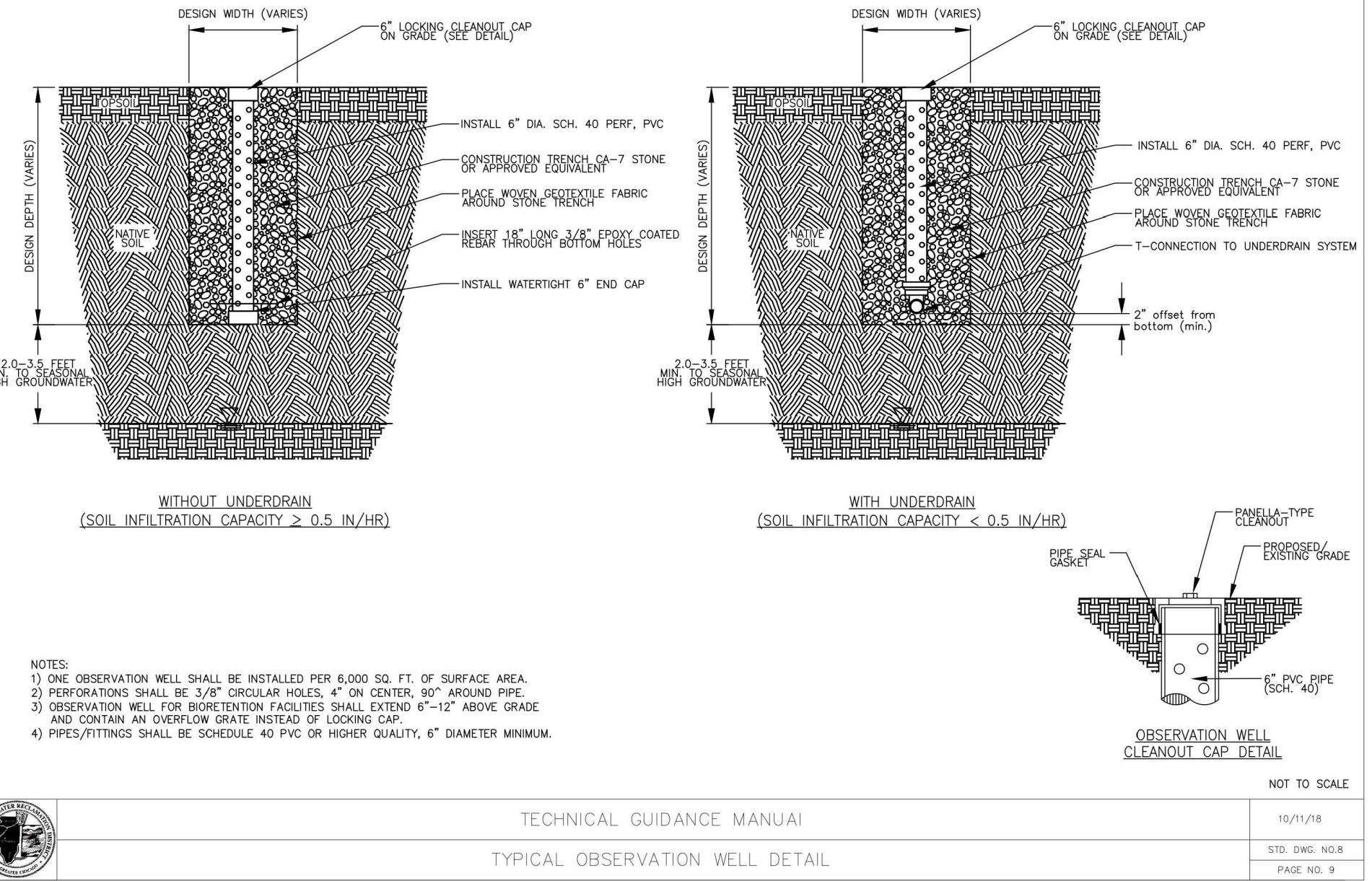
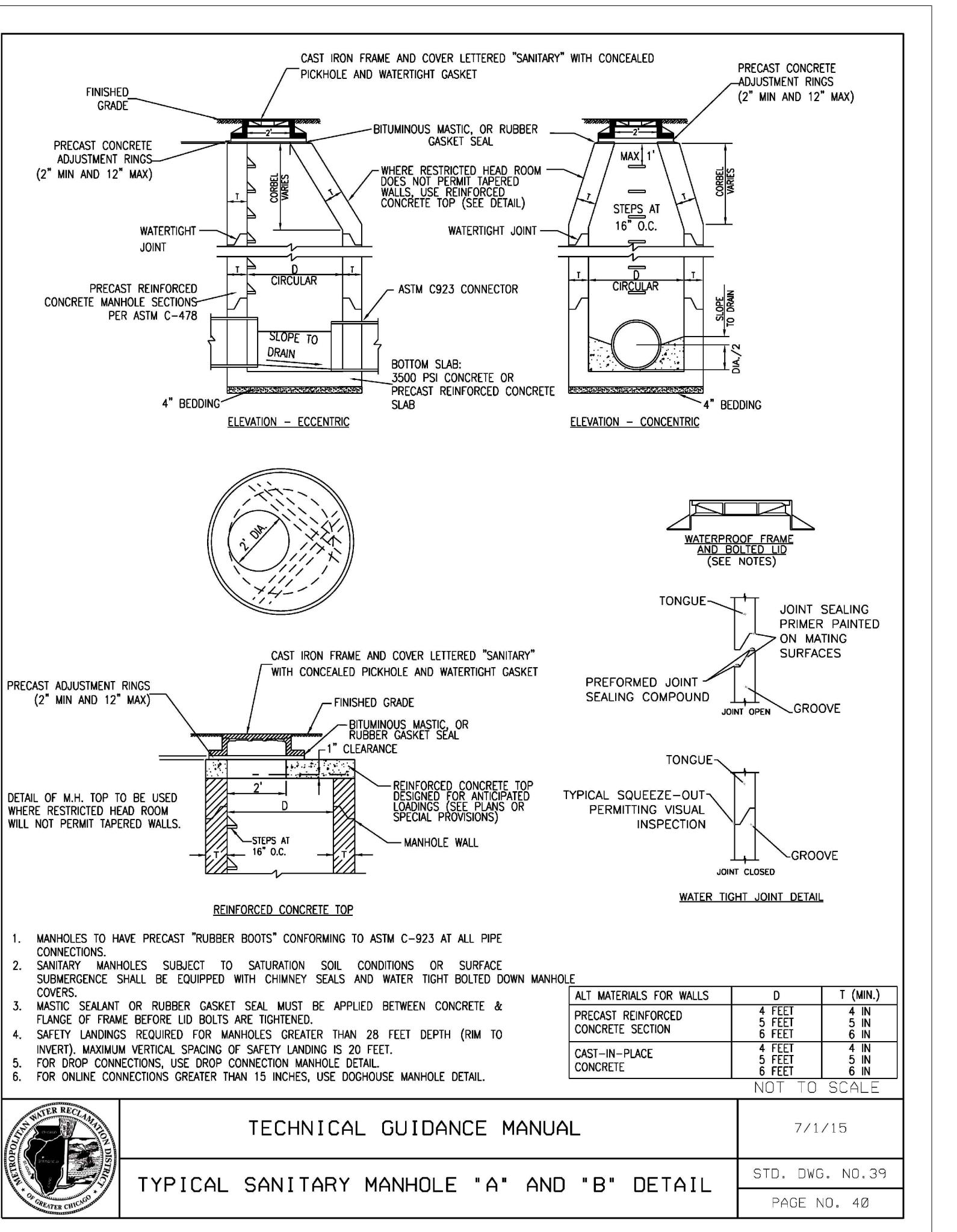
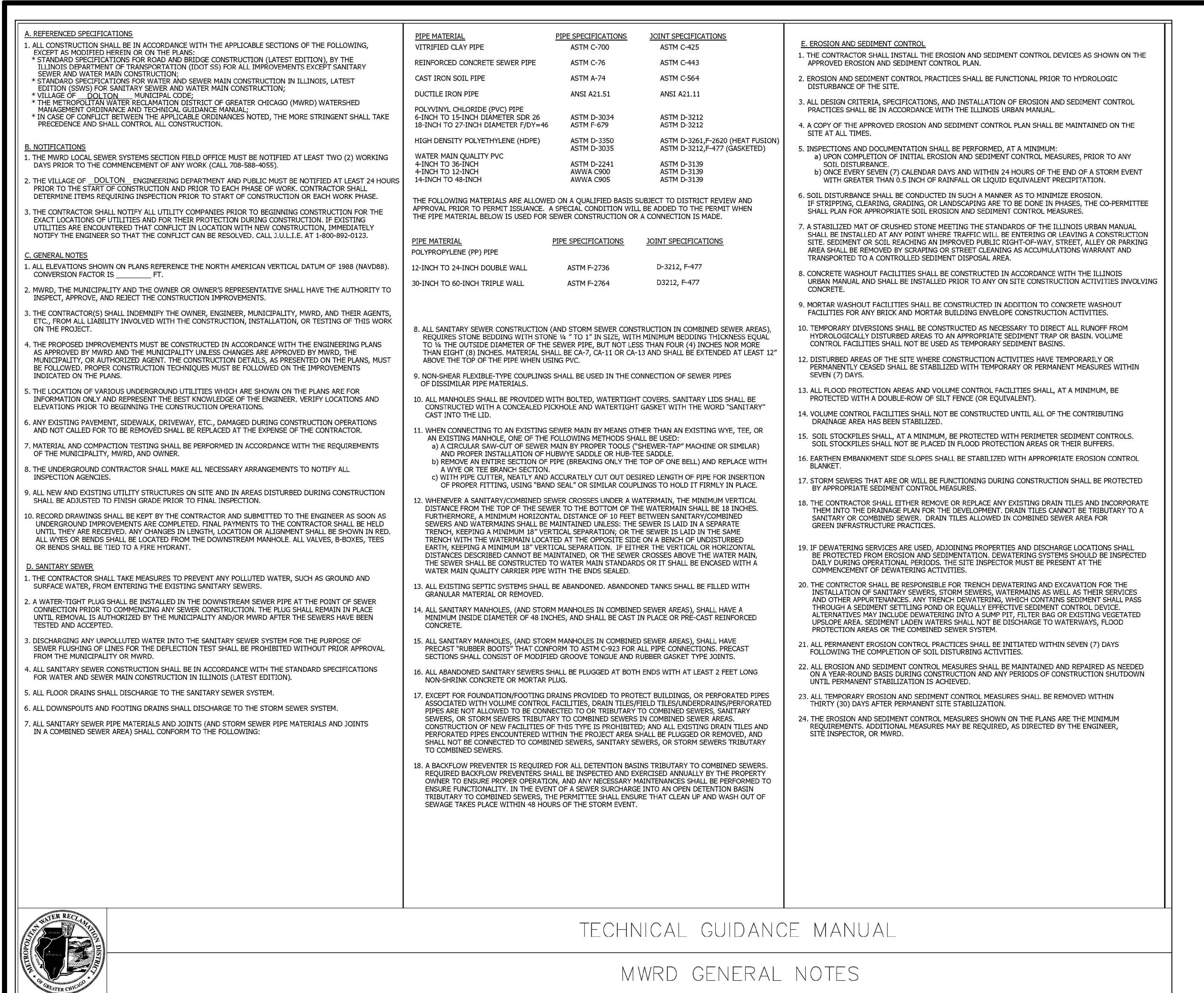
GE OF DOLTON, ILLINOIS

Manhard CONSULTING LTD.



DATE	REVISIONS	DRAWN BY
1-17-20	REVISED PER ARCH. COORDINATION	JRC
12-10-19	REVISED PER FORWARD REVIEW	JRC
10-30-19	REVISED PER INTERNAL REVIEW	JRC
10-15-19	REVISED PER VILLAGE REVIEW	JRC

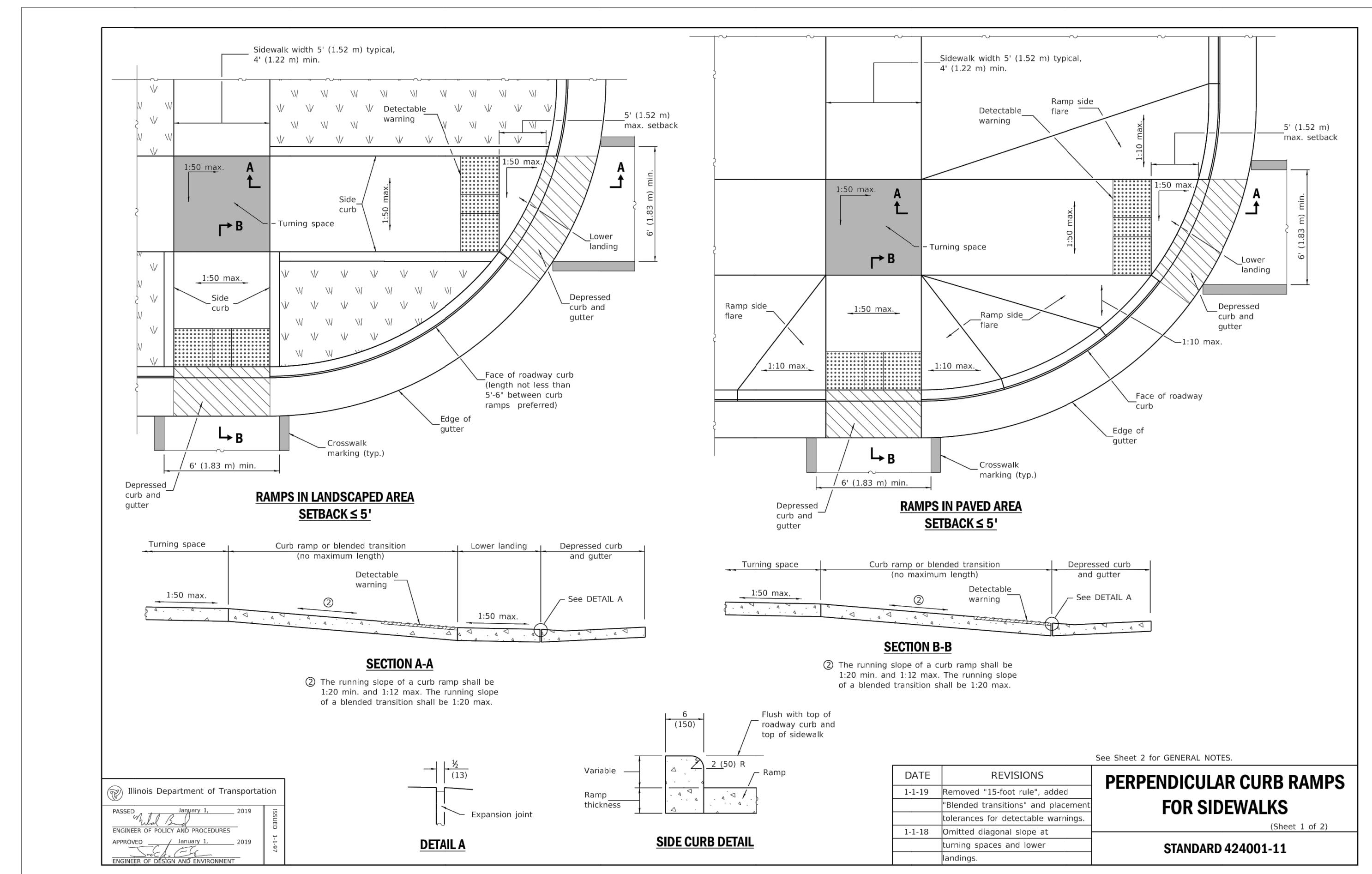
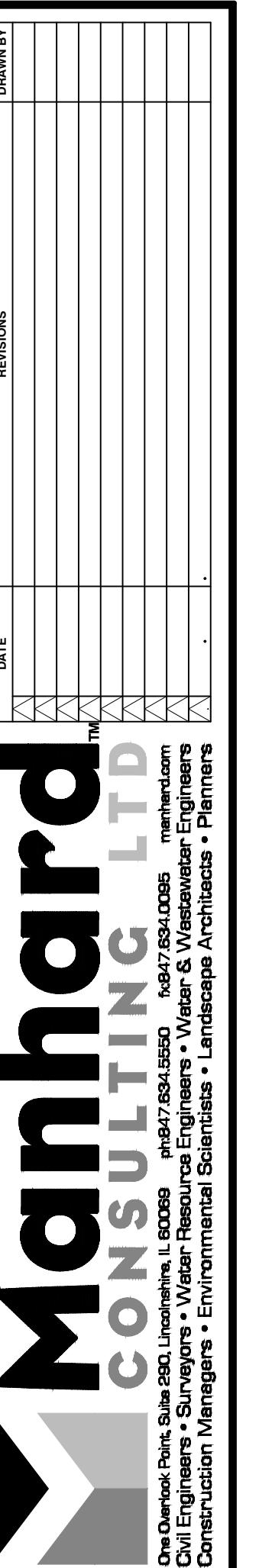
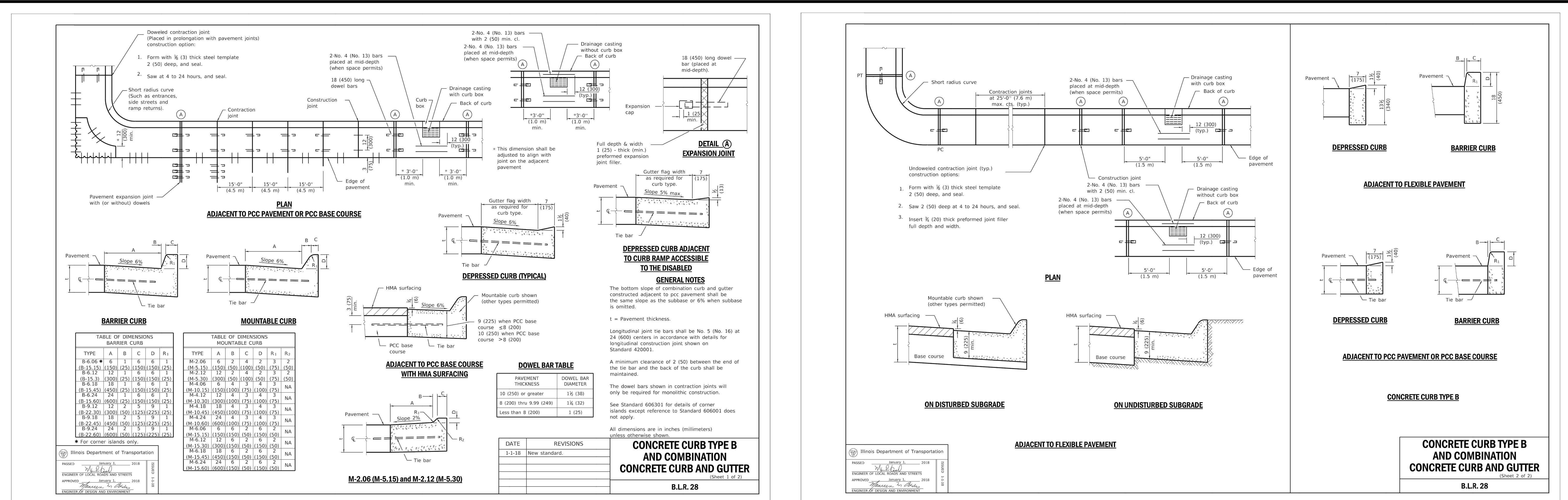




VILLAGE OF DOLTON, ILLINOIS

1 OF 13
AETDOILO1

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



OULD A CONFLICT ARISE BETWEEN MANHARD
TAILS AND THE VILLAGE DETAILS, THE
VILLAGE DETAILS SHALL TAKE PRECEDENCE.

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, and 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 any other 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 its 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 structures.

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 on the project, 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.

Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company. CONTRACTOR must protect the AST 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 ENTITY 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 absolute. The CONTRACTOR shall be responsible for any damage to any of the above mentioned utilities.

The CONTRACTOR shall be 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.

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 all 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 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, type, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

All sanitary borings shall be tested for water tightness in accordance with ASTM C369 "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Concrete Precast Concrete Pipe Sewer Lines", or ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test".

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 IDOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

SODDING

Upon completion of topsoil removal, 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.

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 resodded 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.

AGGREGATE

Upon completion of all paving, the CONTRACTOR shall install aggregate to the required thickness in accordance 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.

GRADING

Upon completion of grading, the CONTRACTOR shall grade all areas to the required elevations and slopes in accordance 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.

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, spoil, 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 limits to elevations & grades 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).

MATERIALS

All fill materials shall be in accordance 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.

SOILS

All fill materials shall be in accordance 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.

SOILS

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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 other 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": flexible 1/8" galvanized aircraft cable, 7x7 strand or approved equal
 - b. Trees 5" and over: flexible 3/16" galvanized aircraft cable, 7x7 strand or approved equal.
 - 3. Turnbuckles: 5/16", eye and eye, with 4" takeup.
 - 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 prescribed 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 disking 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.
- 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 ground surface can be properly prepared. Sod shall not be laid on frozen or snow-covered ground. Sod shall be strongly rooted, not less than two (2) years old and free of weeds and undesirable native grasses. Sod should be machine cut to pad thickness of 3/4" (plus or minus 1/4"), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant). Provide sod of uniform pad sizes with maximum 5% deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on the upper 10% of pad will not be accepted.

- J. Timing of plant material and seeding operations:

- 1. Seeding of specified areas shall occur when the soil temperature is above 55° F. No seed shall be sown during periods of high winds, or when the ground is not in proper condition for seeding (see section 3-02 (G)). Seeding operations for the specified mixes shall occur in the spring time frame of April 15 through June 30 and in the summer time frame of August 15 through December 1. The mixes containing bluegrass and fescue seed must have six weeks to harden off for winter survival.

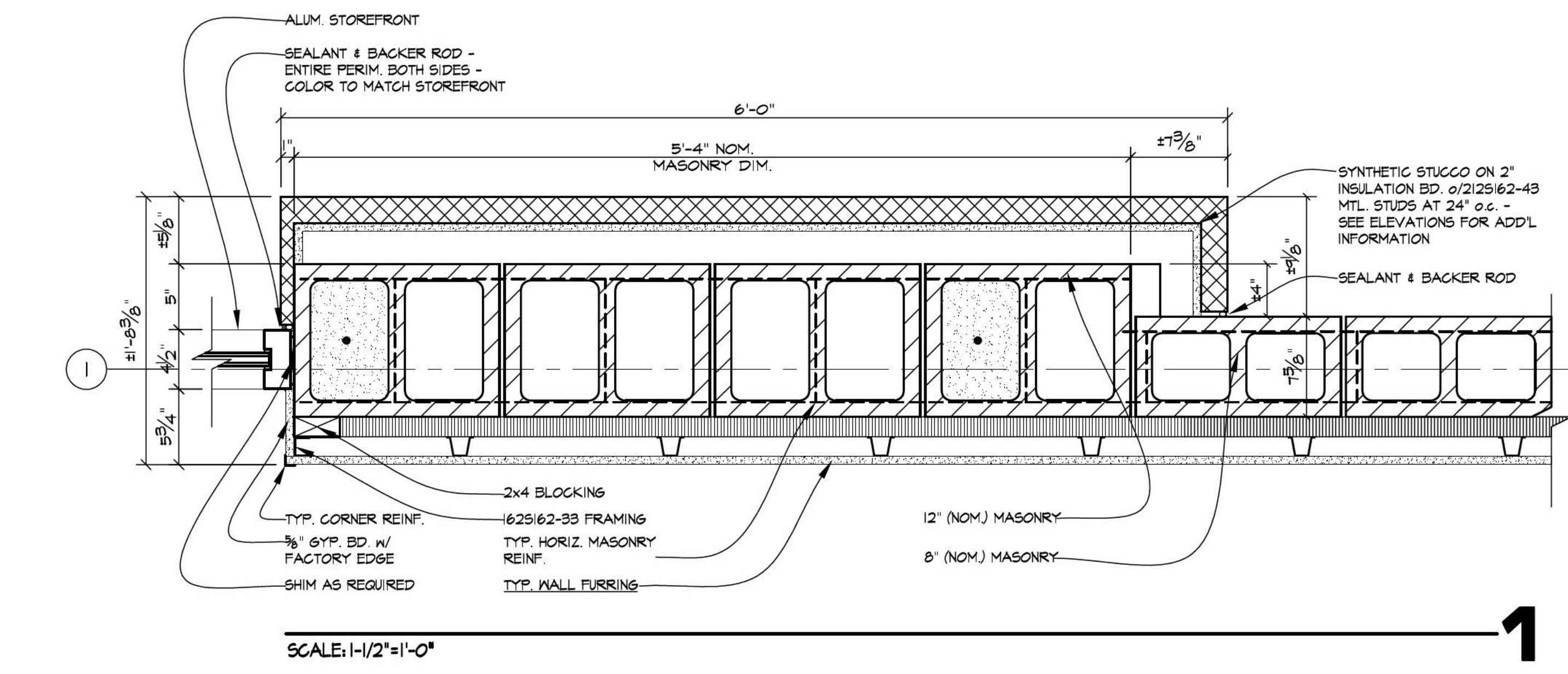
- 2. Sod shall be installed when the ground is not frozen or snow covered and temperatures are less than 80° F. It shall not be placed during a period of extended drought.

- 3. Herbaceous ornamental plants shall be planted between May 1 and June 15 or between August 15 and December 1.

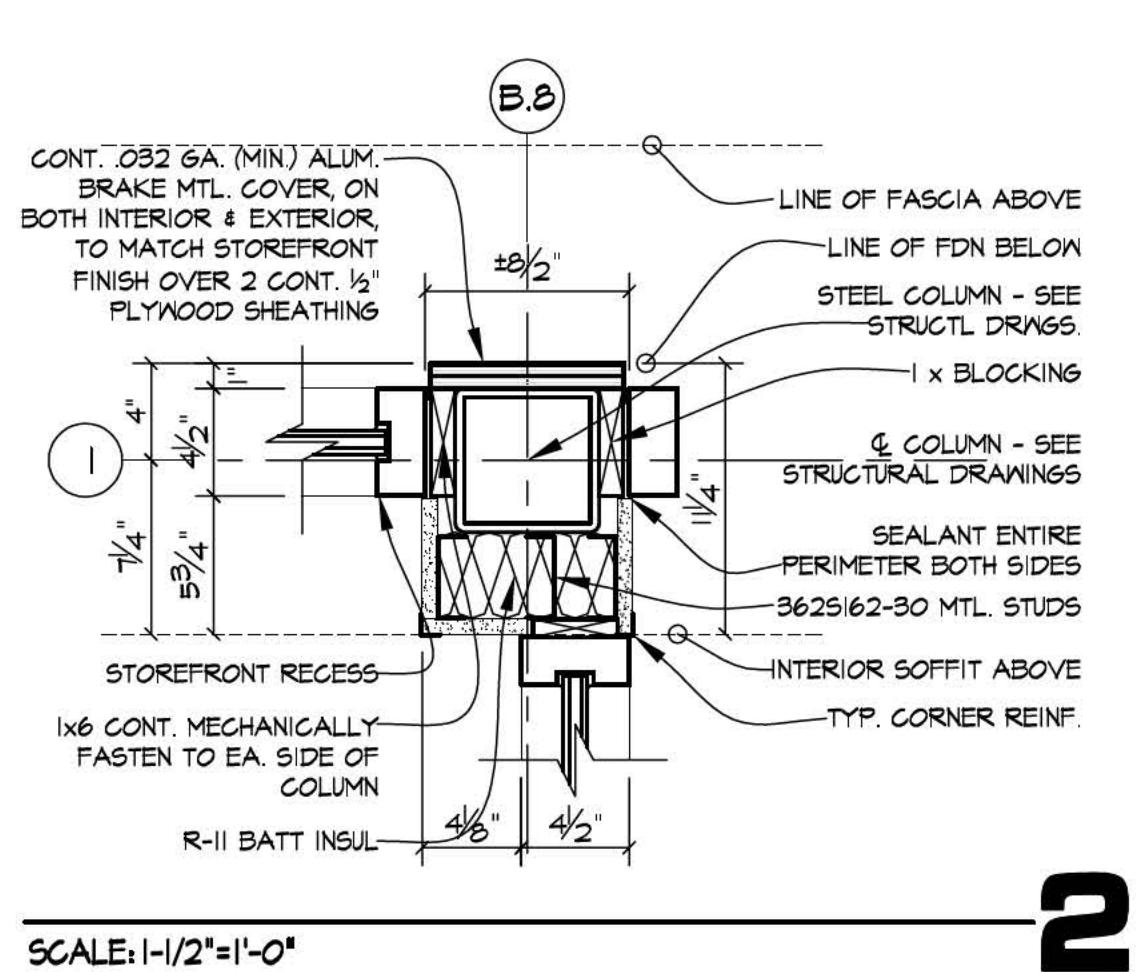
- 4. Spring planting of woody ornamental plants shall be performed from the time the soil can be easily worked until June 1, except that evergreen planting shall end on May 15. Oak, hawthorn and red maple species will only be planted during this spring planting period. Fall planting will begin August 15 and will continue until the ground cannot be worked satisfactorily, except that evergreen planting shall be performed between August 15 and December 1.

3-04 MAINTENANCE:

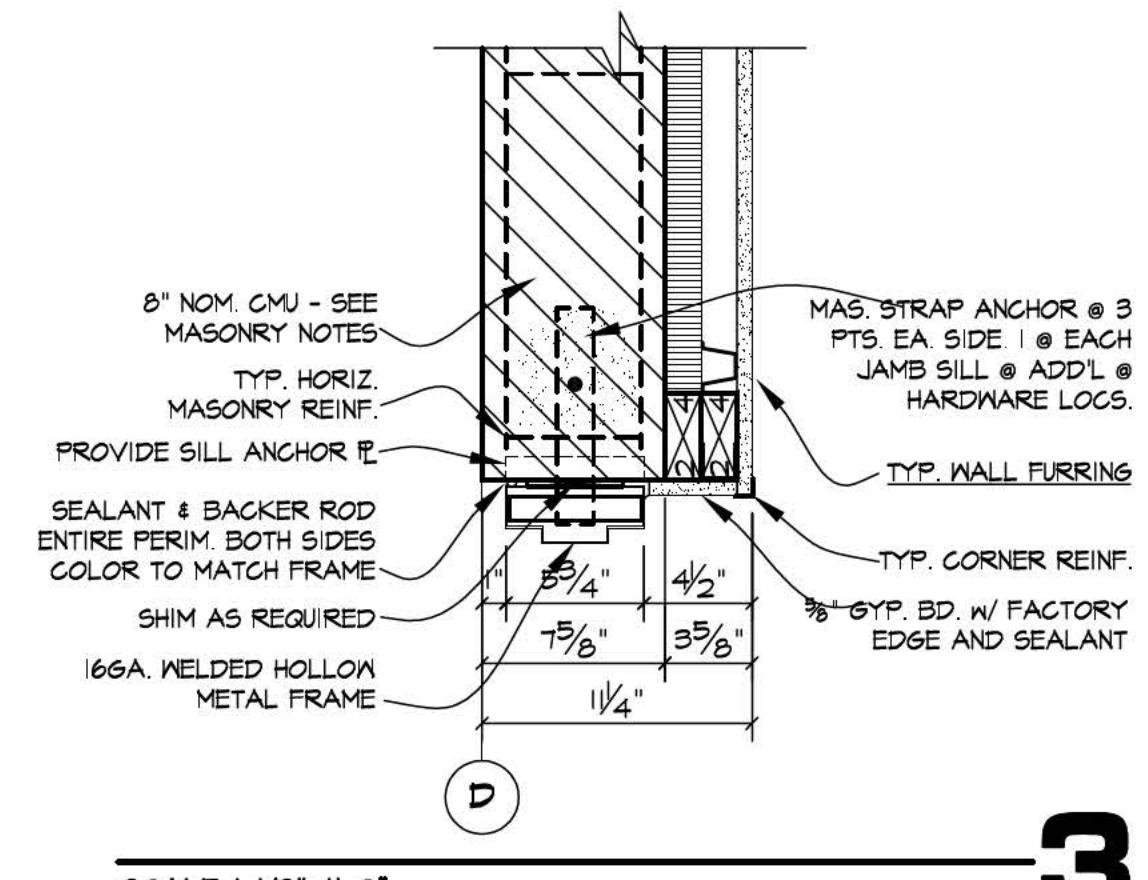
- A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include but is not limited to: mowing and edging turf, pulling weeds, watering turf areas and plant material plus annual flower maintenance. The Contractor will reset settled plants to proper grade and position. Dead material will be removed. Stakes and guy wires will be tightened and repaired as required.
- </div



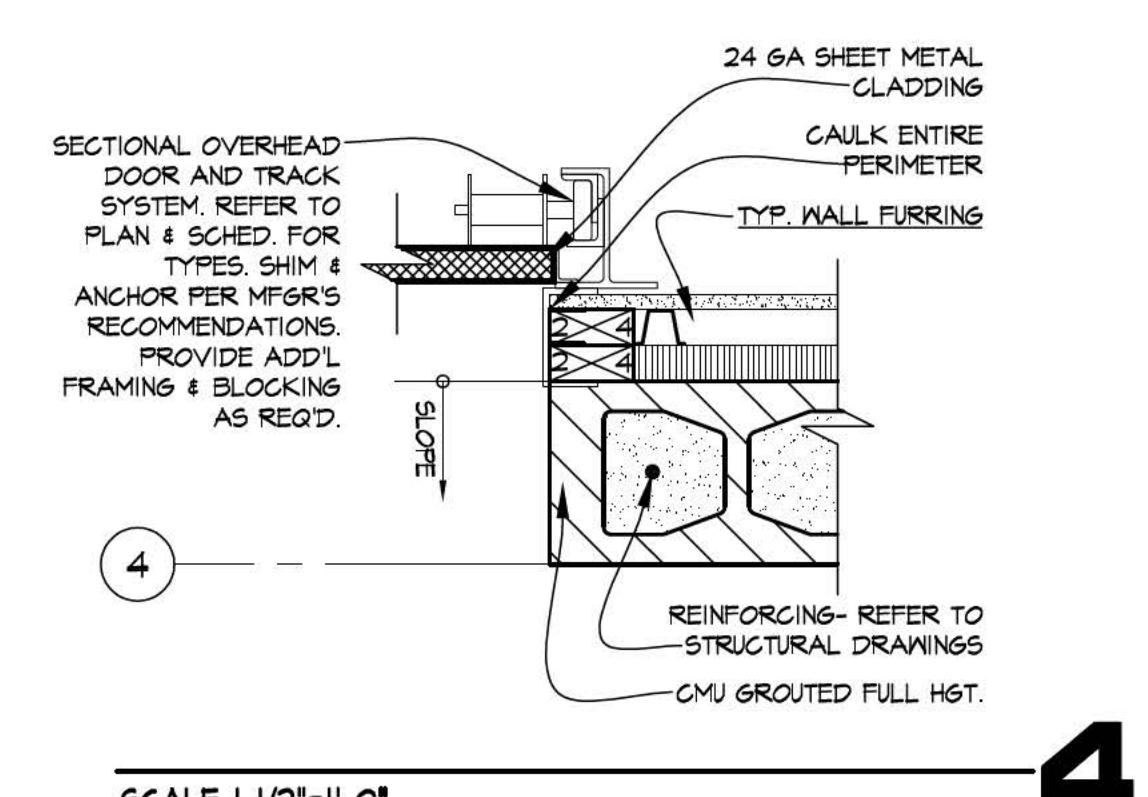
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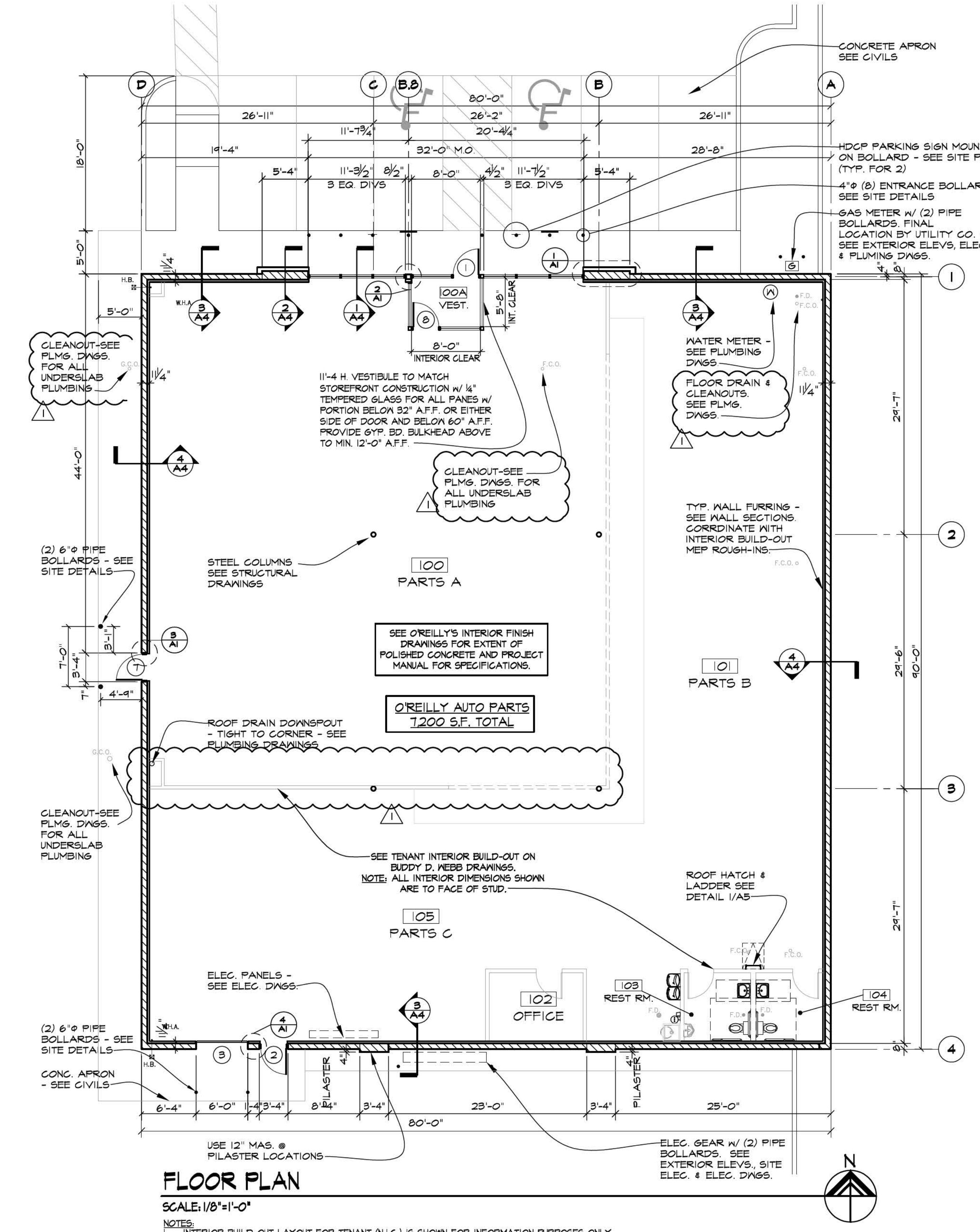
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3



4



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 7/8" D. x 15/8" L. (NOM. 8 x 12 x 16 @ PILASTERS) SPLIT-FACE FINISH
B) 7/8" H. x 7/8" 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.

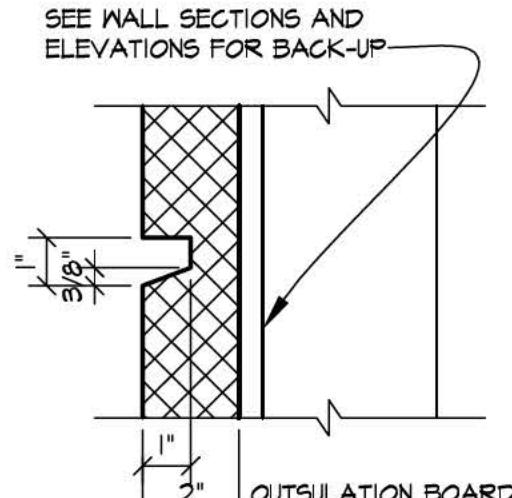
2. PRE-CONSTRUCTION MEETING REQUIRED PRIOR TO INSTALLATION OF THRU-WALL BRICK SYSTEM. PRE-CONSTRUCTION MEETING TO INCLUDE MANUFACTURER, MANUFACTURER'S REPRESENTATIVE, OWNER'S REPRESENTATIVE & ARCHITECT.

SPECIAL MASONRY NOTE ALERT!

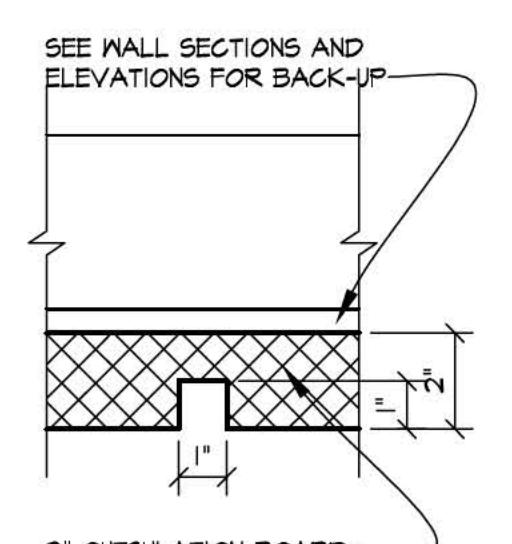
There are four CRITICAL elements to SINGLE WYTHE masonry construction:
1. The concrete brick product has to have integral waterproofing.

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.



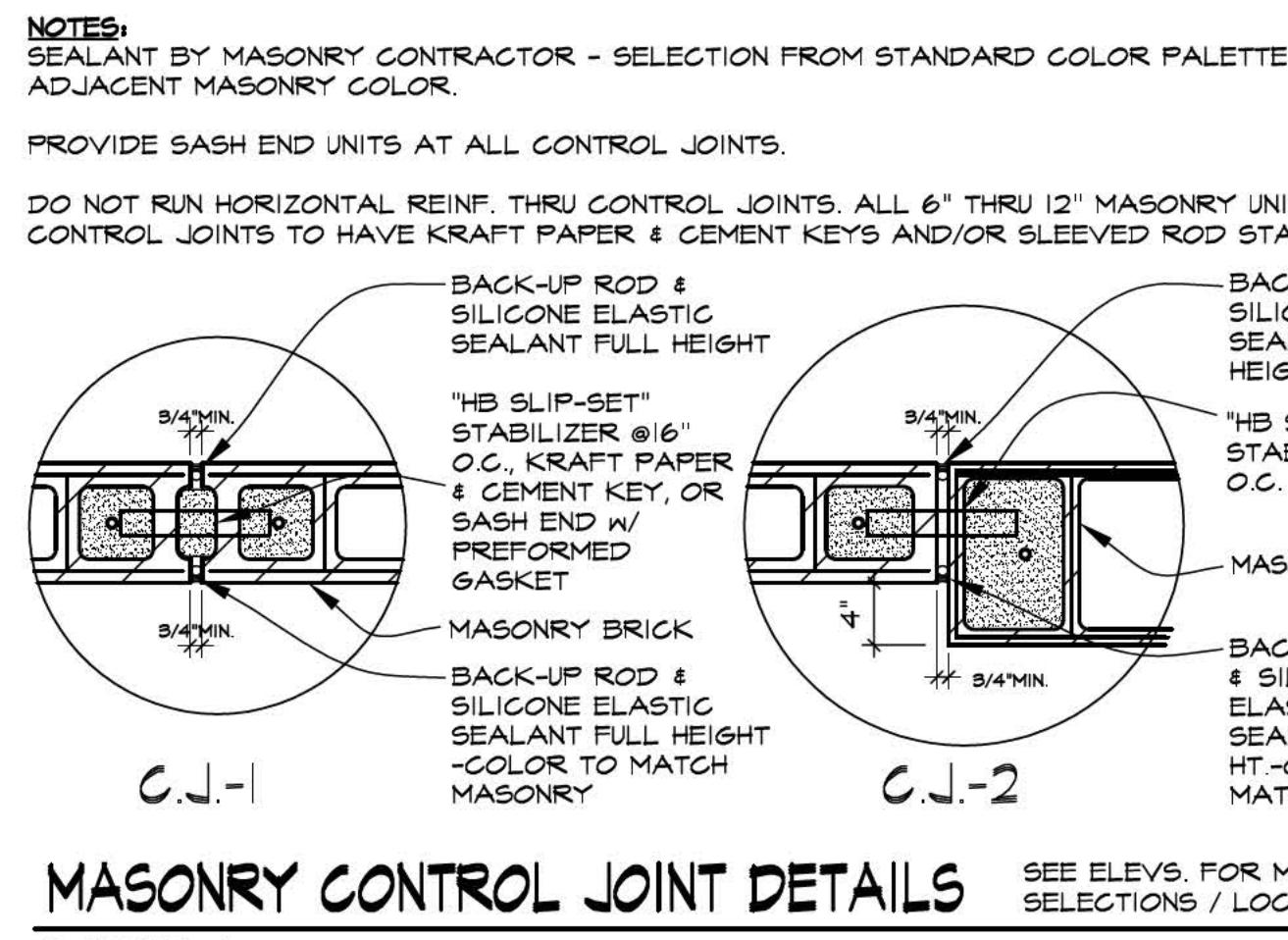
HORIZONTAL



VERTICAL

E.I.F.S. SCORE JOINT DETAILS

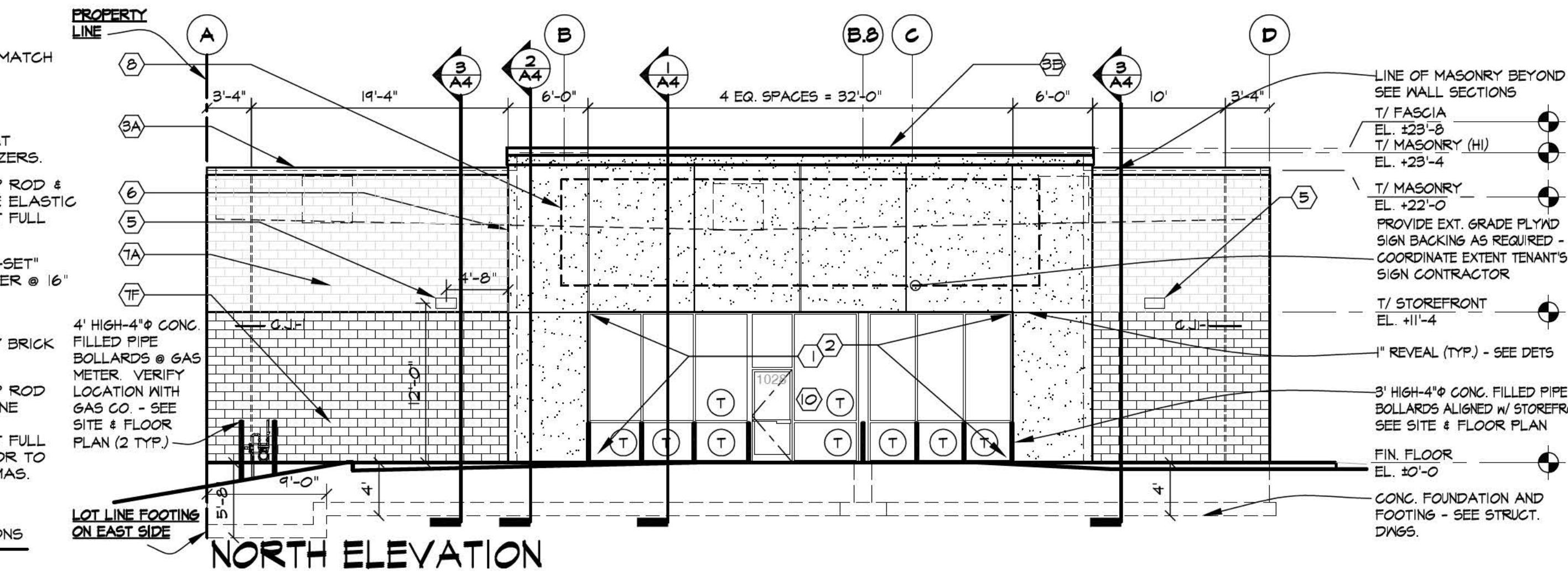
SCALE: 3" = 1'-0"



MASONRY CONTROL JOINT DETAILS

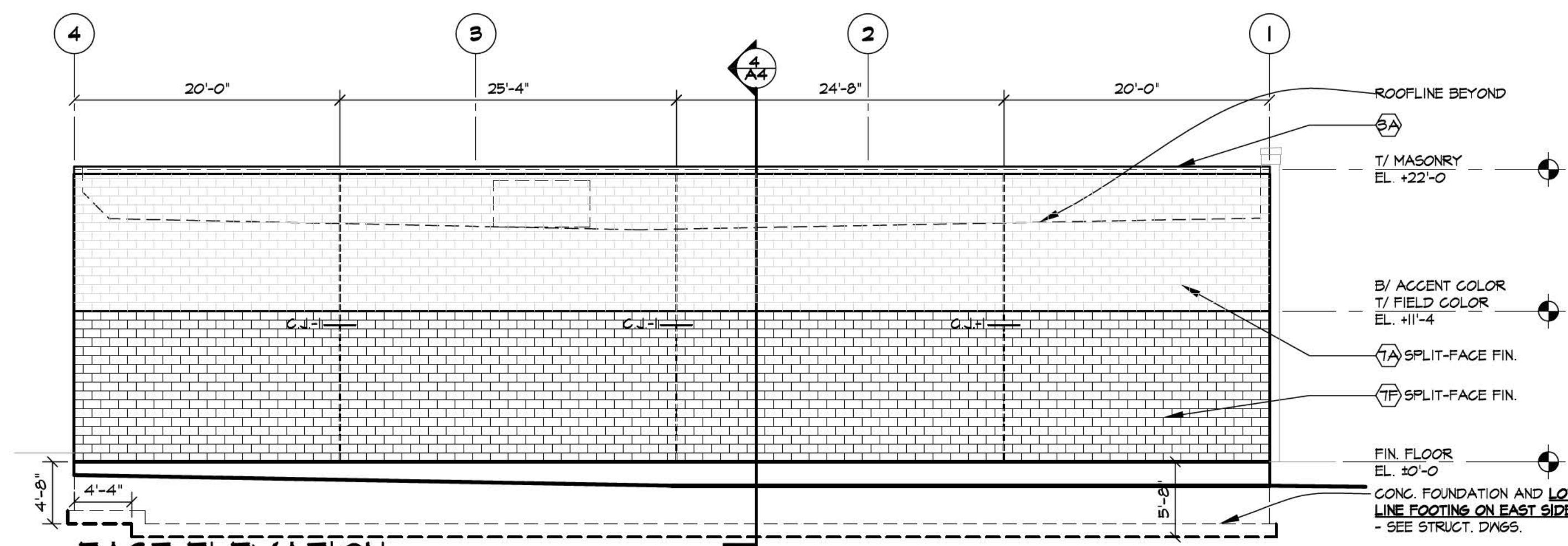
SEE ELEVS. FOR MAS. SELECTIONS / LOCATIONS

SCALE: 1"-1'-0"



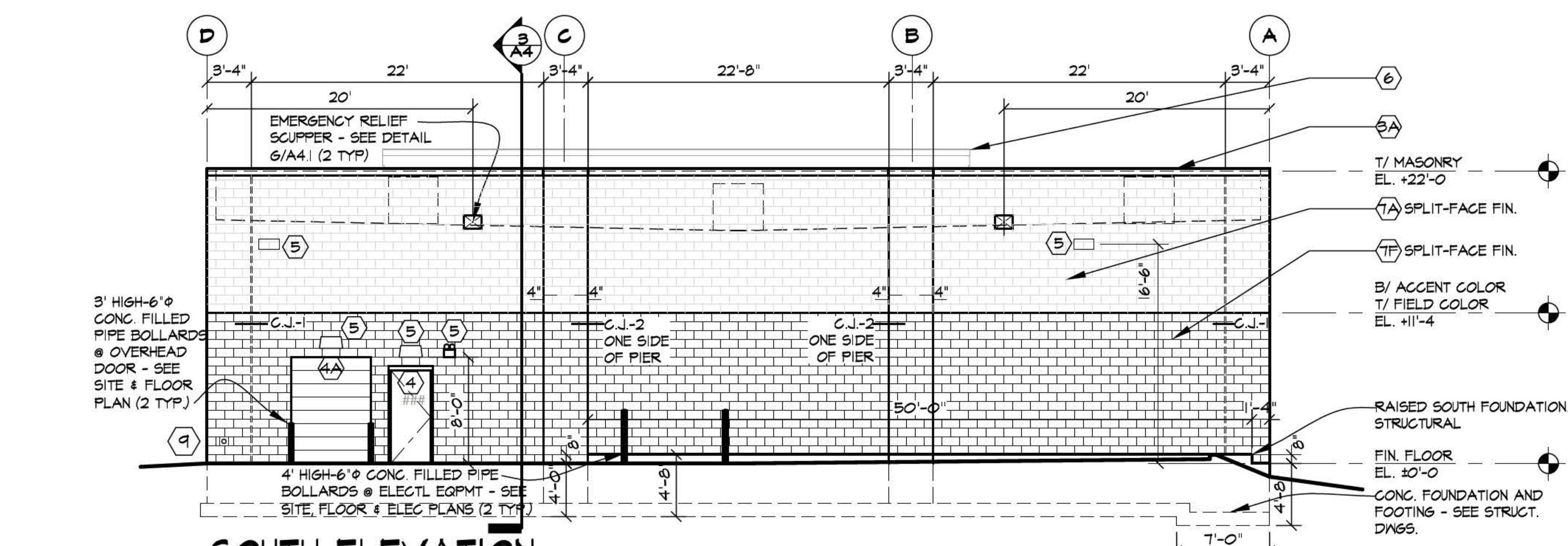
NORTH ELEVATION

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



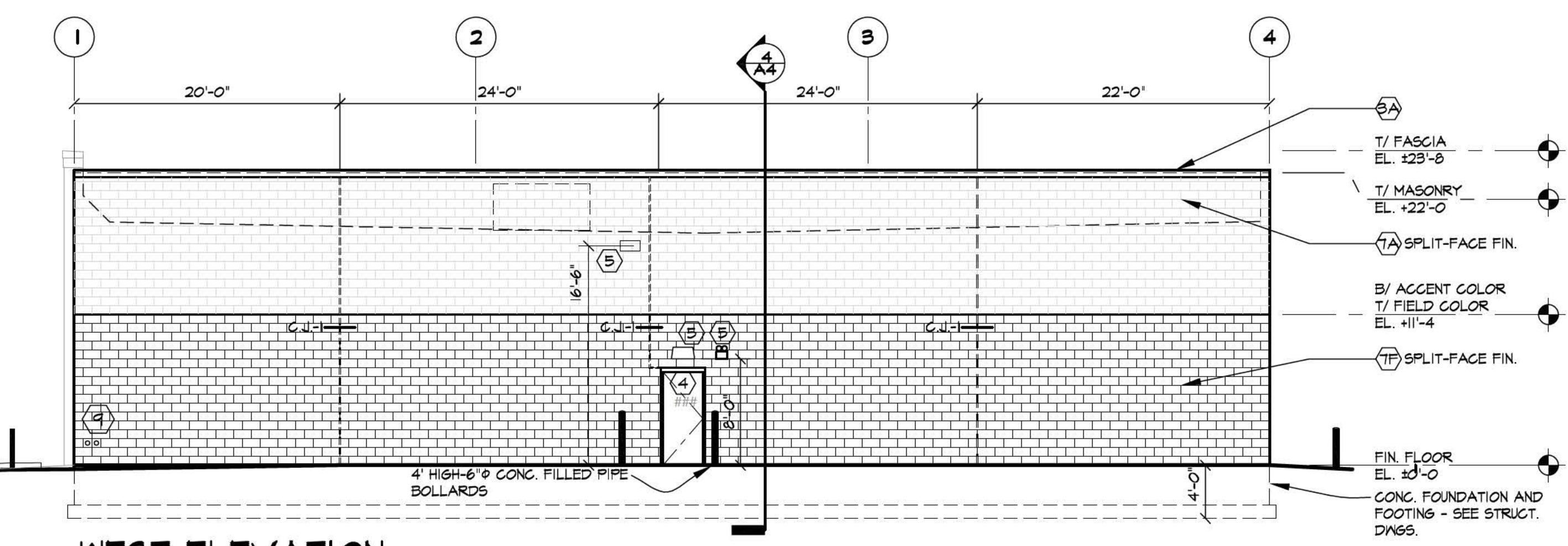
EAST ELEVATION

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, DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

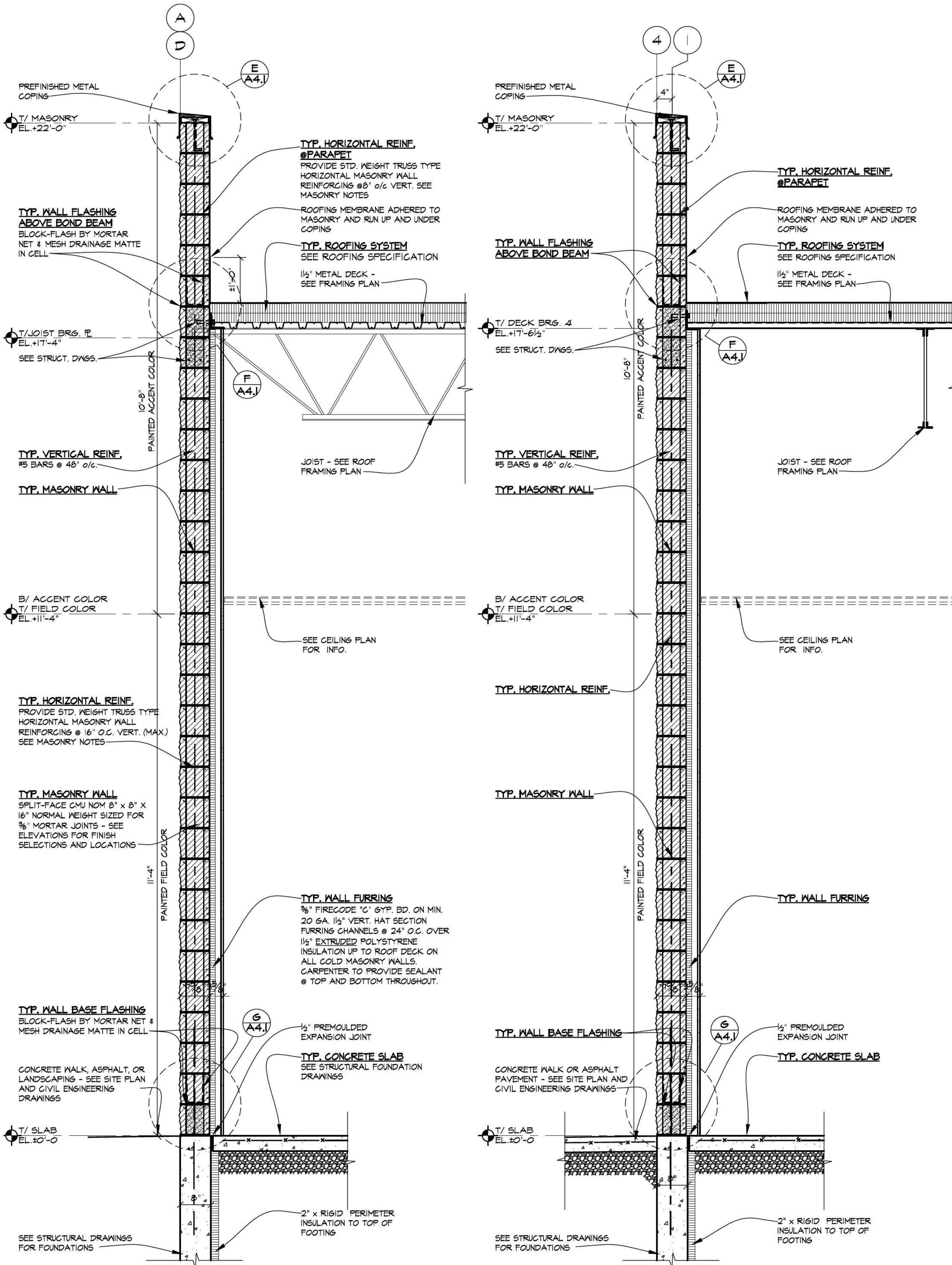
SHEET TITLE
ELEVATION
NOTES
DETAILS

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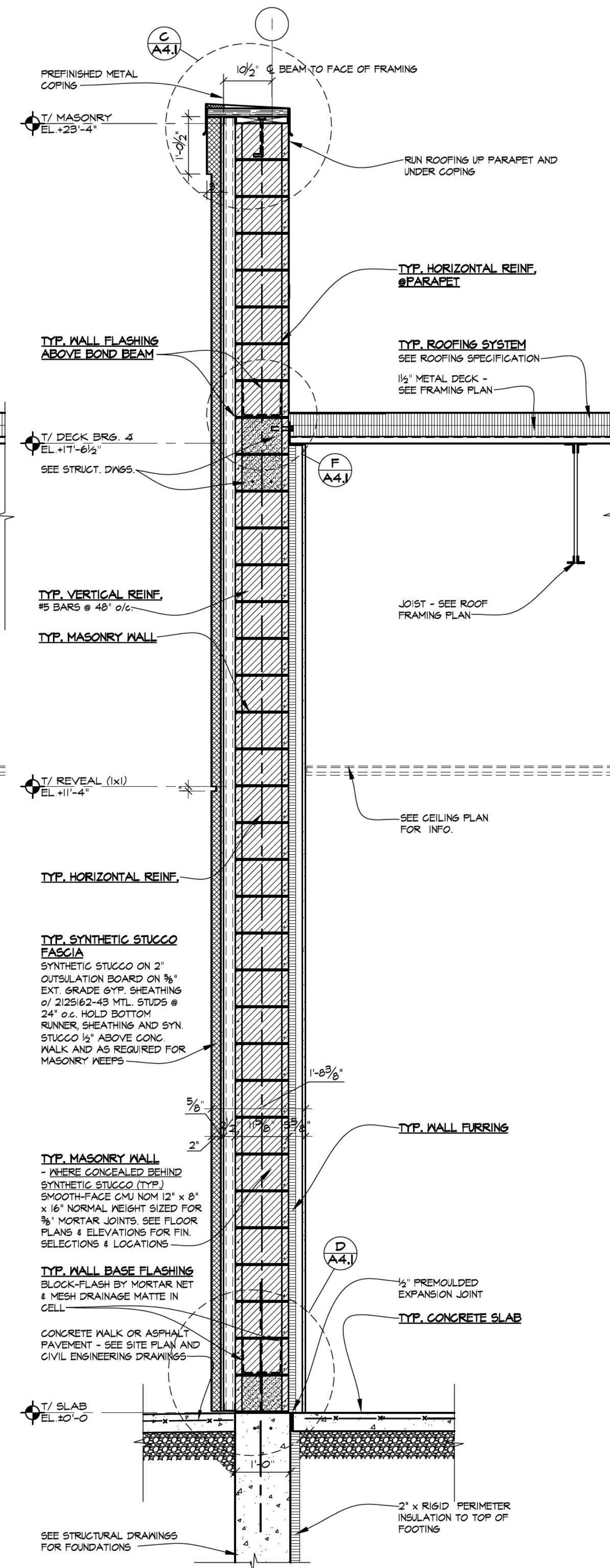
T-H DRAWING		NOT FOR COORDINATION	NOT FOR BIDDING	NOT FOR PERMITTING	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION
1/12/19	1/12/19					

REVISIONS		NOT FOR COORDINATION	NOT FOR BIDDING	NOT FOR PERMITTING	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION

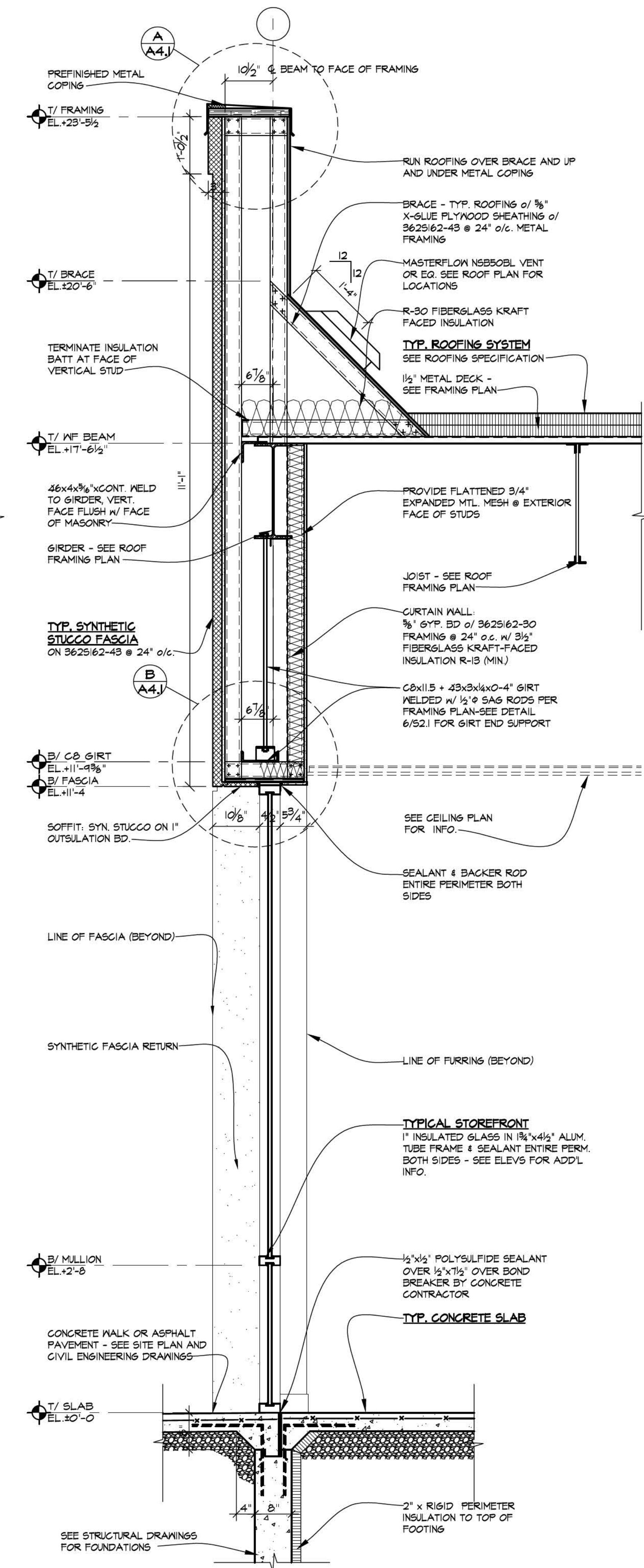
VERIFY JOIST ORIENTATION W/ ROOF FRAMING PLAN AND DETAILS



SCALE: 3/4" = 1'-0" SEE 4/A4 FOR ADD'L TYP. NOTES



SCALE: 3/4" = 1'-0" SEE 4/A4 FOR ADD'L TYP. NOTES



SCALE: 3/4" = 1'-0" SEE 4/A4 FOR ADD'L TYP. NOTES

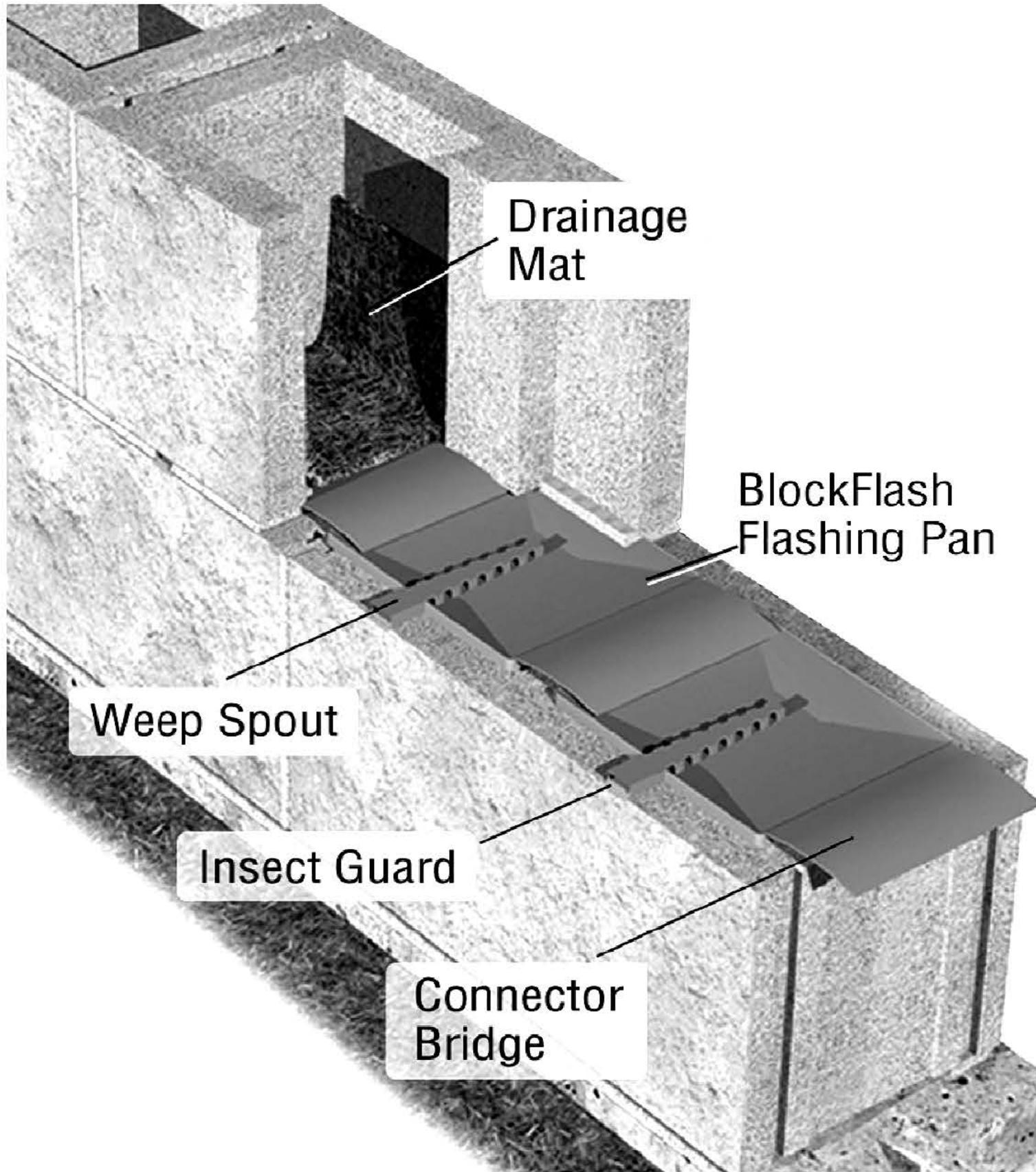
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O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD., DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
WALL SECTION

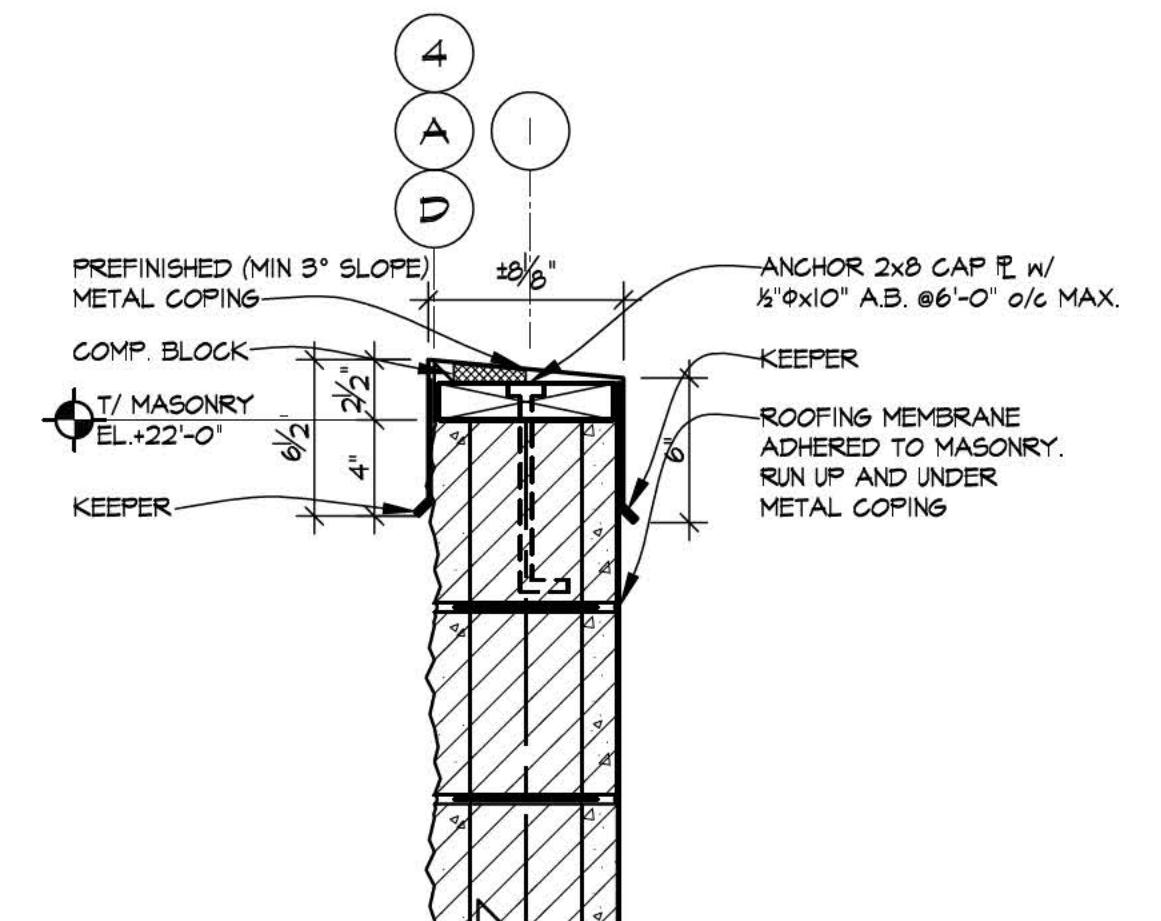
1906

REVISIONS
THIS DRAWING
NOT FOR CONSTRUCTION
FOR BIDDING
FOR PERMIT
FOR CONTRACTING
NOT FOR COMMERCIAL
KMA & ASSOCIATES, INC. ARCHITECTS
SUITE F
60015-1-2235
FAX(847)945-6669
1121 LAKE COOK ROAD
DEERFIELD, ILLINOIS
(847)945-6669

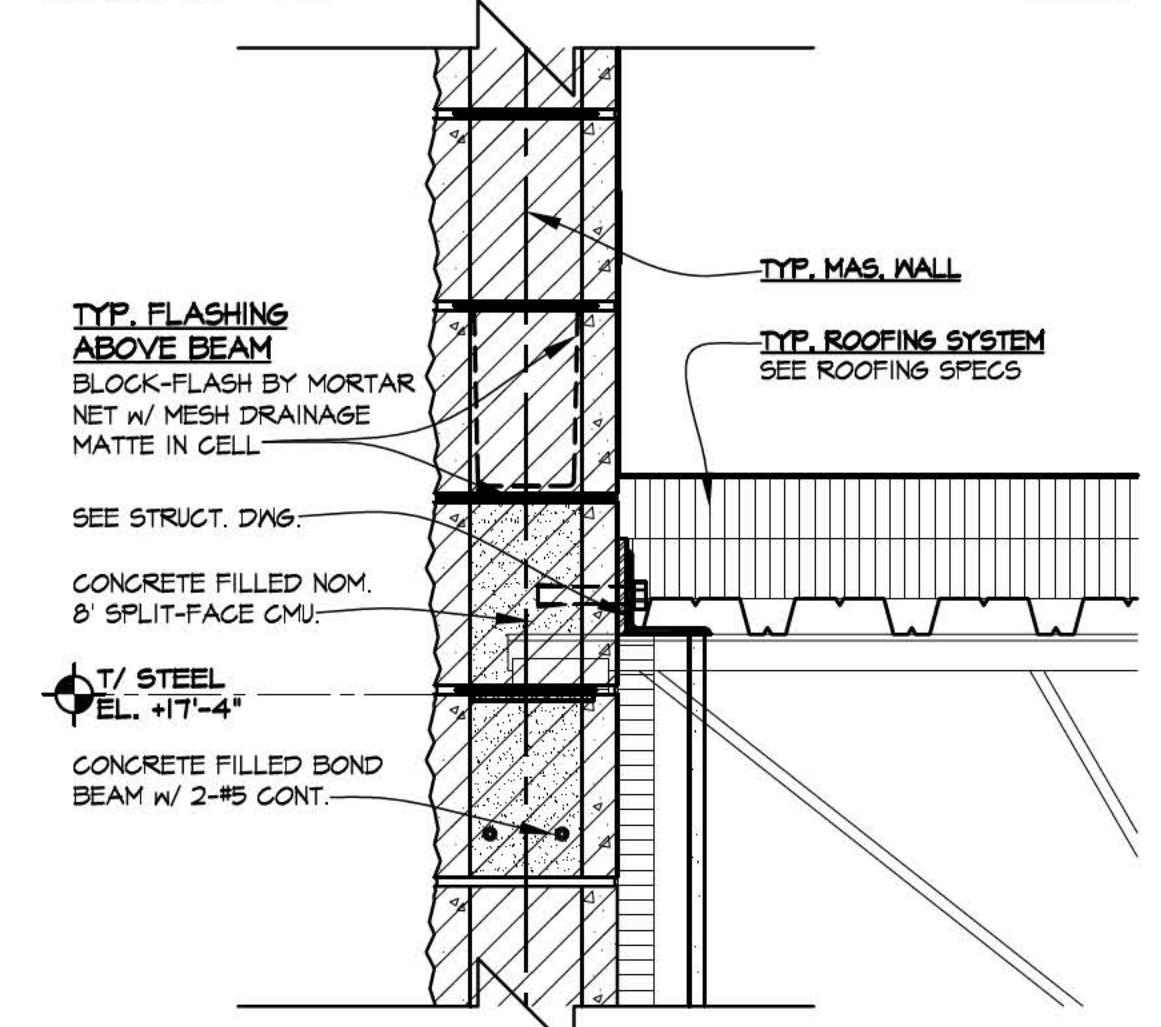


SINGLE NYTHE THRU-WALL MASONRY BLOCKFLASH INSTALLATION NOTES

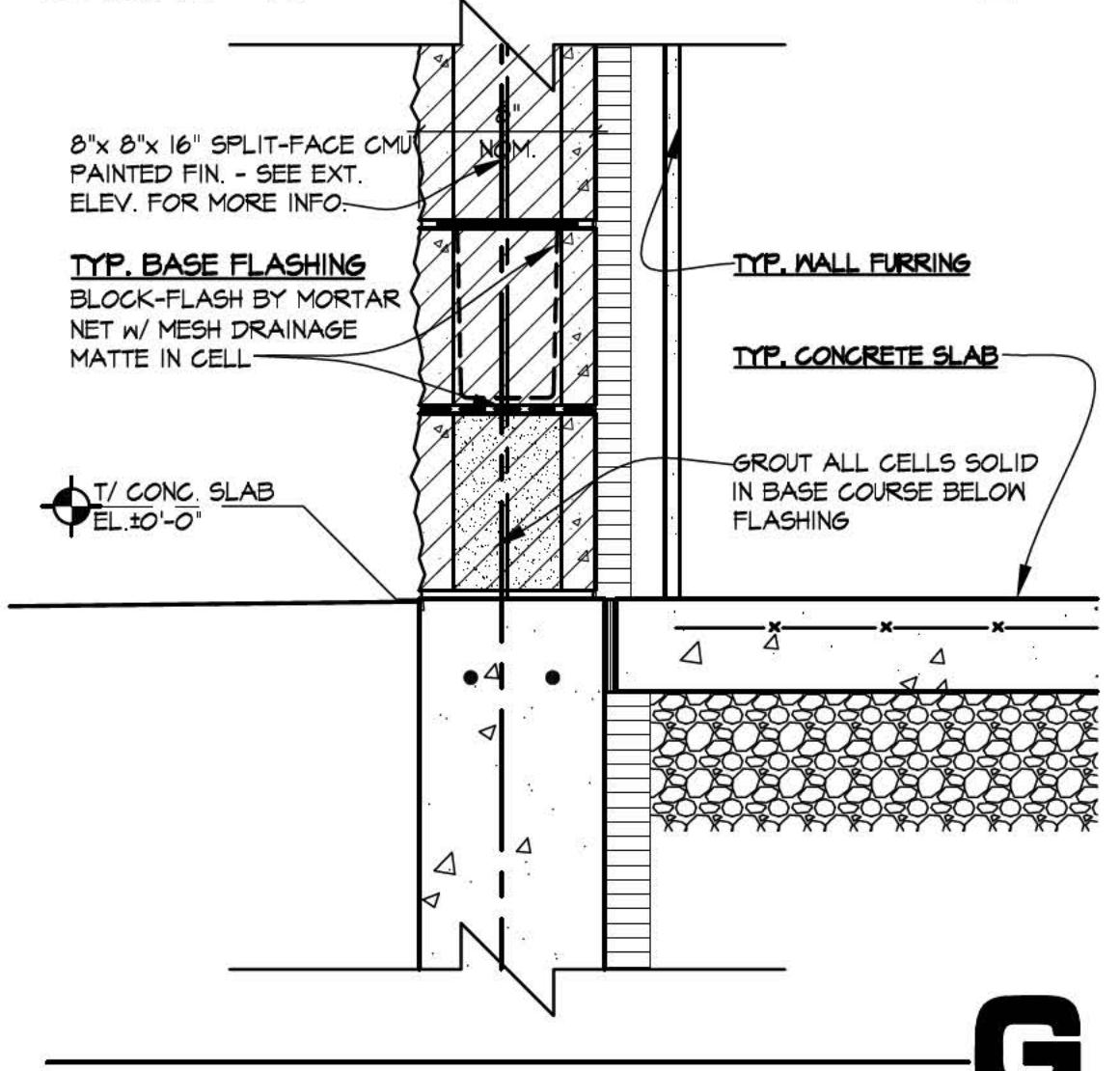
- BlockFlash is a product of Mortar Net Solutions. Provide BlockFlash near base of wall & above all lintels, steel beams, solid cores, bond beams and above any multi-nythe condition.
- See all wall sections for complete information.
- BlockFlash is to be installed ABOVE GRADE ONLY.
 - Fully grout masonry 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.



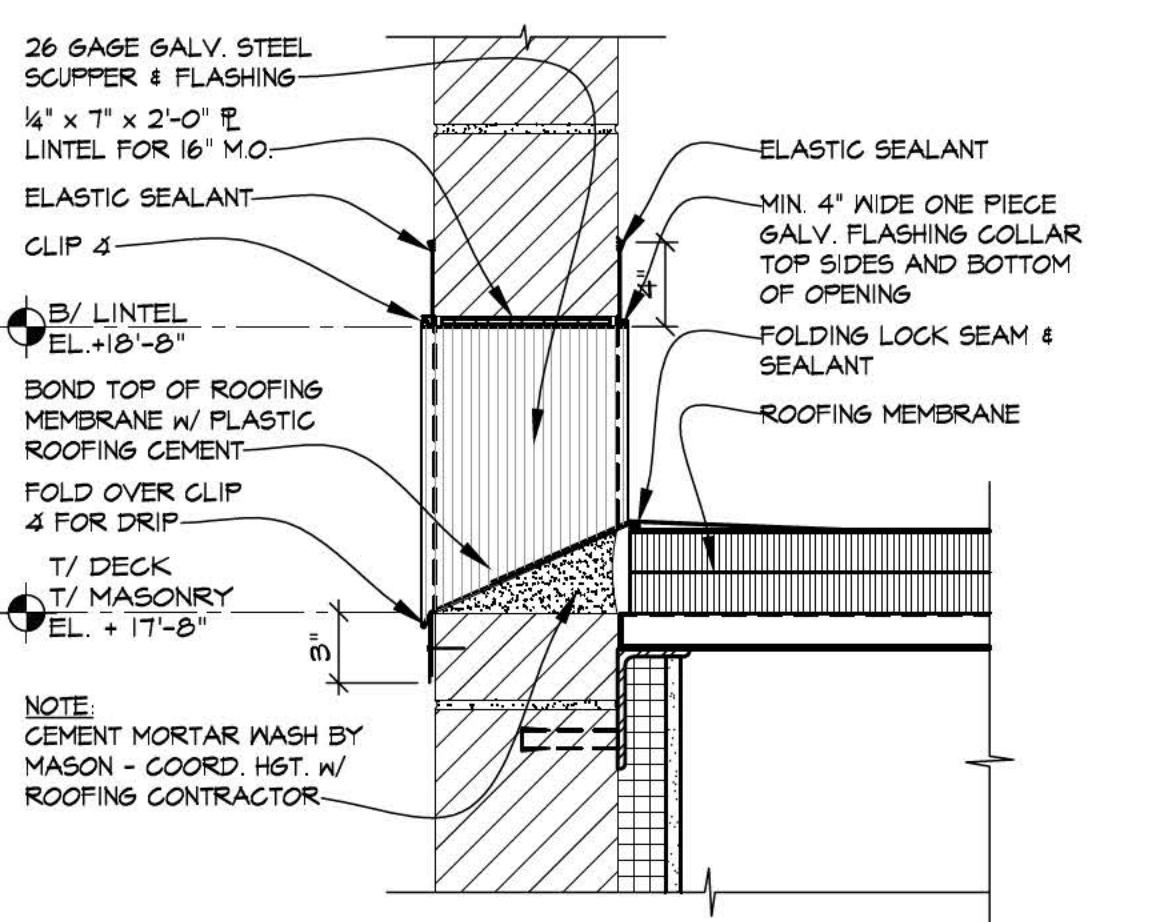
SCALE: 1 1/2" = 1'-0"



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

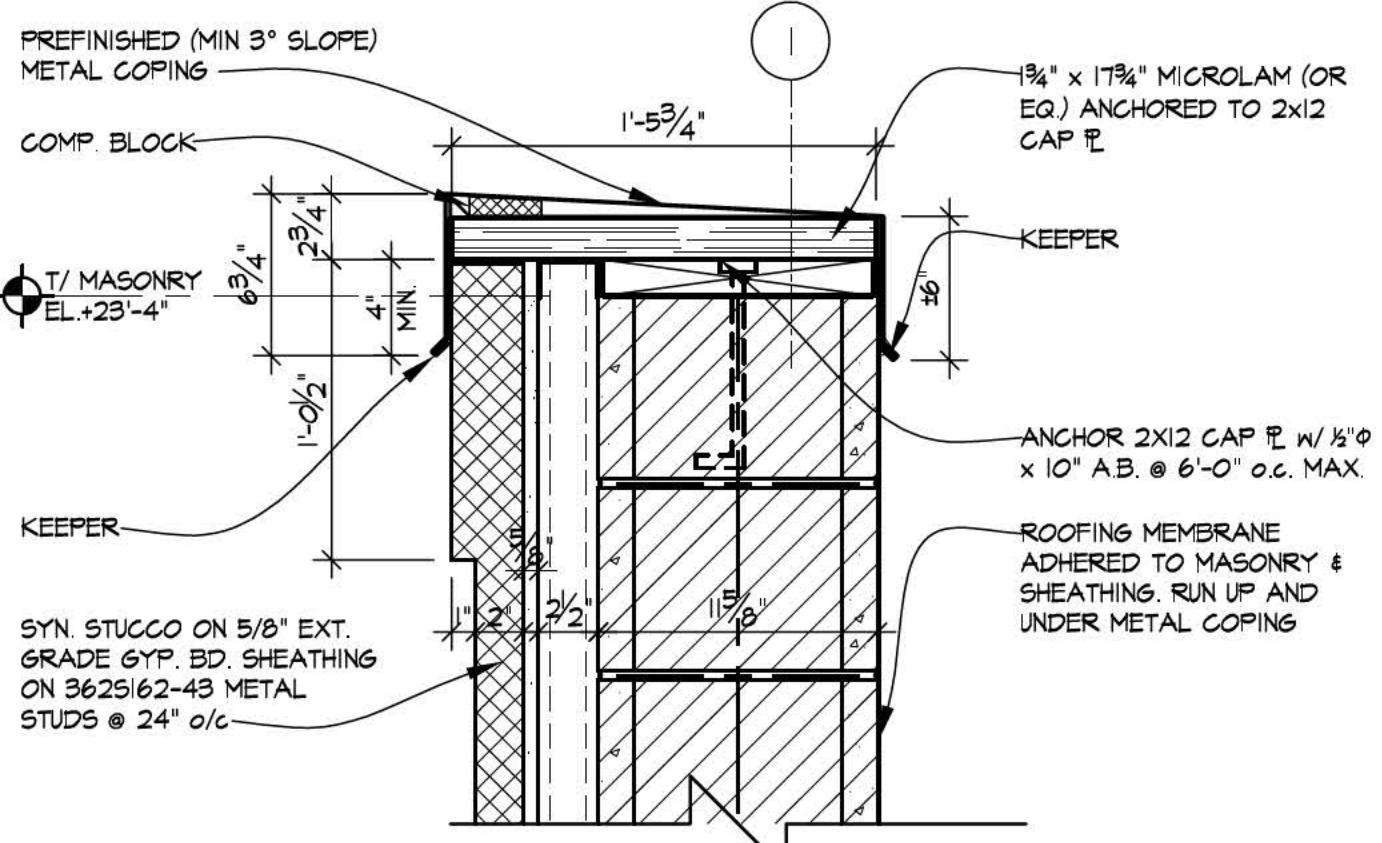


SCALE: 1 1/2" = 1'-0"

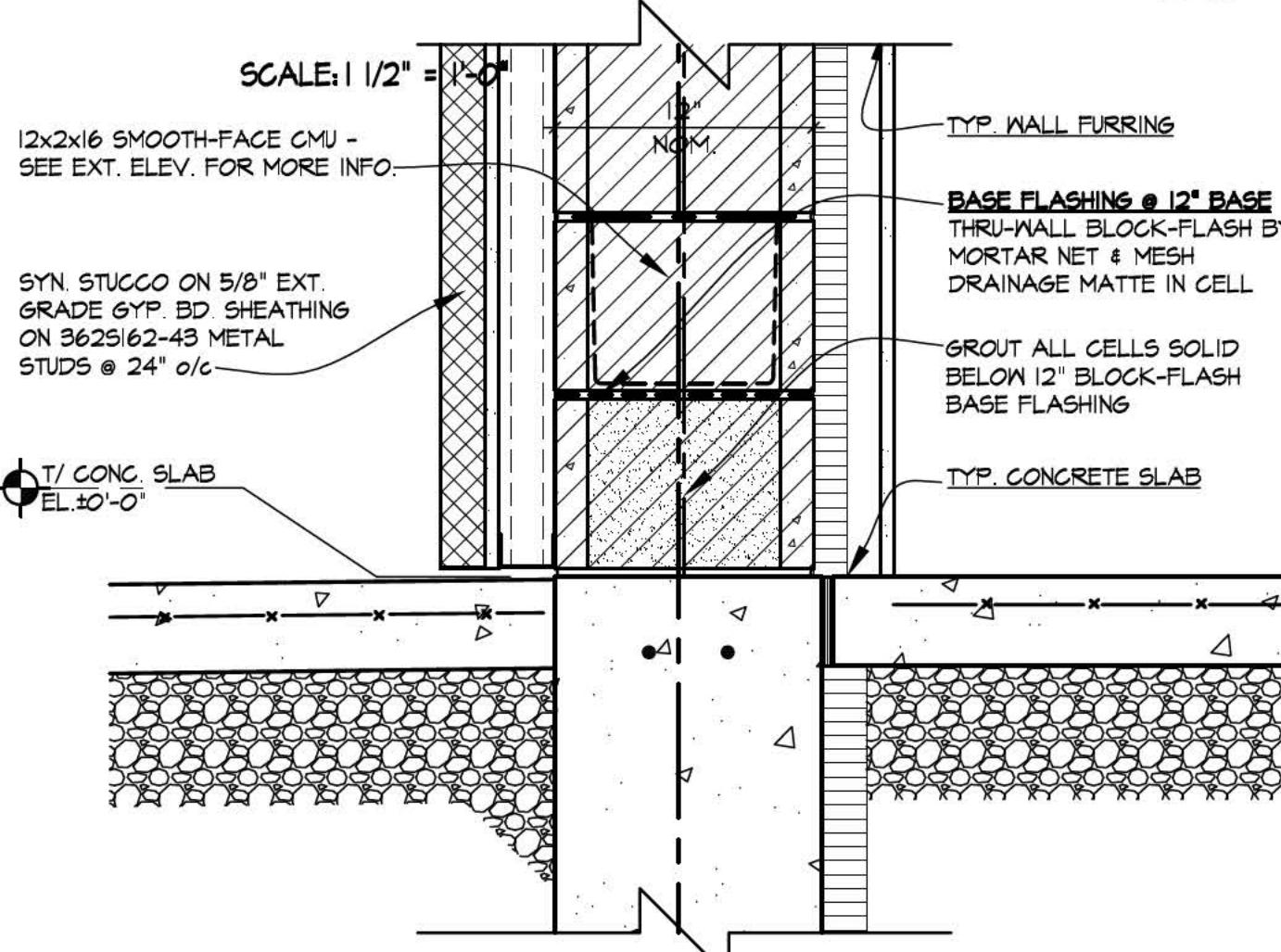


ROOF SCUPPER

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



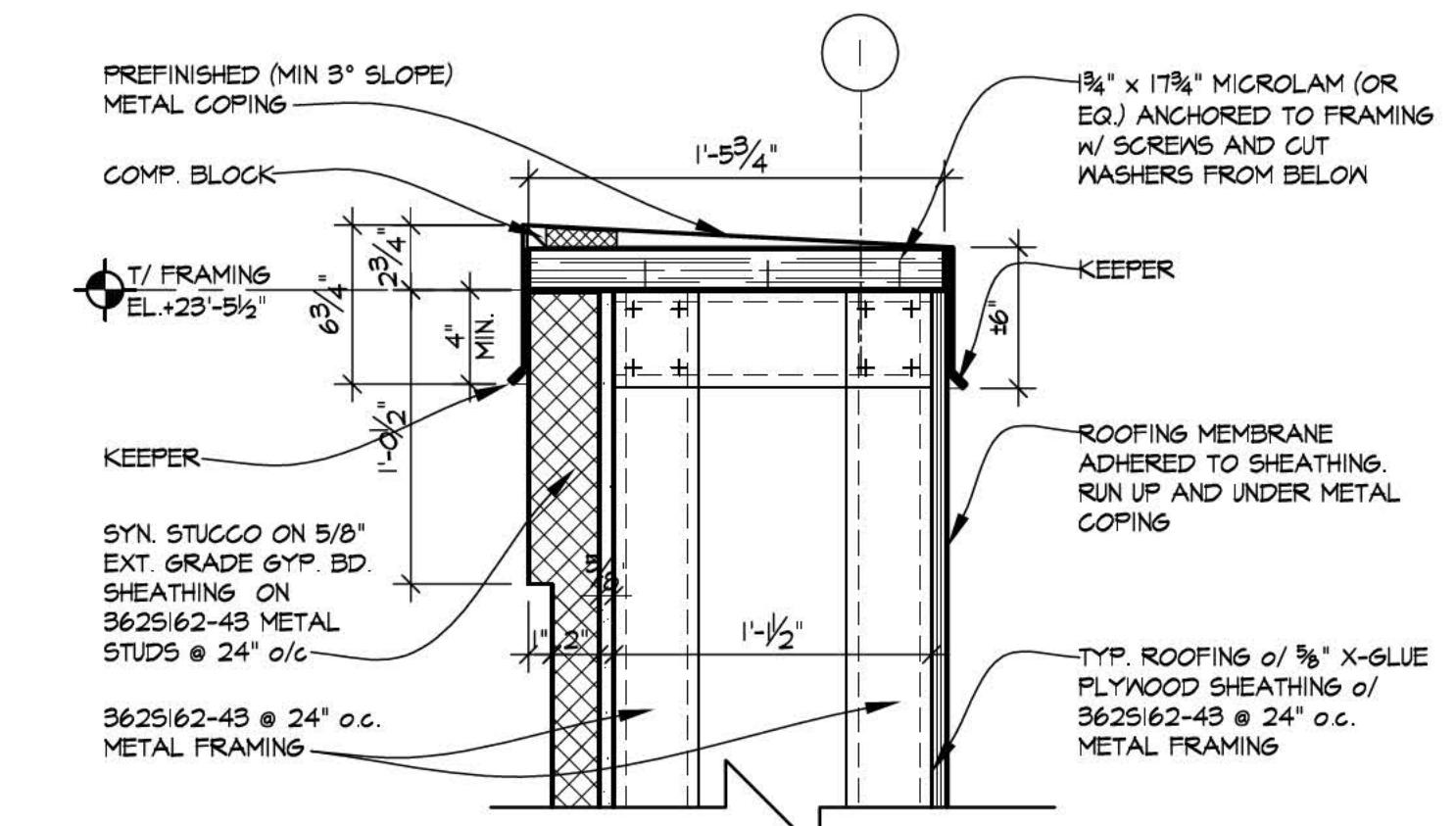
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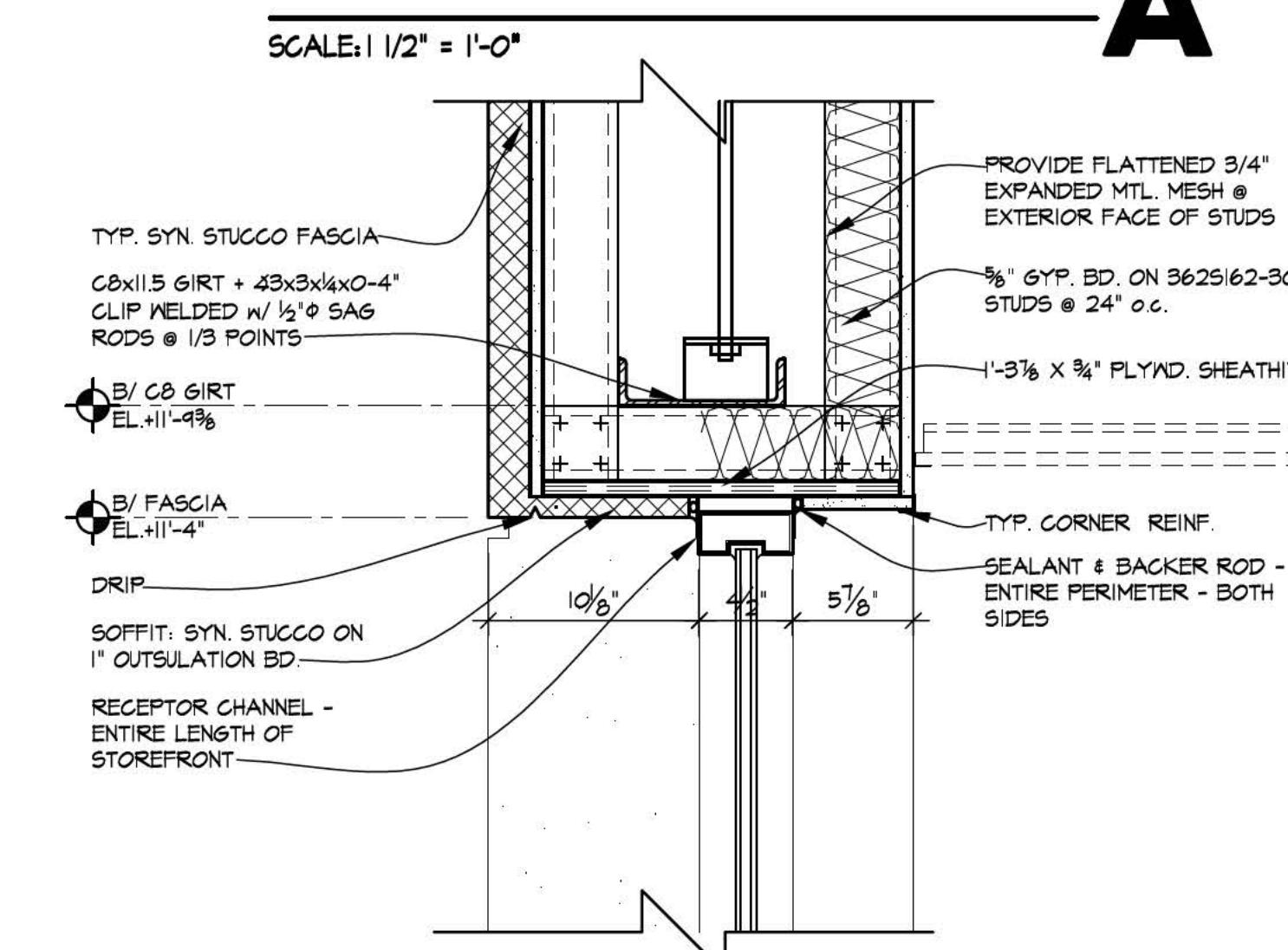
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EXTRUDED POLYSTYRENE INSULATION BOARD	
POLYSTYRENE BOARD INSULATION IS LIMITED TO A FLAME SPREAD OF 25 OR LESS (ACTUAL = 5) AND A SMOKE DEVELOPED RATING OF 450 OR LESS (ACTUAL = 165) PER ASTM E84. INSULATION AND STUDS TO BE FACED WITH A FACE LAYER OF 1/8" FIRECODE 'C' GYPSUM DRYWALL PROTECTION AS REQUIRED BY CODE	
FIBERGLASS INSULATION	
FIBERGLASS INSULATION TO BE TYPE FLAME SPREAD 25 INSULATION, FACED WITH A VAPOR BARRIER OF MAX. 10 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.	
PLYWOOD SHEATHING	
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	
GYPSUM BOARD & ACCESSORIES	
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
REINFORCED GYP PANELS	ASTM C 1278
TESTING SYSTEM AND GYPSUM PRODUCTS	ASTM C 22, C 412; C 413

H



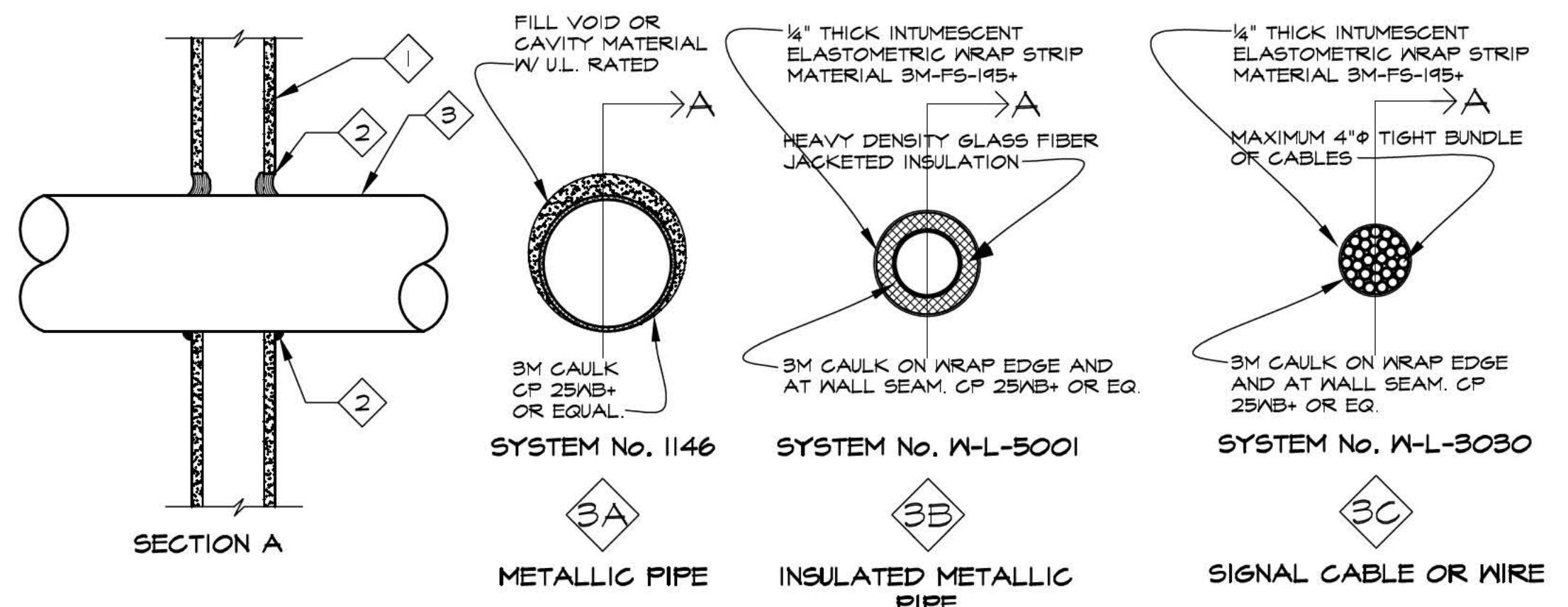
C



B

INTERIOR FINISH SCHEDULE

SEE BWCO DRAWINGS
FOR INTERIOR FINISHES



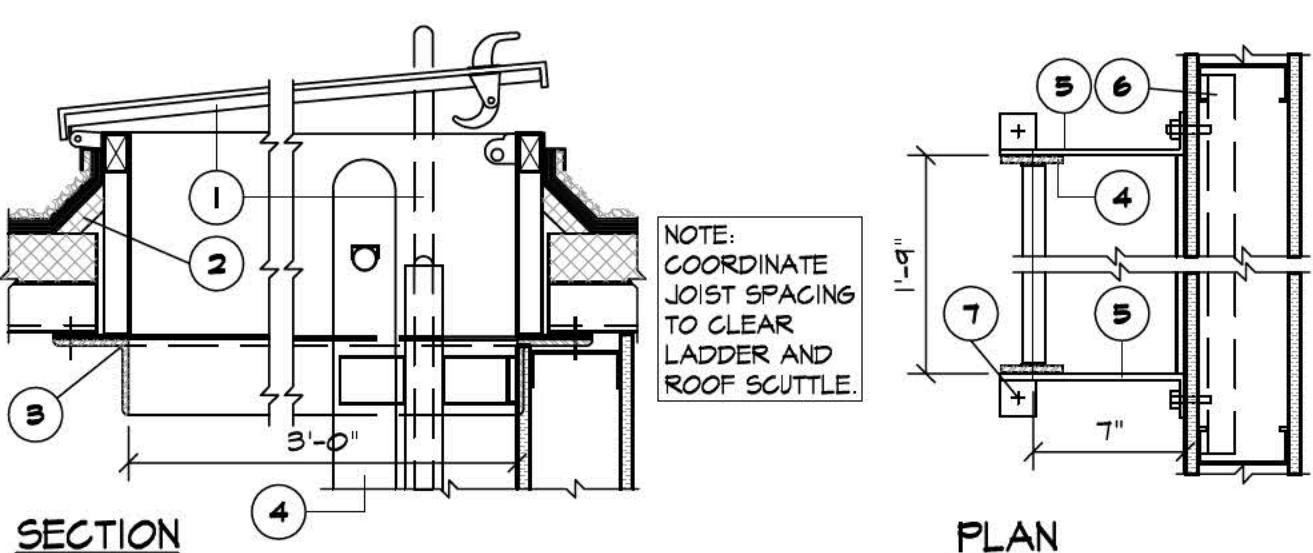
TYPICAL DEMISING WALL PENETRANT RESTORATION DETAIL

SCALE: 1/4" = 1'-0"
DRAWING LEGEND NOTES

- (A) WALL ASSEMBLY
- (B) 1/8" THICK MINIMUM CAULK 3M CP 25WB+ OR EQUAL
- (C) THROUGH WALL PENETRANT
- (D) 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)
- (E) 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)
- (F) 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)
- (G) SIGNAL CABLE OR WIRE (SYSTEM W-L 5001)



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 1/2" FLAT STL BAR SIDE RAILS, 8" DIA STL RINGS FURNISHED INTO RAILS 12" O.C. & WELDED W/M. MEAC SLIP-RESISTANT RUNG COVERS W/A FINISH COAT RUST INHIBITIVE PAINT.
5. PROVIDE 2 1/2" 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 1/2" 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

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

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

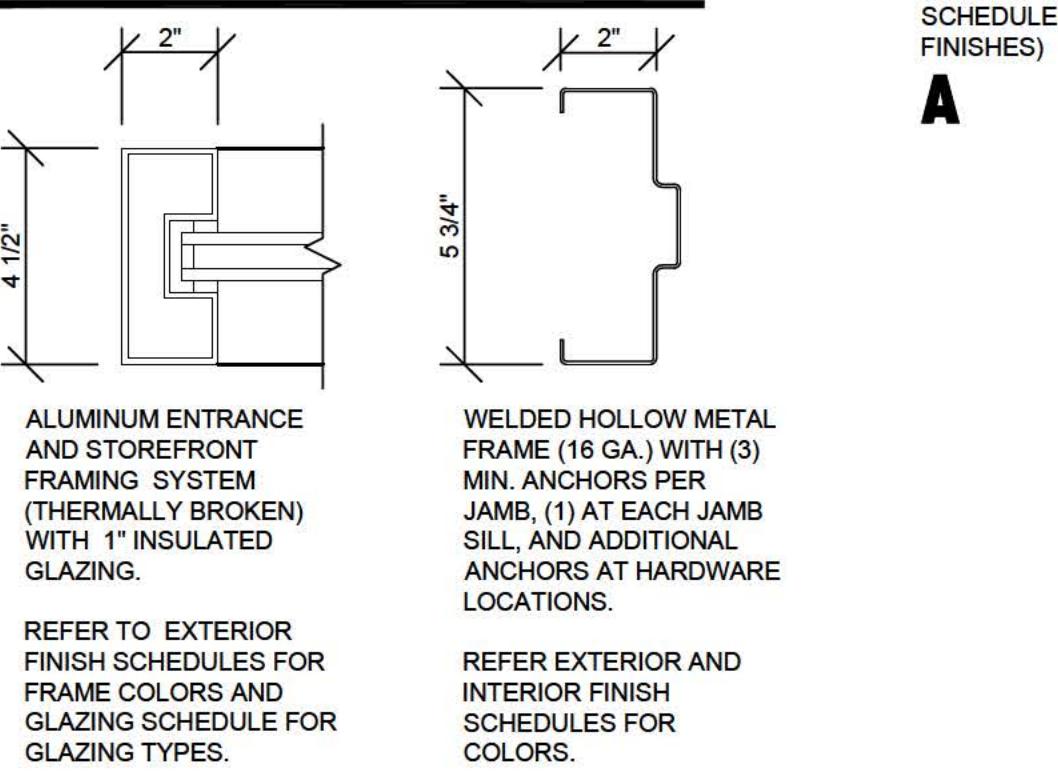
SPECIAL NOTE:
UNLESS OTHERWISE INDICATED, KNOCK
DOWN (KD) TYPE DOOR FRAMES ARE NOT
PERMITTED.

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")



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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"

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REVISIONS
T-1B DRAWING
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FOR CONTRACTING
NOT FOR CONSTRUCTION

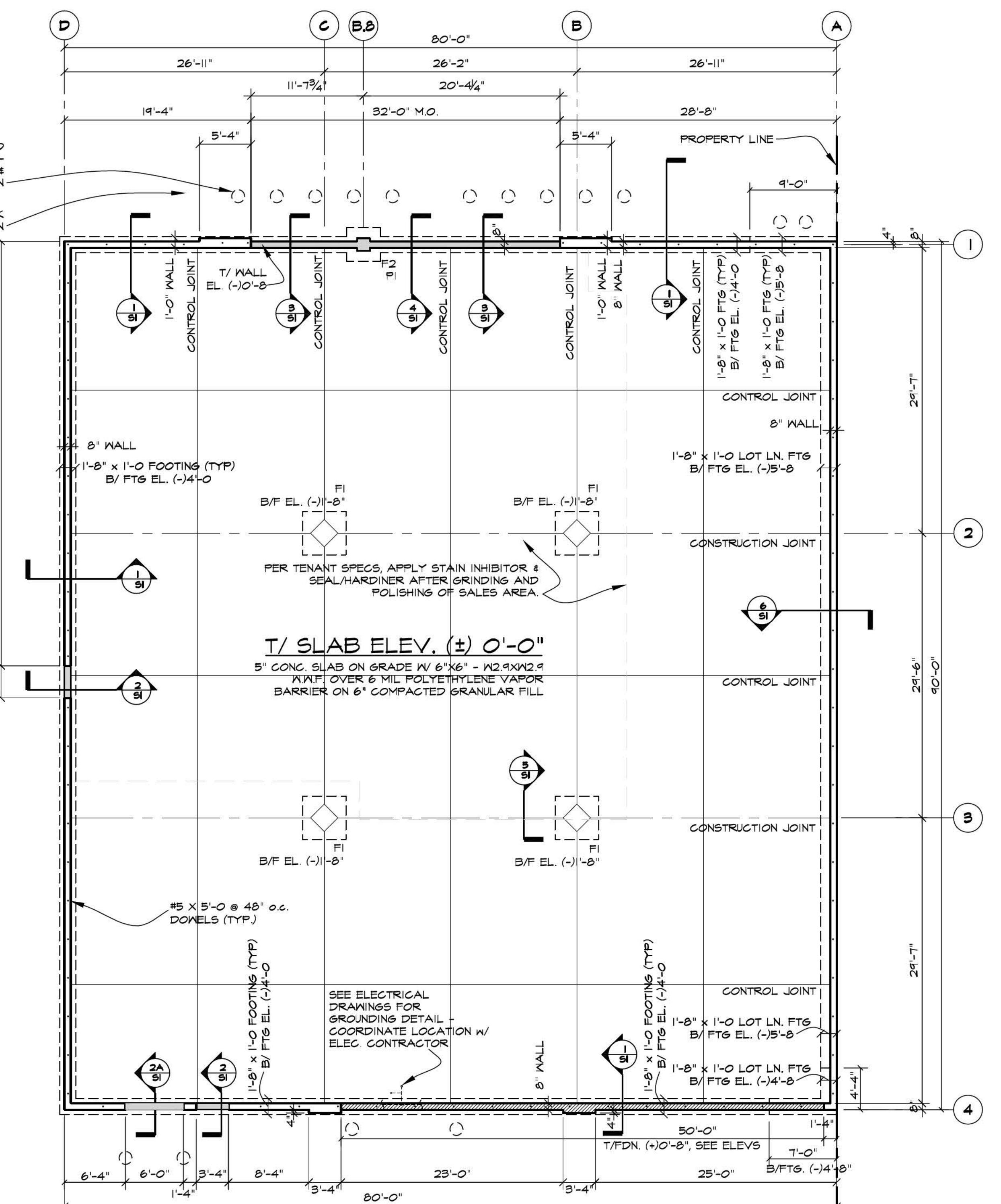
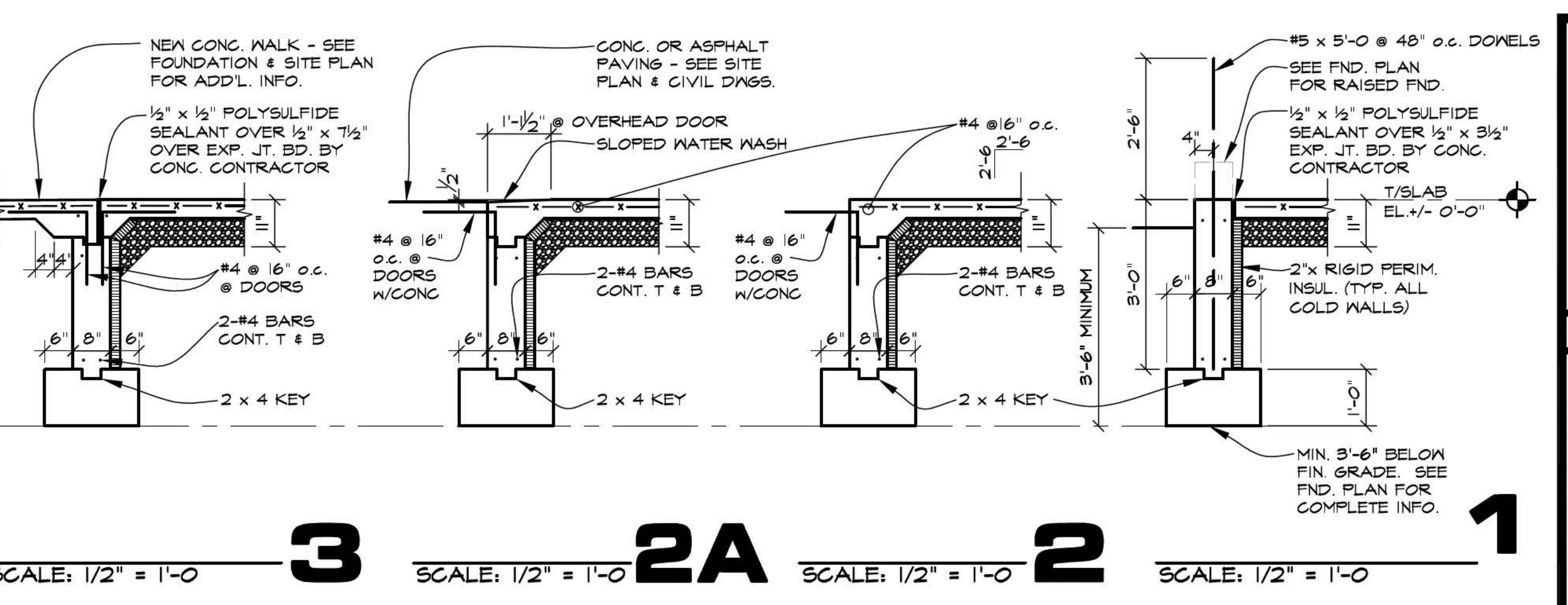
KMA & ASSOCIATES, INC. ARCHITECTS
1121 LAKE COOK ROAD
DEERFIELD, IL 60015-5235
(847)945-6869 FAX(847)945-0284+

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

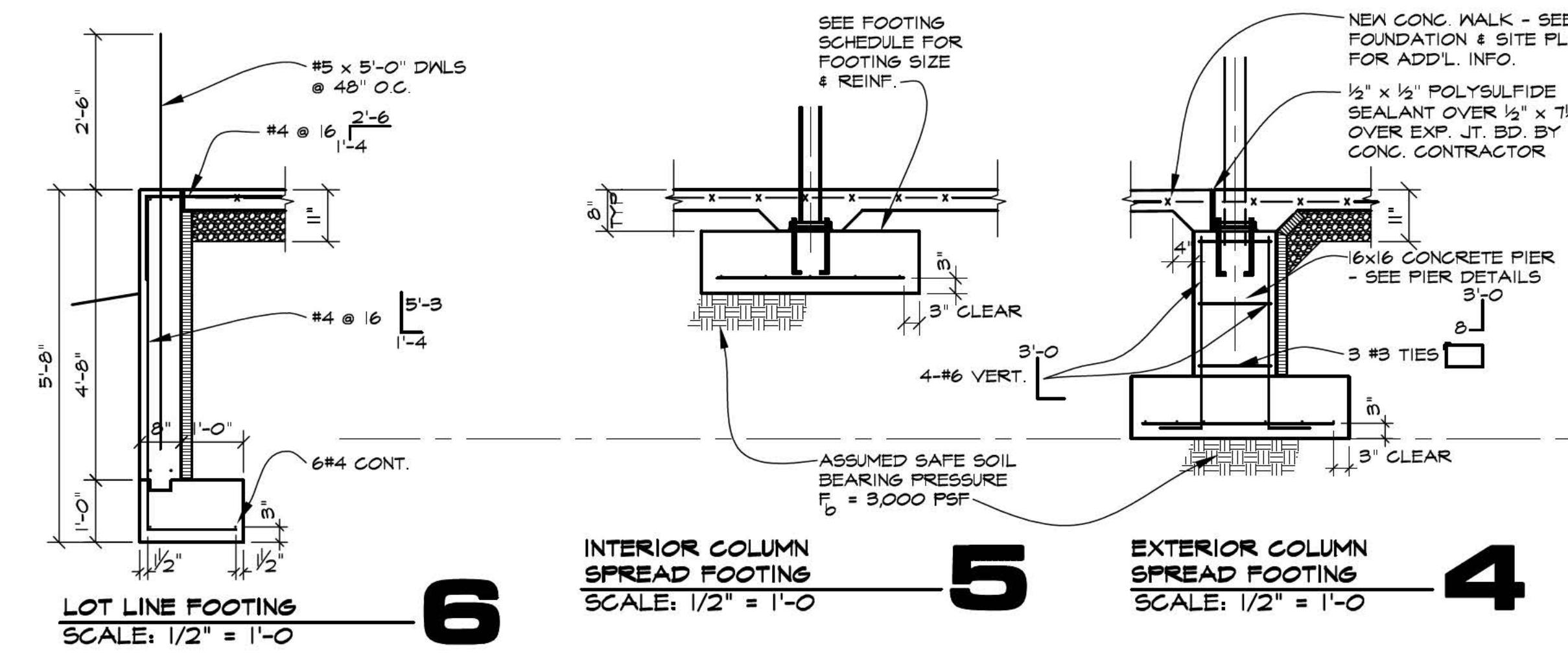
SHEET TITLE
FOUNDATION PLAN
DETAILS
GENERAL NOTES

1906

1S
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FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

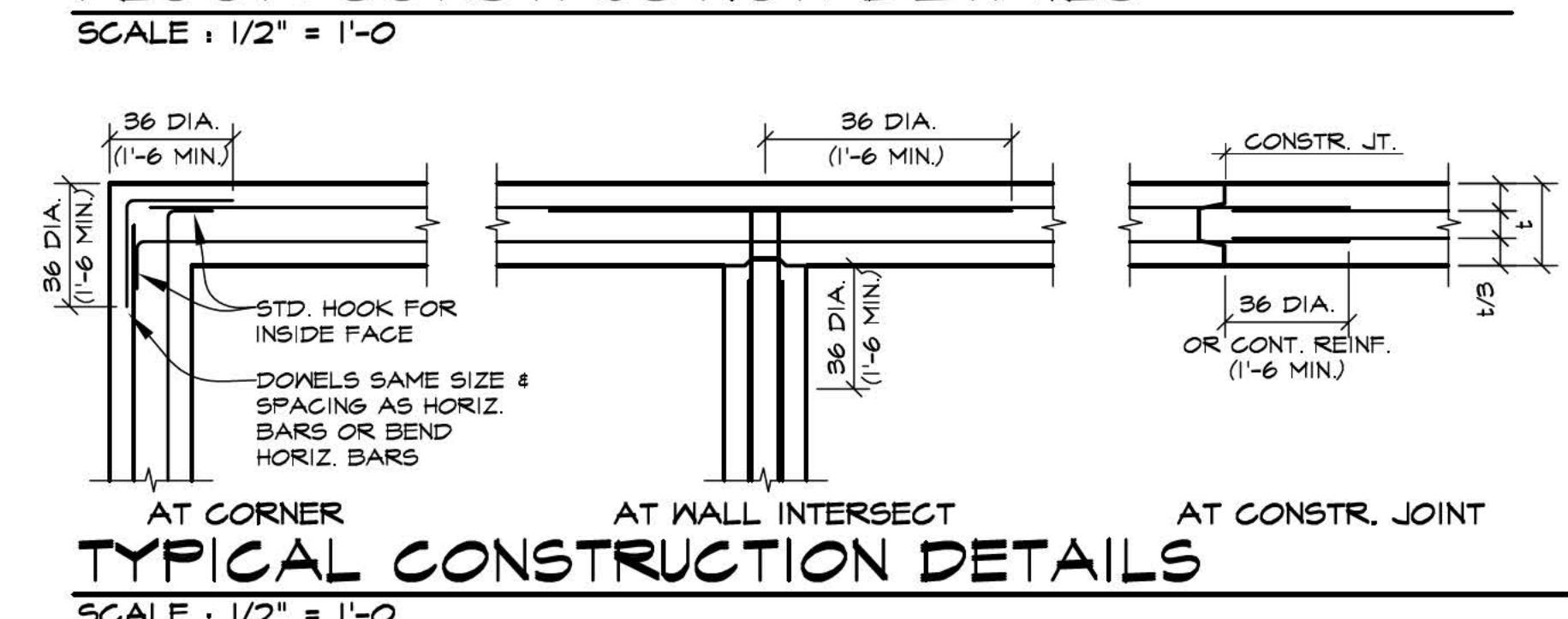


FOOTING SCHEDULE						
PAD			PIER			
MARK	SIZE	REINF. EA. WAY	BOTTOM ELEV.	SIZE	VERT. REINF.	TIES
F1	4'-6" X 4'-6" X 1'-0"	9 #4 EA	(-1)-8			
F2	3'-6" X 3'-6" X 1'-0"	6 #4 EA	(-4)-6	16 x 16	4 #6	#3 @ 12
						-0'-8
						PI
						SEE PIER DETAILS

CONCRETE NOTES

- 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.
- ALL REINFORCING BARS SHALL BE ASTM A615-60 AND SHALL HAVE DEFORMATIONS IN ACCORDANCE TO ASTM SPECIFICATIONS A-305 AND A-402 LATEST EDITIONS.
- ALL WELDED WIRE FABRIC SHALL BE ASTM A162. ALL FLATWIRK SHALL BE REINFORCED WITH 6 X 6 IN. X 1/4 IN. WELDED WIRE FABRIC UNLESS NOTED OTHERWISE. ALL WWF SHALL BE SET 1" DOWN FROM TOP OF SLAB.
- 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".
- MECHANICAL EQUIPMENT PAD, OPENING, 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.
- SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, SLEEVES, EQUIPMENT PADS, DEPRESSION, CURBS, FLOOR FINISHES, INSERTS, OTHER EMBEDDED ITEMS AND DETAILS.
- FABRICATORS SHALL SUBMIT CHECKED SHOP DRAWINGS FOR REINFORCING STEEL AND OTHER DETAILS TO THE ARCHITECT-ENGINEER AND OBTAIN APPROVAL PRIOR TO FABRICATION.
- 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.
- CONCRETE FLOOR SHALL HAVE HARDENER AND SEALER.
- SEE CONSTRUCTION NOTES AS SHOWN ON THE FOUNDATION PLAN.
- 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.
- CONCRETE CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL TRANSFORMER PAD, PYLON SIGN FOUNDATION & LIGHT POLE BASES.

FLOOR CONSTRUCTION DETAILS



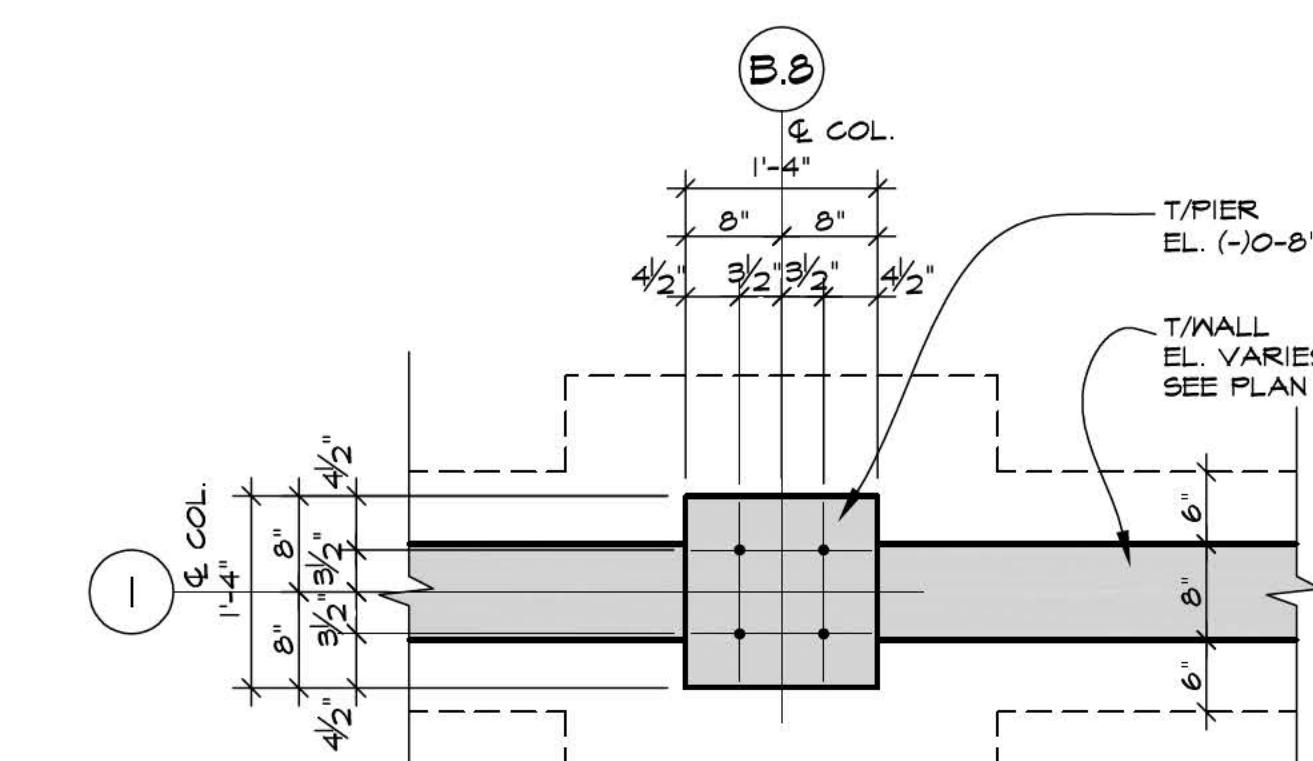
SCALE : 1/2" = 1'-0"

GENERAL SUBSTRUCTURE NOTES

- FOOTINGS ARE DESIGNED TO BEAR ON FIRM UNDISTURBED SOIL CAPABLE OF SUPPORTING A LOAD OF 3000 P.S.F., IF SOIL IS NOT CAPABLE OF SUPPORTING THIS LOAD AT ELEVATIONS SHOWN, DROP FOOTINGS TO REQUIRED STRATA.
- ALL FLOOR AND PAVEMENT SLABS SHALL REST ON WELL-COMPACTED FILL.
- TOP AND BOTTOM BARS SHOWN ARE TO BE CONTINUOUS IN ALL WALLS. PROVIDE CORNER BARS AT ALL OUTSIDE CORNERS.
- LAP WIRE MESH ONE FULL MESH AT SIDES AND ENDS.
- FOUNDATION WALL POUR SHALL BE A MAXIMUM OF 6' BETWEEN CONSTRUCTION JOINTS. PROVIDE CONTROL JOINTS AT SAME LOCATION AS MASONRY CONTROL JOINTS.
- FILL ALL COLUMN POCKETS WHEN FLOOR SLAB IS Poured.
- FOOTINGS ARE TO PROJECT A MINIMUM OF 8" BEYOND FACE OF WALL OR PIER UNLESS NOTED.
- WALL FLOORING WHICH STEP DOWN ON ELEVATION SHALL DO SO AT A MAXIMUM SLOPE OF ONE DOWN TO TWO HORIZONTAL.
- NO CONCRETE SHALL BE Poured IN EXCAVATION CONTAINING WATER OR ON FROZEN GROUND.
- SEE OTHER DRAWINGS FOR CURBS, PAVEMENT AND SIDEWALKS.
- SEE "CONCRETE NOTES" FOR ADDITIONAL INFORMATION.
- GENERAL MACHINE EXCAVATIONS FOR FOOTINGS SHALL STOP AT LEAST 6' ABOVE SCHEDULED ELEVATION OF BOTTOM OF FOOTING. THE FINAL EXCAVATIONS SHALL BE DUG BY HAND NOT MORE THAN 24 HOURS BEFORE THE CONCRETE IS PLACED.
- SOIL REPORT WAS PREPARED BY ECS LTD, BUFFALO GROVE, IL, ECS PROJ #16-1014 TITLED GEOTECHNICAL ENGINEERING REPORT SIBLEY LINCOLN PLAZA, SNC OF SIBLEY BOULEVARD & LINCOLN AVENUE, DOLTON, IL, AUGUST 22, 2014.

PIER DETAILS

SCALE: 3/4" = 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.

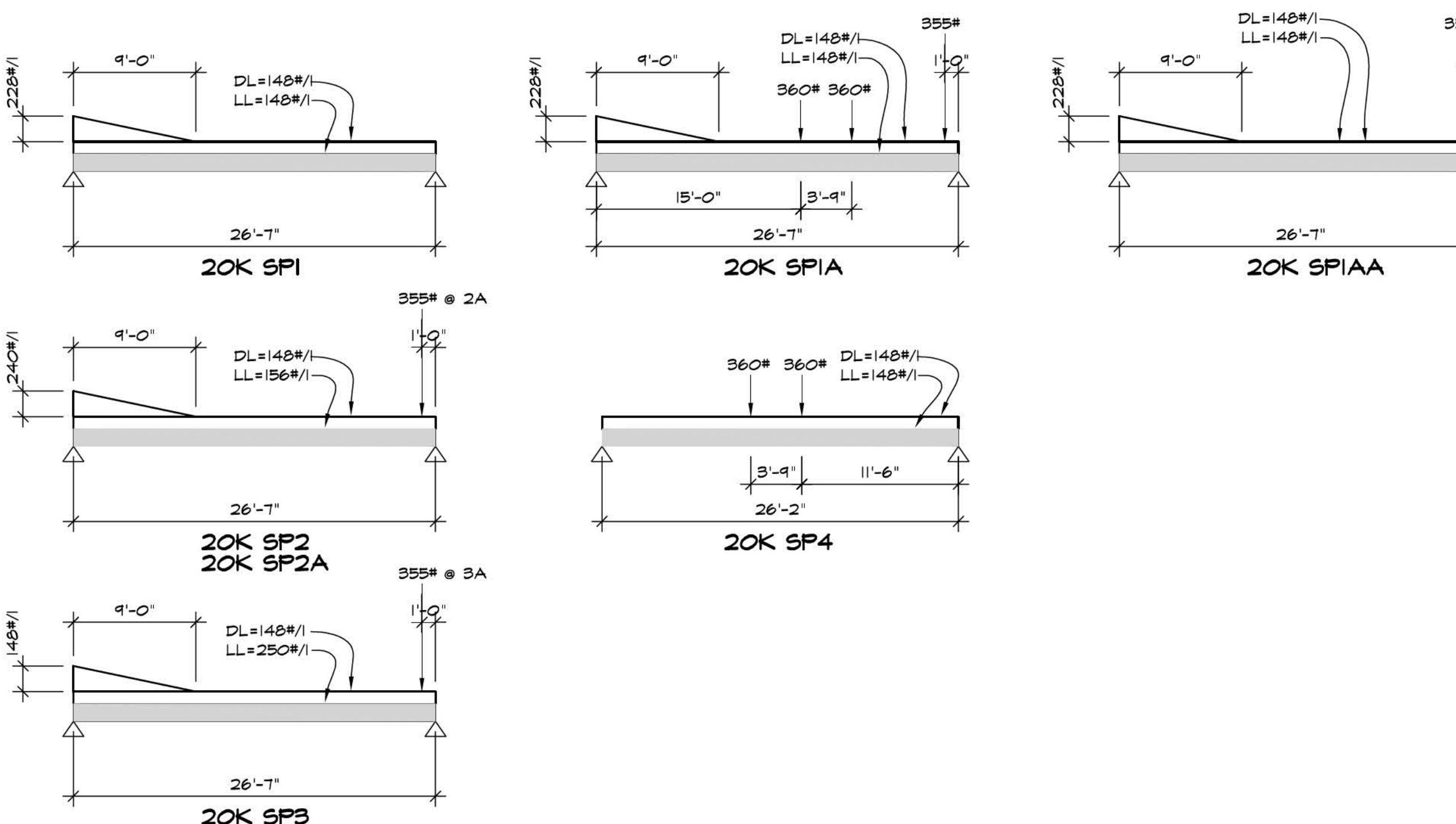
DESIGN LOADS

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)

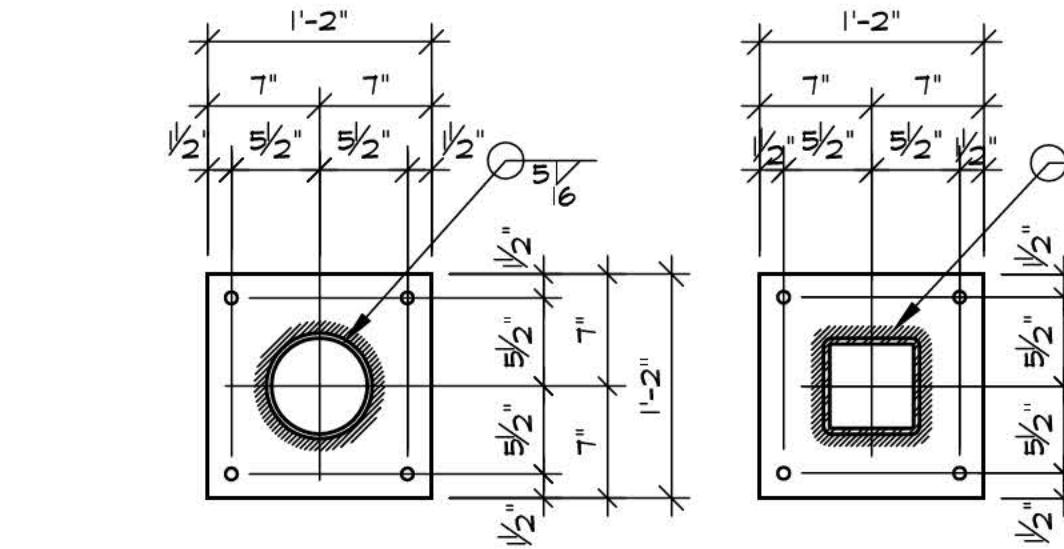
	100 PSF
B. ROOF SNOW LOAD	25 PSF
GROUND SNOW LOAD	10
EXPOSURE FACTOR (C_e)	10
IMPORTANCE FACTOR (I)	10
Thermal Factor (C_t)	10
C. DEAD LOADS	ACTUAL MATERIAL WEIGHTS
D. WIND LOADS	90 MPH
3 SECOND GUST	10
Importance Factor	B
Exposure Category (MAFRG)	16 PSF
Exposure Category (C&C)	16/20 PSF
Main Wind Force Pressure	
Wind Pressure (MAFPAP)	
Components & Cladding Varies	
WALL	
E. SEISMIC LOADS	
Seismic Use Group	II
Site Class	D
Spectral Response Coeff.	
Short Periods (SDS)	.148
1 Second Periods (SD1)	.104
Basic Structural System	
Ordinary Reinforced Masonry Shear Walls	
Response Mod Factor (R)	2.0
Design Base Shear (V)	0739W
Analysis by Equiv. Lateral Force Procedure	
Seismic Design Category	B
F. Handrails & Guards	
Uniform Load in Any Direction	50 LB/FT
Concentrated Load in Any Direction	200 LB/FT



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

JOIST DIAGRAMS

NO SCALE



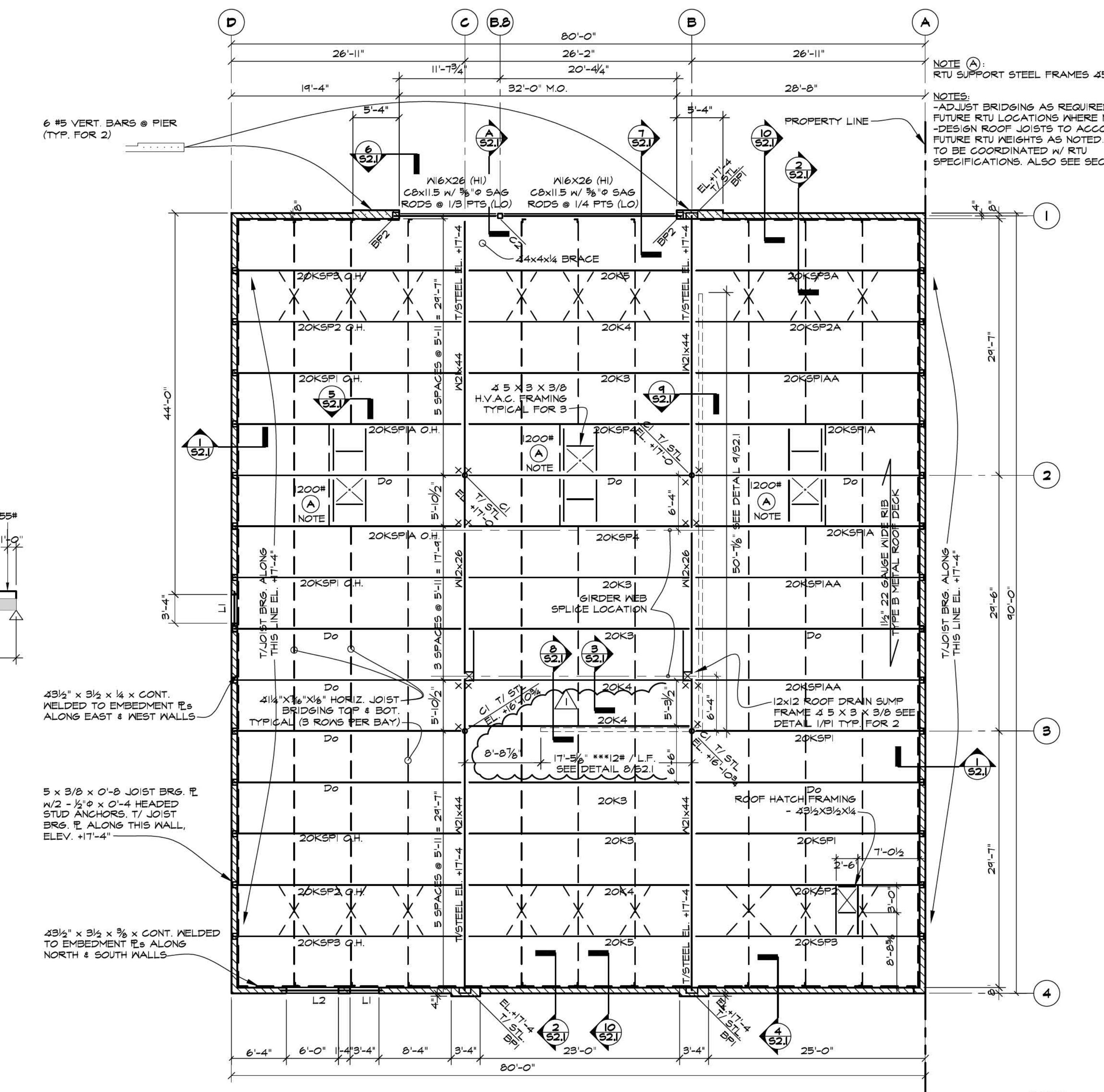
C1

6" STD. PIPE COL
14" x 1/4" x 1'-2" SET PL
14" x 1" x 1'-2" BASE PL
ON 3/8" GROUT BED
W/ 4-3/8" x 1'-6" A.B.
W/ 4-3/8" x 1'-6" A.B.

C2

COLUMN BASE PLATE DETAILS

SCALE: 1" = 1'-0"



ROOF FRAMING PLAN

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

LINTEL SCHEDULE

L1 24s 3 1/2 x 3 1/2 x 5/8

L2 C8 x 11.5 + 7 x 5/8 PL

NOTES:
PROVIDE MIN. 8" BEARING EACH END. INSTALL W/ LINTEL FLASHING COMPLETE W/ END DAMS.

BEARING PLATES

BPI 8 x 3 1/4 x 0'-10 PL W/ (2) 1/2" x 4 HEADED ANCHORS
BP2 9 x 1/2 x 0'-9 PL W/ (2) 1/2" x 4 HEADED ANCHORS

1/13/20

REVISIONS

THIS DRAWING	NOT FOR CONSTRUCTION	SUITE F
	FOR BIDDING	60015-5235
	FOR PERMIT	60015-5235
	NOT FOR CONTRACTING	FAX(847)945-0284
	NOT FOR CONSTRUCTION	

KMA & ASSOCIATES, INC. ARCHITECTS
1121 LAKE COOK ROAD
DEERFIELD, ILLINOIS
(847)945-6859

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

1906

NORTH

REVISIONS

1/18 DRAWING	1/18/19
FOR COORDINATION	
FOR BIDDING	
FOR CONTRACTING	
NOT FOR CONSTRUCTION	

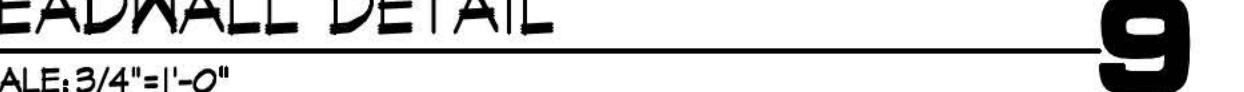
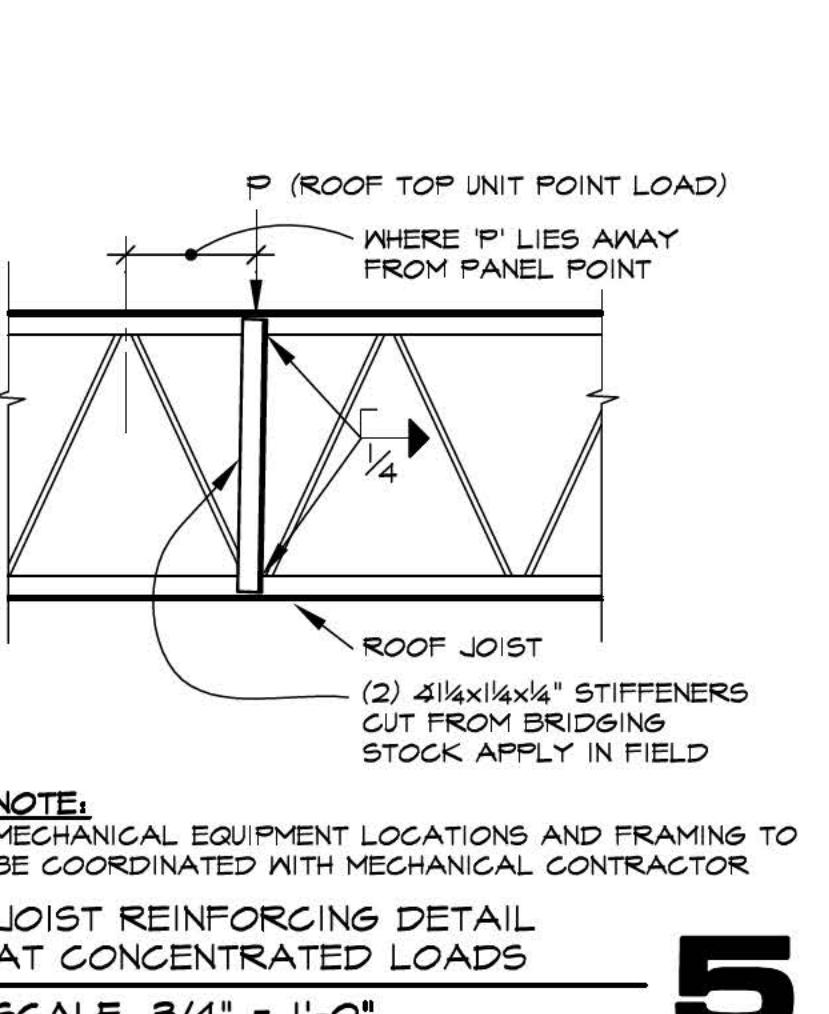
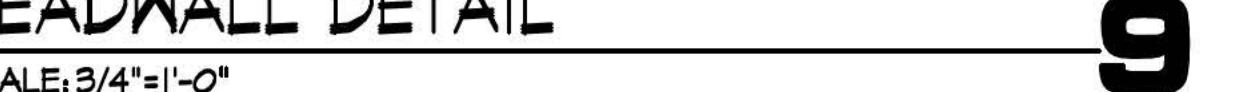
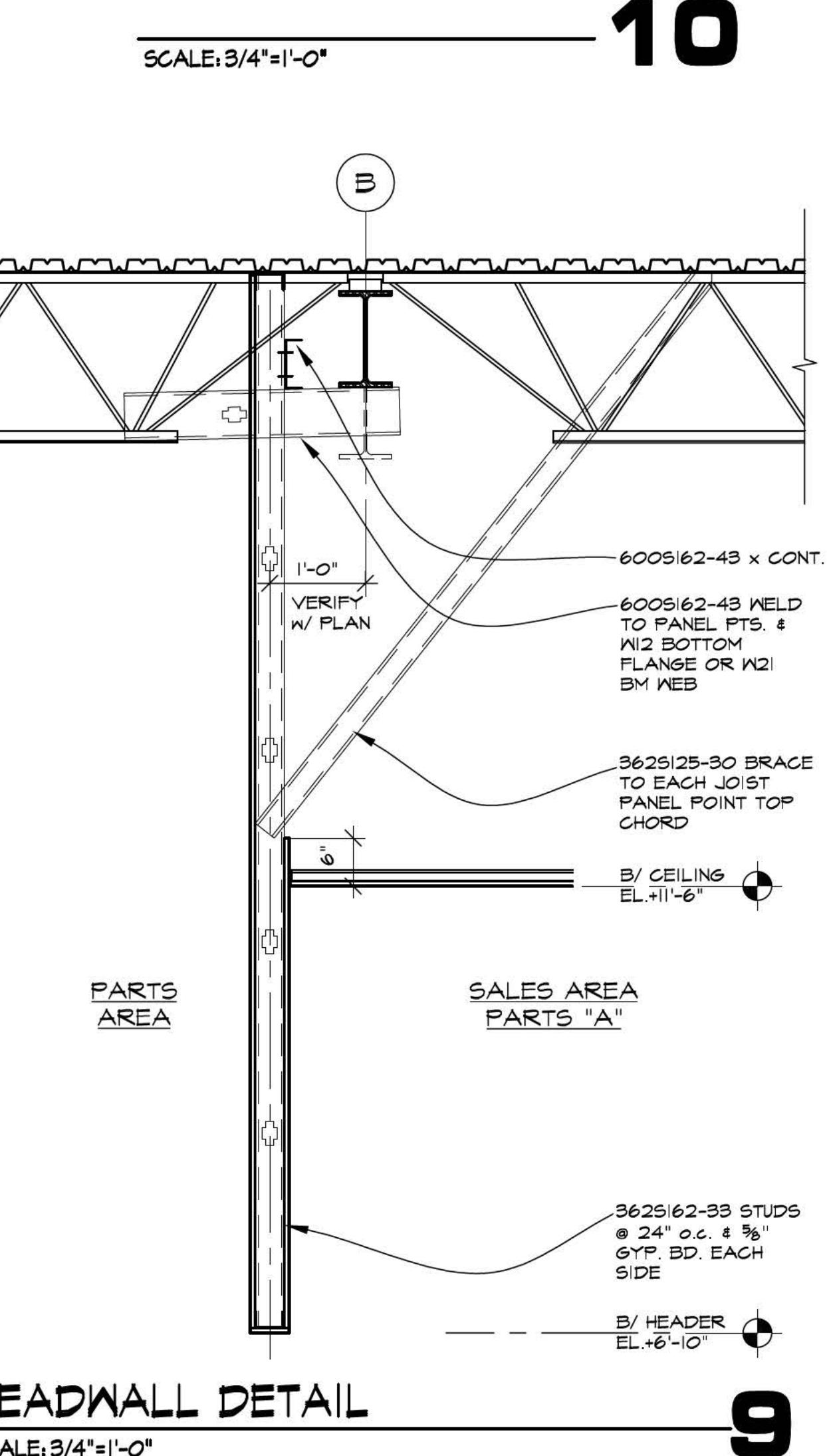
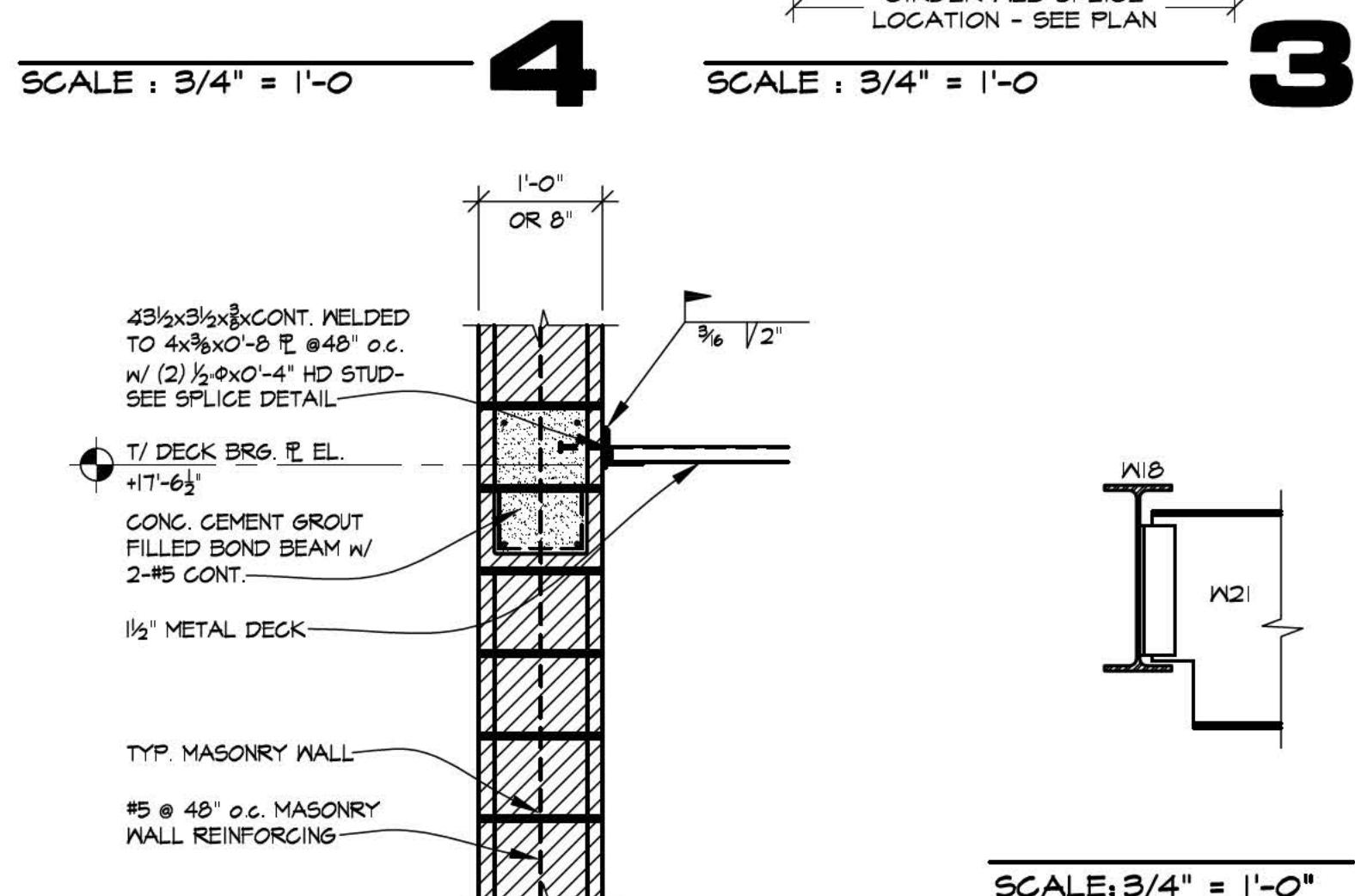
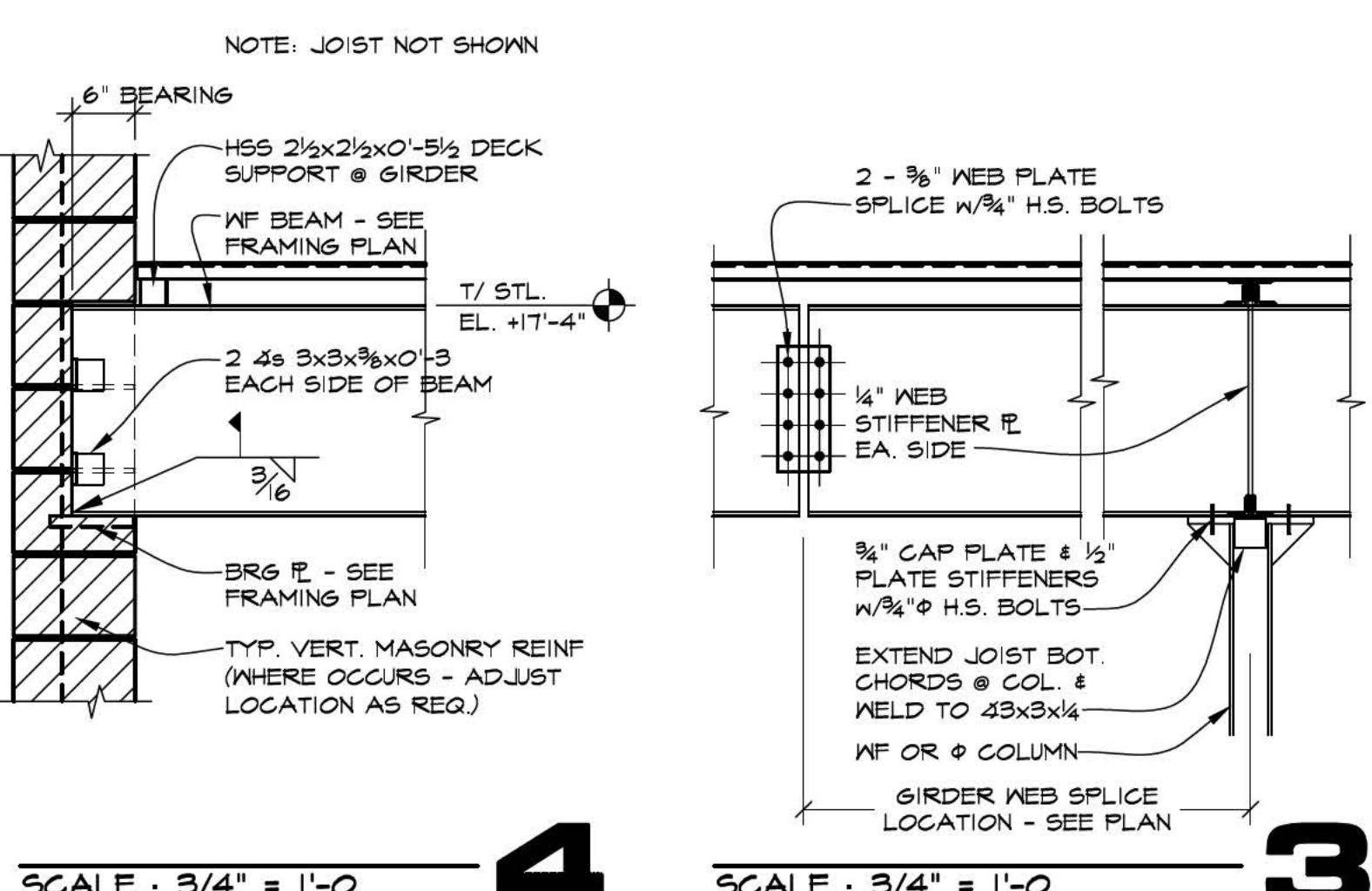
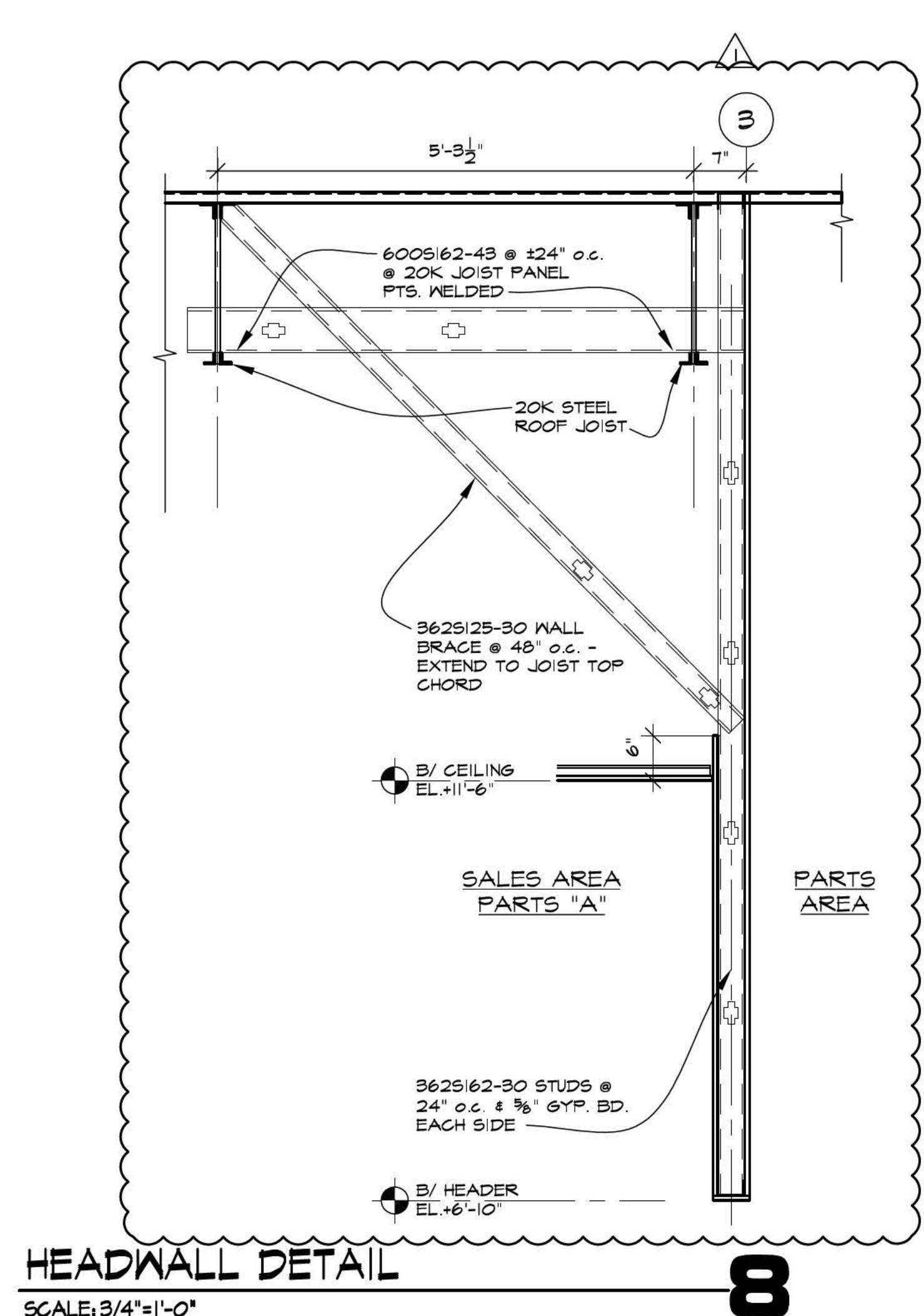
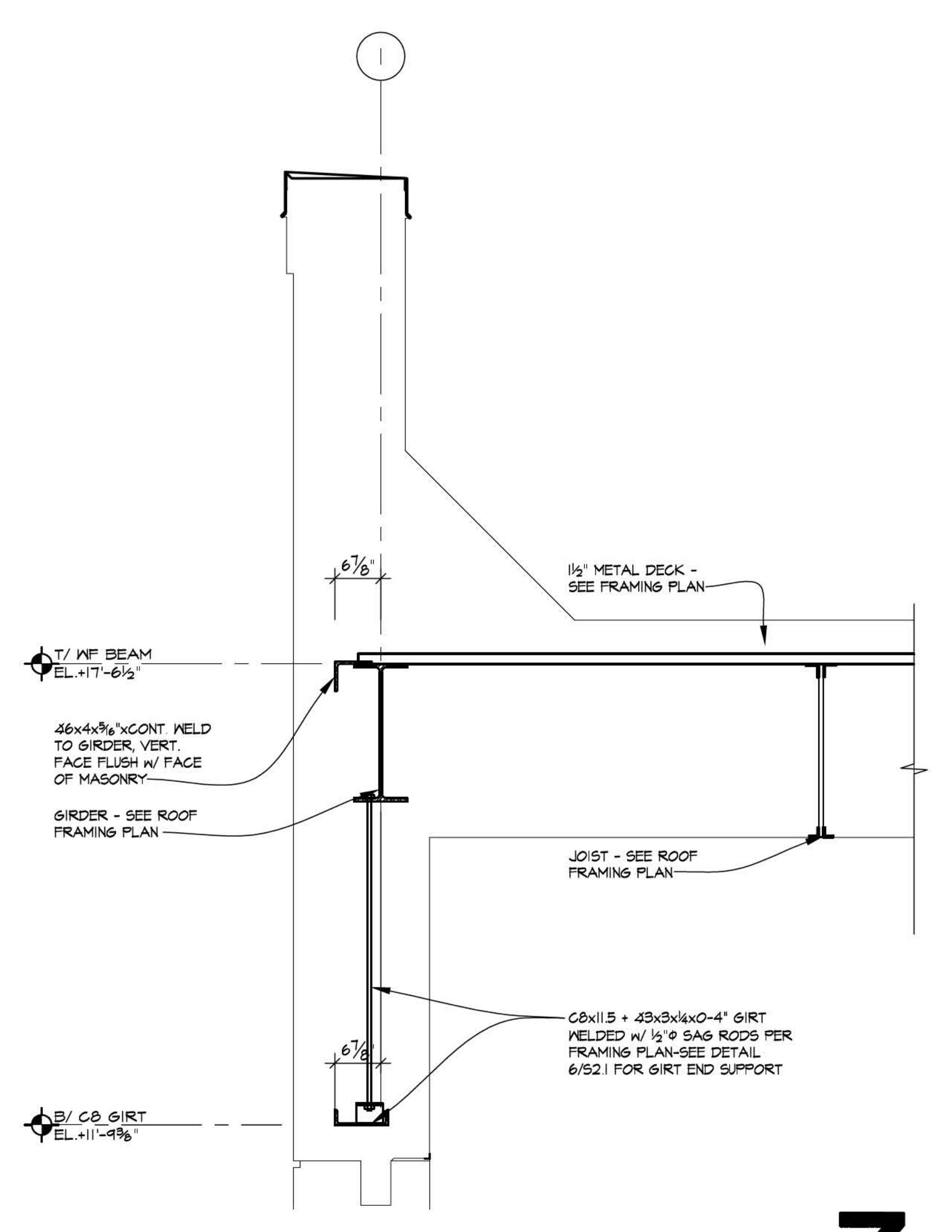
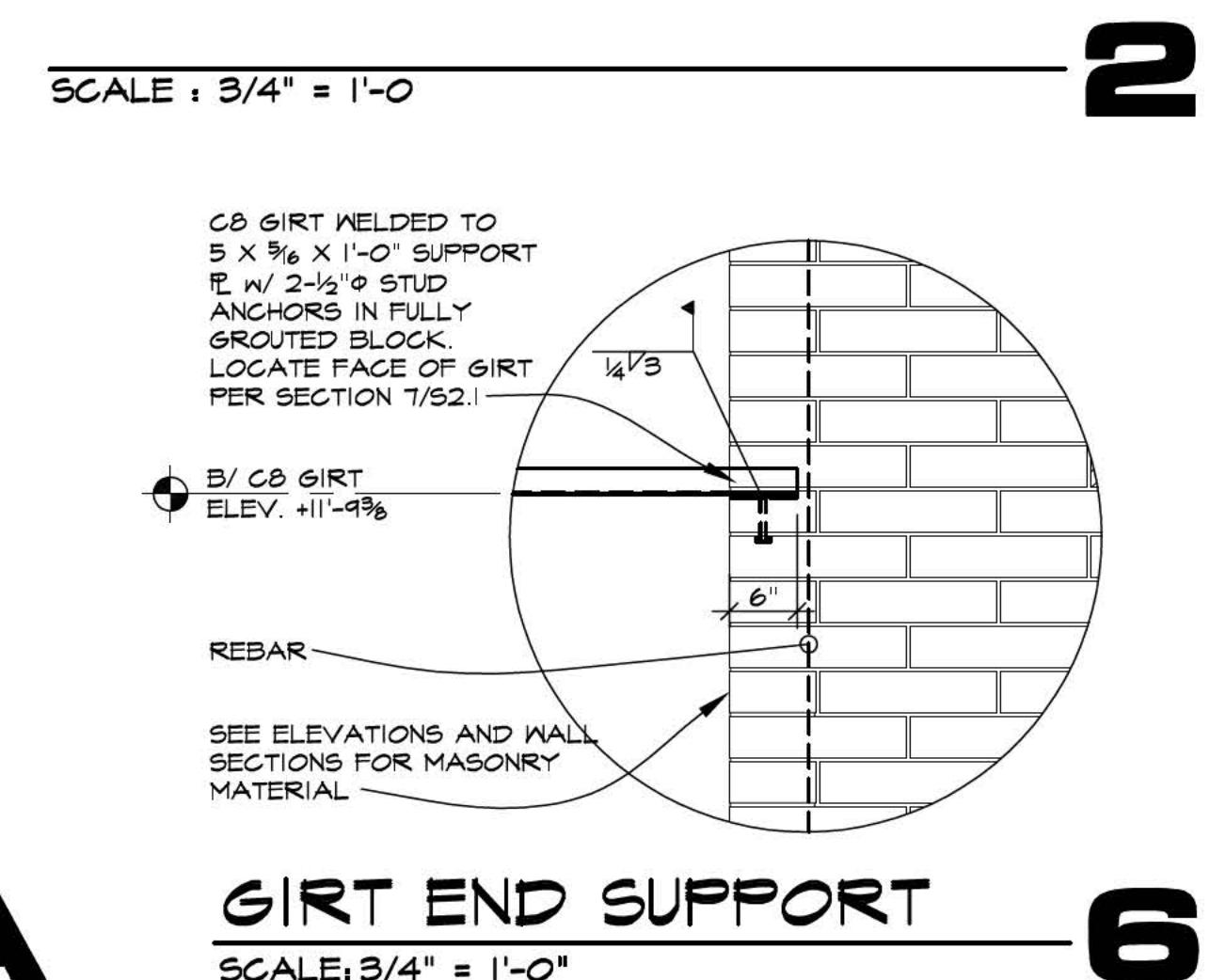
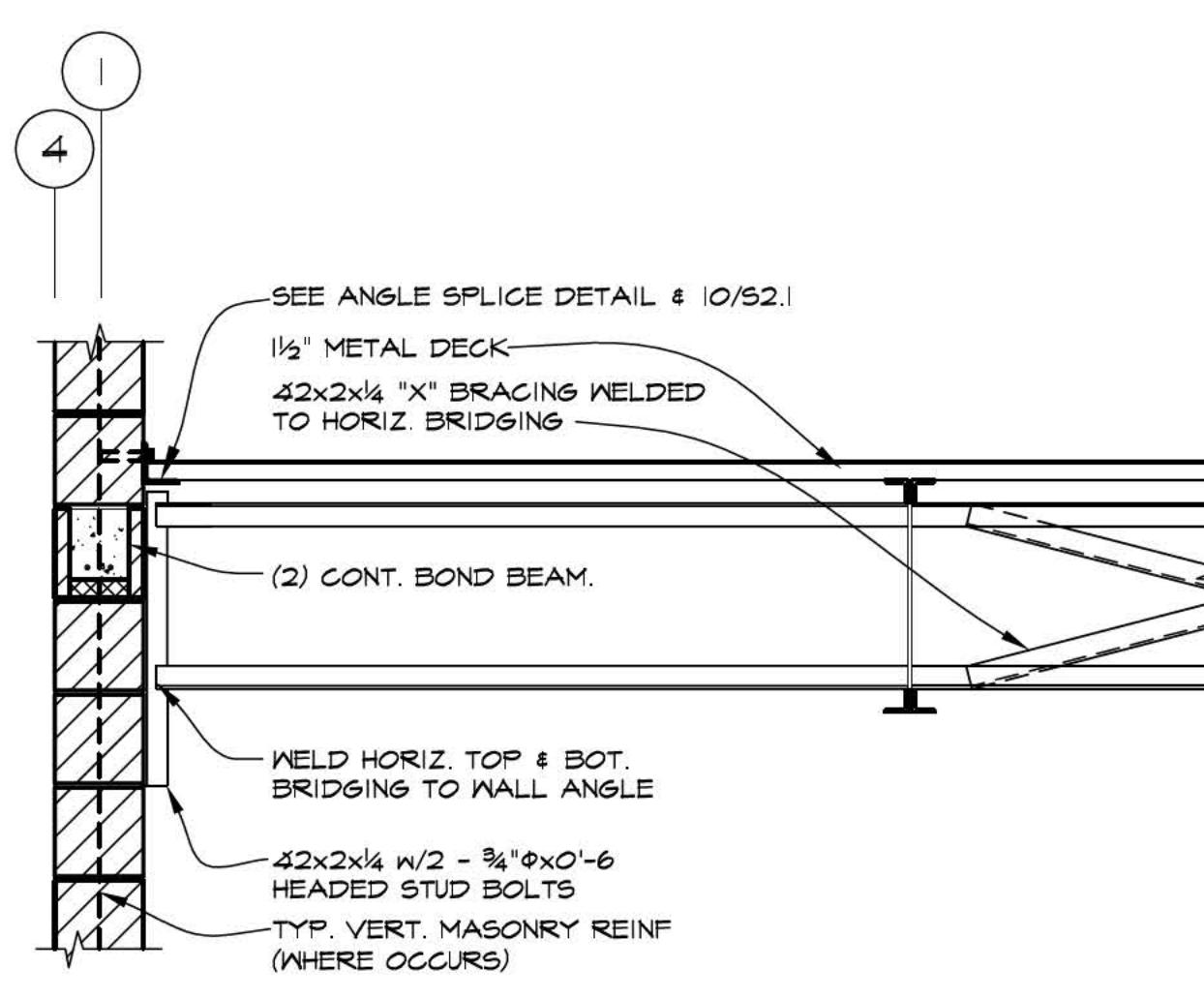
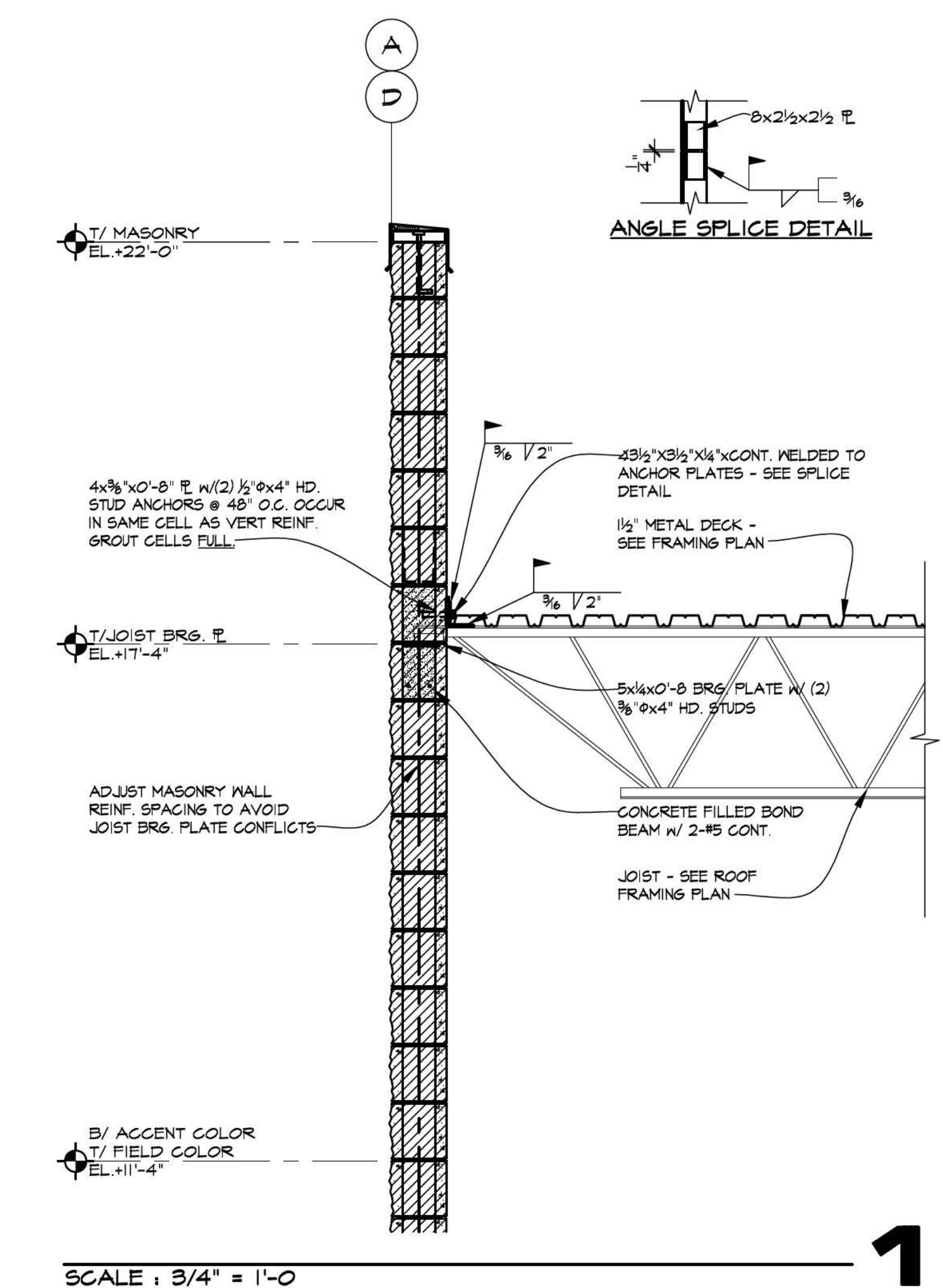
KMA & ASSOCIATES, INC. ARCHITECTS
1121 LAKE COOK ROAD
DEERFIELD, ILLINOIS 60015-3235
(847)945-6669 FAX(847)945-6669

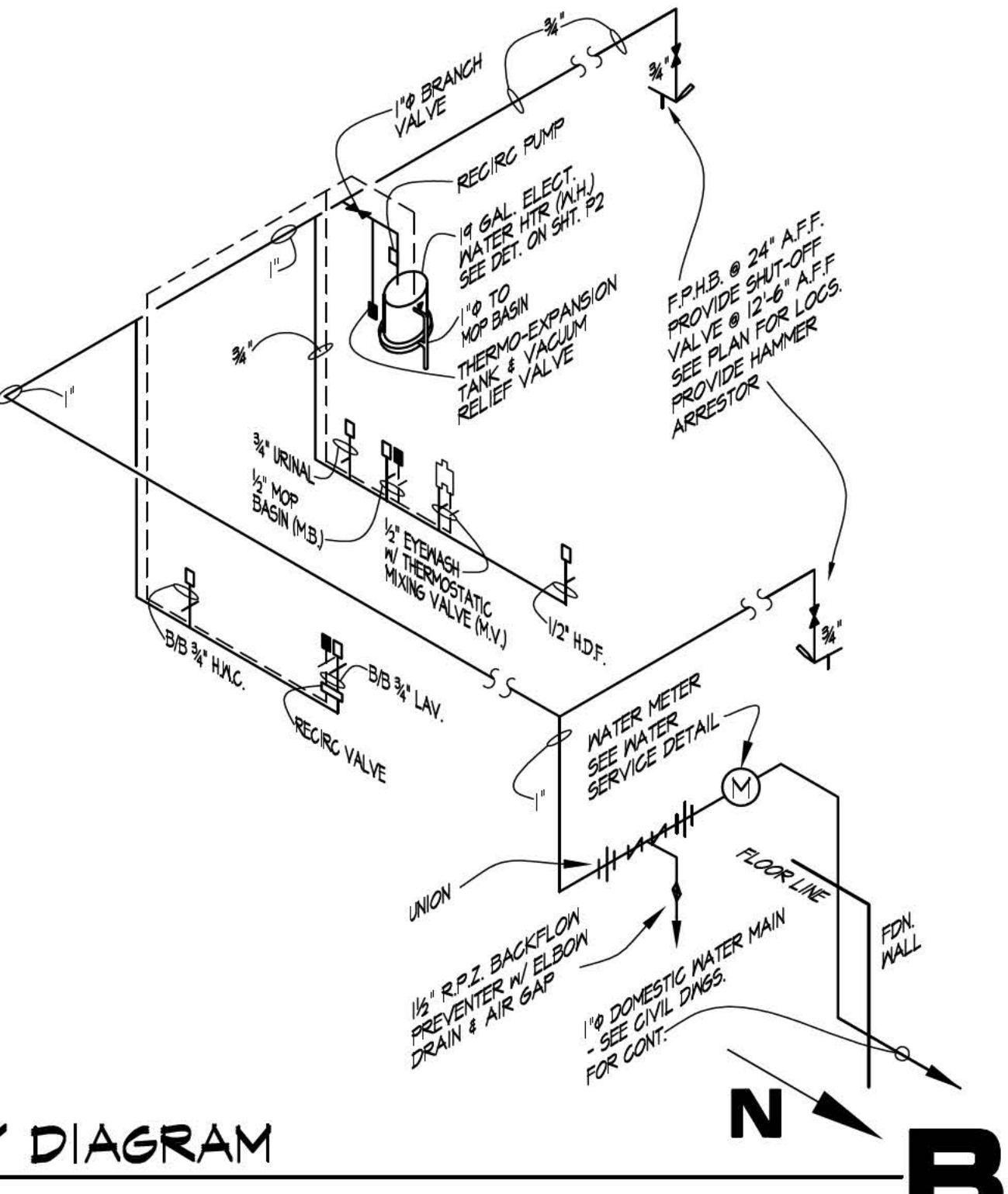
O'REILLY AUTO PARTS
DOLTON PLAZA
1317 E. SIBLEY BLVD. DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE DETAILS

1906

2.1





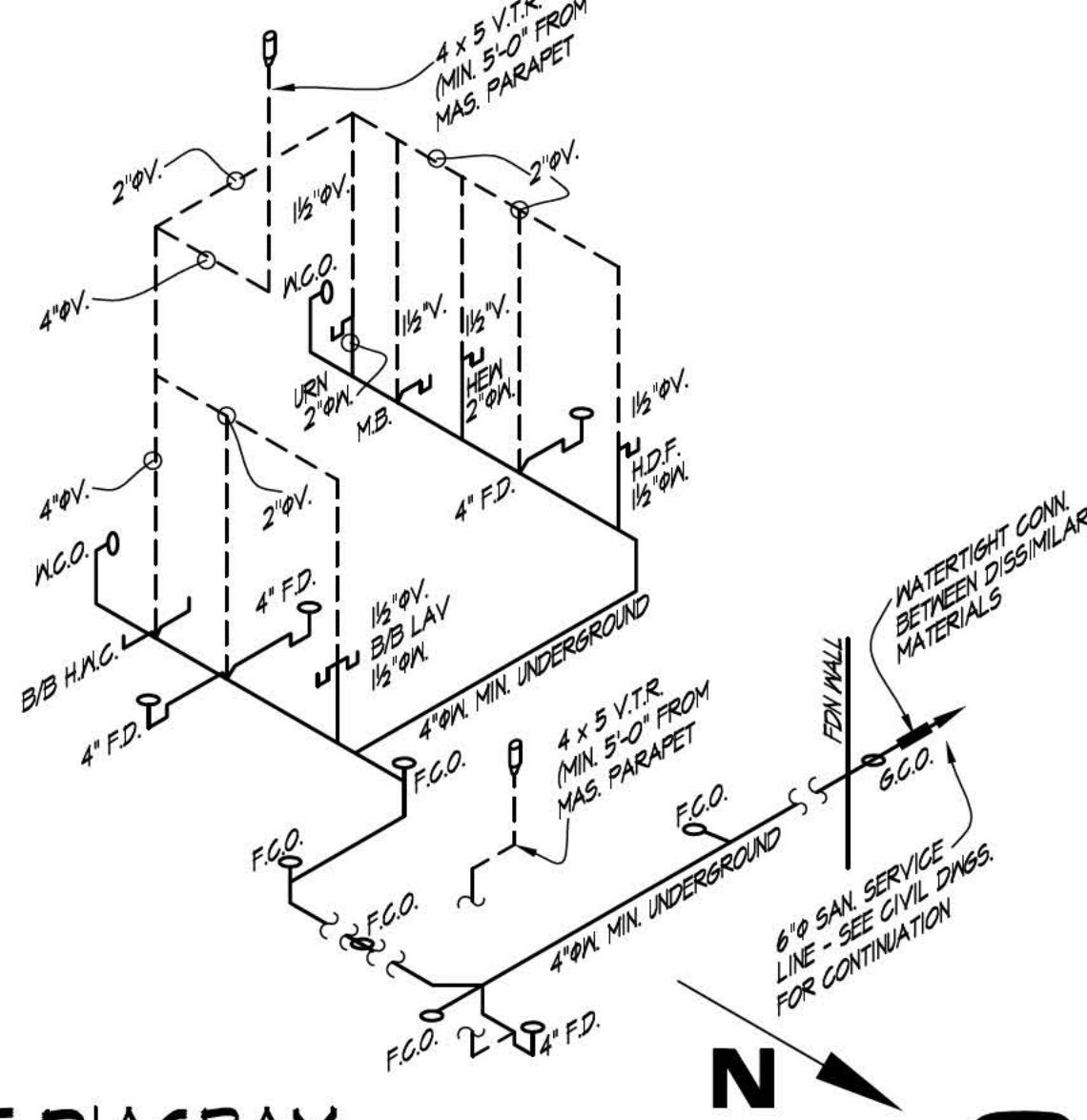
SCHEMATIC SUPPLY DIAGRAM

SCALE: NONE

NOTE:
MINIMUM UNDERGRND. WASTE LINE TO
BE 4"Ø. CLEANOUT SIZE TO MATCH
WASTE PIPE SIZE UP TO AND INCLUDING
6"Ø.

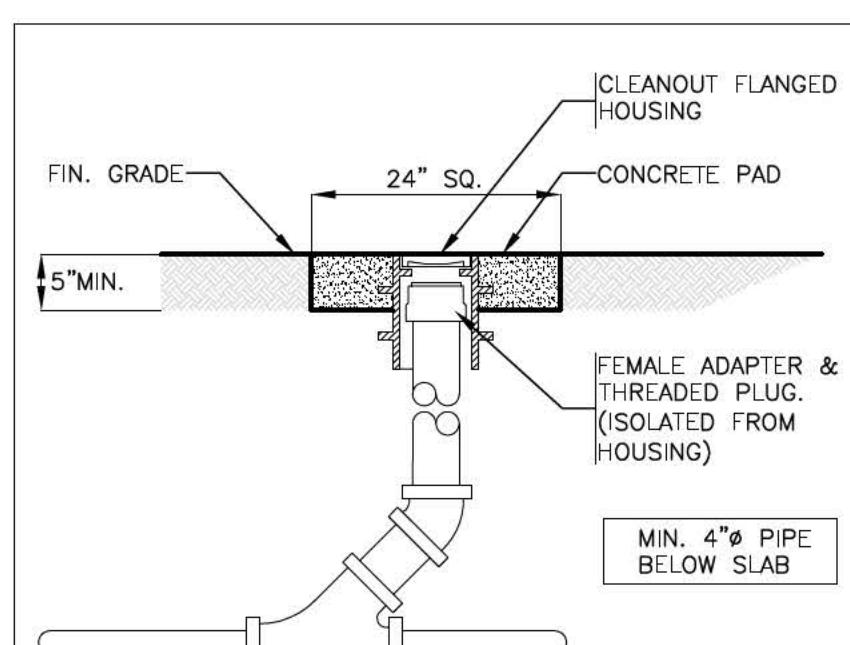
GENERAL WASTE/VENT NOTES

1. ALL UNDERGROUND WASTE PIPING TO BE 4" MIN. CAST IRON OR SCHED. 40 SOLID WALL PVC AS LOCAL CODE ALLOWS & ALL INTERIOR ABOVE-GRND WASTE & VENT PIPING SHALL BE SCHED. 40 SOLID WALL PVC. CELLULAR CORE PVC IS NOT ALLOWED. ALL CLEANOUTS SHALL BE SAME SIZE AS PIPE SERVED.
 2. ALL P-TRAPS TO BE THE SAME SIZE AS THE FIXTURE OPENING.
 3. ALL UNDERGROUND SANITARY & STORM PIPING SHALL BE CAST IRON.
 4. DOUBLE COMBO WYE 1/8 BENDS SHALL BE LIMITED WHERE AND HOW TO BE INSTALLED. CONSULT PLUMBING INSPECTOR BEFORE STARTING WORK.



SCHEMATIC WASTE/VENT DIAGRAM

SCALE: NONE



TYPICAL EXTERIOR CLEANOUT DETAIL

WATER SERVICE DETAIL

N

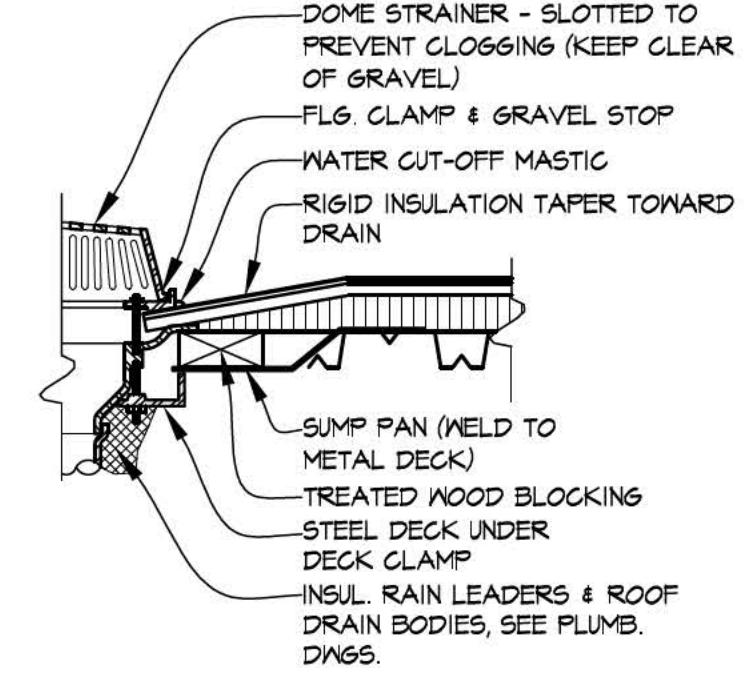
PIPING INSULATION NOTES

SCOPE:

FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID. PROVIDE PIPING INSULATION ON NEW PIPING AS REQUIRED BY CONSTRUCTION DOCUMENTS INCLUDING: INTERIOR ROOF DRAIN BODY, INTERIOR HORIZONTAL AND VERTICAL ROOF DRAIN PIPING, CONDENSATE LINES/DRAINS, EXPOSED DOMESTIC COLD WATER, DOMESTIC COLD WATER AGAINST AN EXTERIOR WALL, DOMESTIC HOT WATER HEATER (FIRST 8' FROM WATER HEATER ONLY), AND HVAC PIPING.

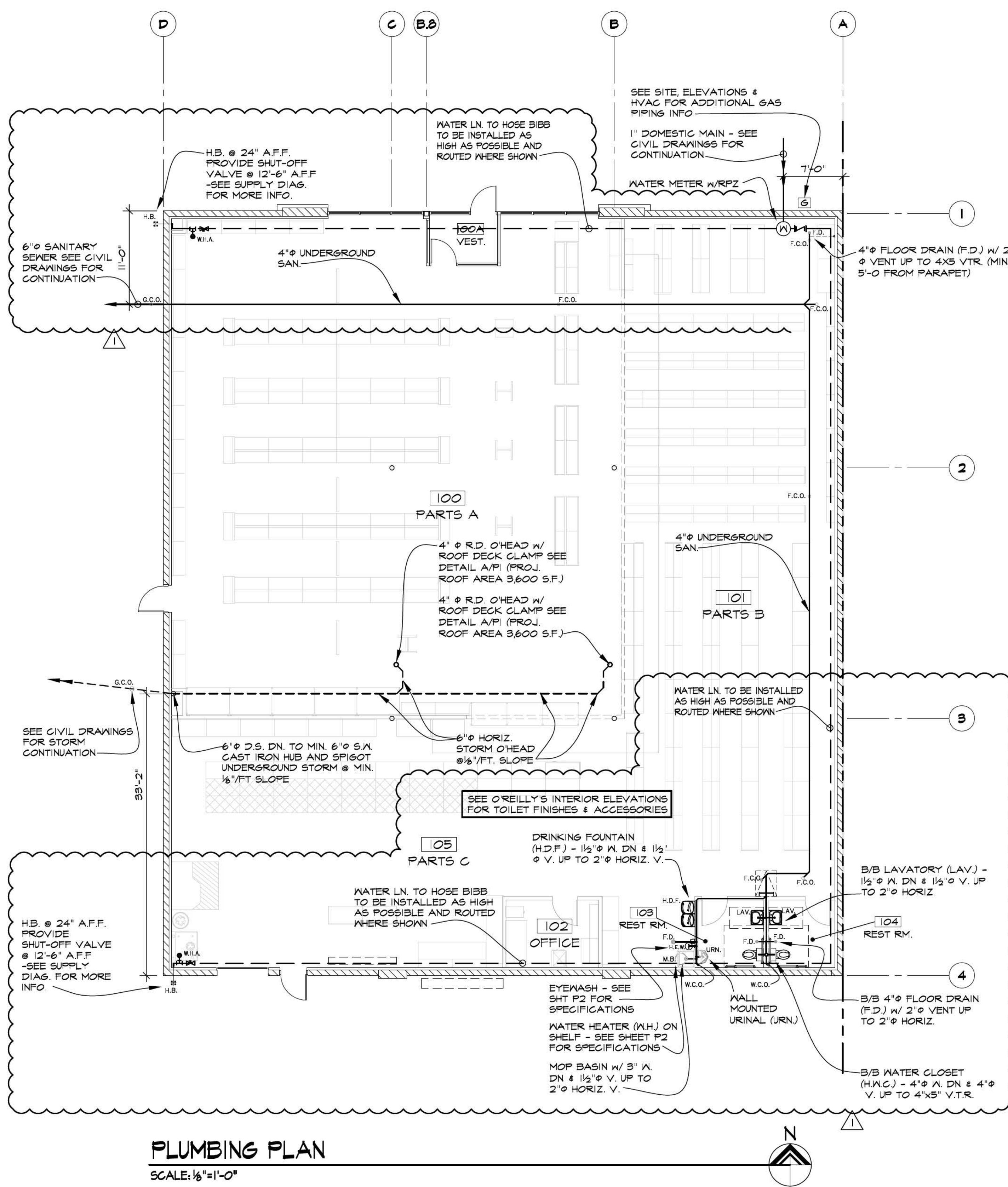
SPECIFICATIONS:

- A. PIPING (ABOVE FINISHED FLOOR) SHALL BE COVERED WITH ARMACELL AP/ARMAFLEX PIPE INSULATION 1/2" THICK IN ACCORDANCE WITH ASTM C-534, GRADE I, TYPE I FOR TUBULAR MATERIALS AND GRADE I, TYPE II FOR SHEET MATERIAL.
 - B. ALL JOINTS SHALL BE SEALED WITH APPROVED MANUFACTURER'S ADHESIVE.
 - C. ACCEPTABLE ALTERNATE MANUFACTURER: KOOLPHEN K CFC FREE PHENOLIC FOAM, OR AEROCEL (BY AEROFLEX INTERNATIONAL CO.) CLOSED CELL ELASTOMERIC THERMAL INSULATION.
 - D. 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 INTERIOR STORM LINES, INTERIOR DOMESTIC WATER LINES, INTERIOR CONDENSATE DRAIN PIPING FROM HVAC UNITS AND INTERIOR WATER WASTE PUMP DISCHARGE LINES. ACCEPTABLE MANUFACTURERS ARE ARMSTRONG, CERTAINEED, JOHNS-MANVILLE, KNAUF, AND OWENS-CORNING.
 - E. FLAME SPREAD SHALL BE 25 OR LESS. SMOKE DEVELOPED SHALL BE 50 OR LESS.
 - F. INSTALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



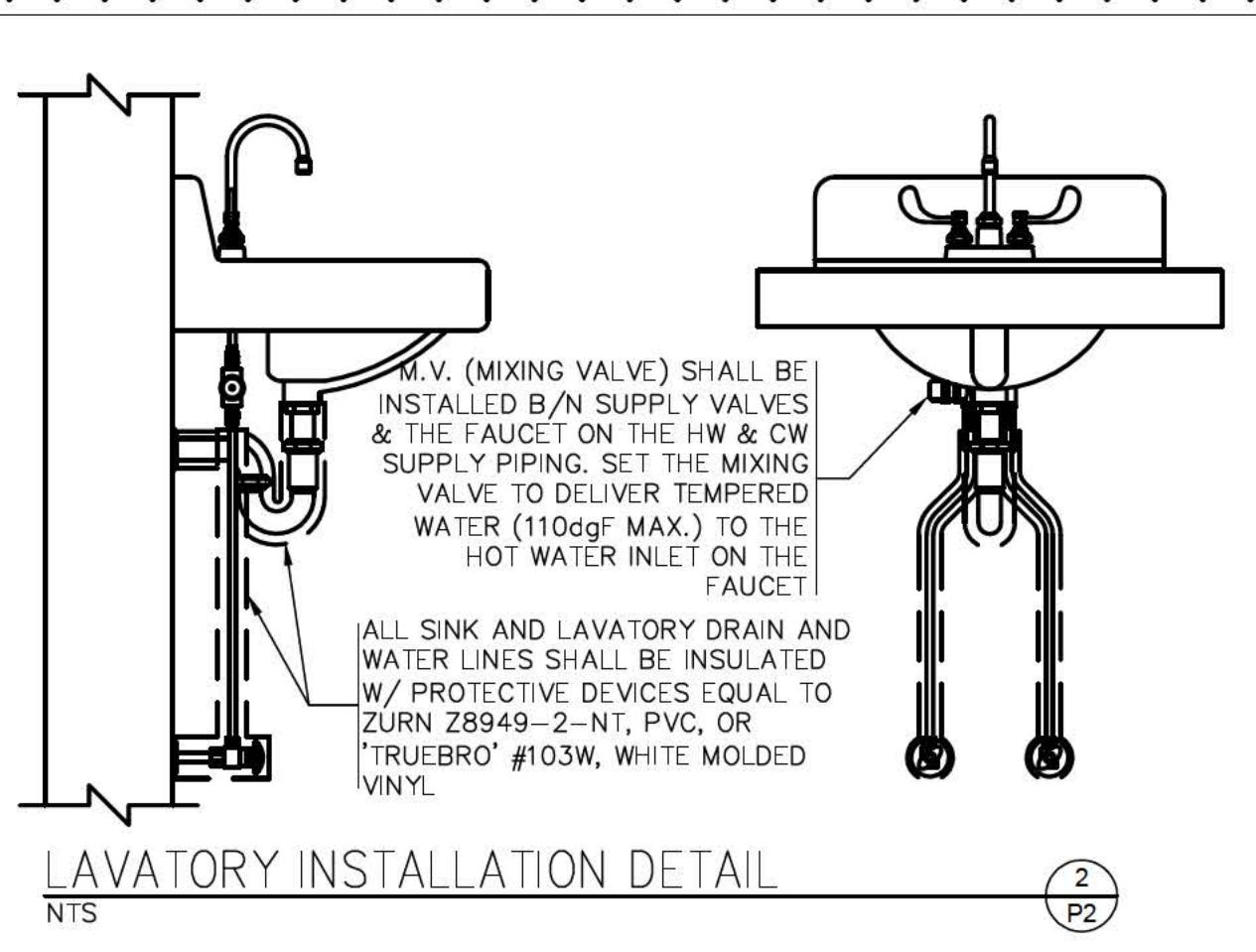
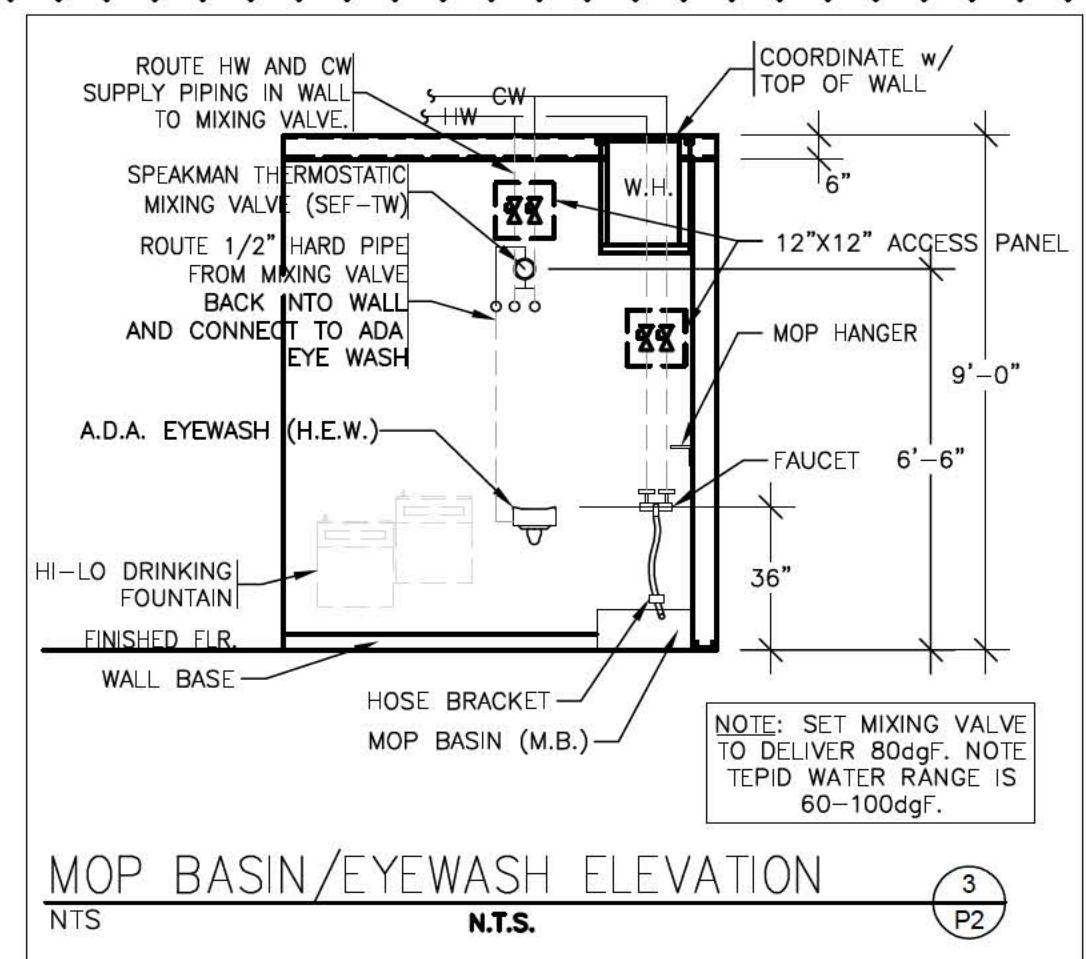
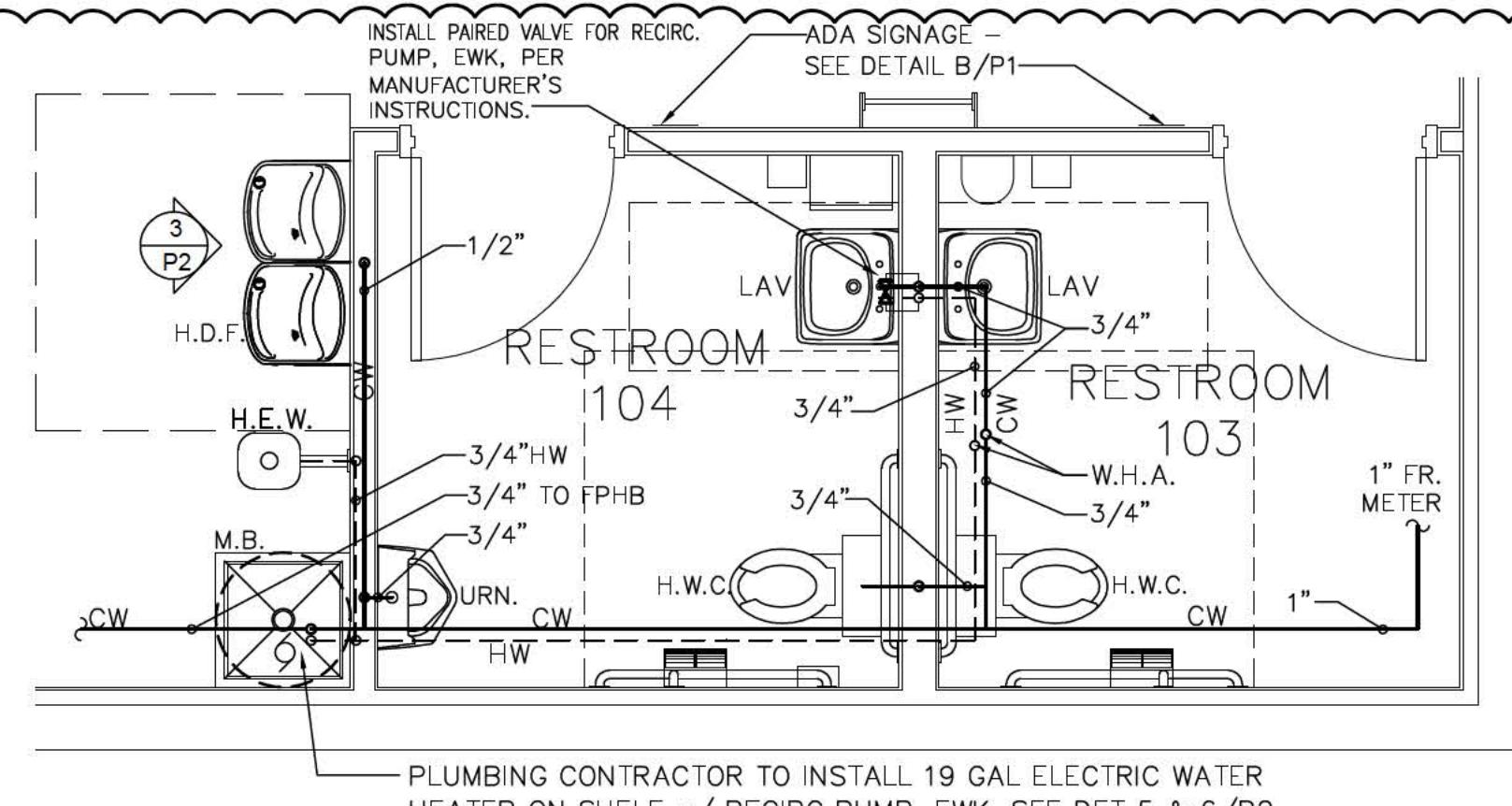
ROOF DRAIN

SCALE: 1-1/2" =



PLUMBING PLAN

SCALE: 1"-0"



NO FLAT VENTING ALLOWED. DRY VENTS SHALL RISE VERTICALLY TO 6" MIN. ABOVE FLOOR LEVEL RIM OF HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.

1/17/20
REVISIONS

THIS DRAWING
FOR COORDINATION
6/4/2019
FOR BIDDING
1/17/20
FOR CONTRACTING
1/17/20
NOT FOR COMBINATION
P2

SEE DETAILS B&C/P1

WASTE & VENT PIPING
RISER DIAGRAM
N.T.S.
P2

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURER'S	CODE APPROVALS
					WASTE	VENT	SUPPLY			
H.W.C.	HANDICAP ACCESSIBLE WATER CLOSET (TANK TYPE)	AMERICAN STANDARD	CADET RIGHT HEIGHT BOWL RIM Ø 16-1/2" H PRESSURE-ASSISTED TOILET 2467.016	CHURCH 9500CT WHITE OPEN FRONT SEAT COMPLETE W/BOLT CAPS	4"	2"	1/2"	LOW-CONSUMPTION 1.6 GPF MAX. MEETS ADA GUIDELINES	ZURN	ANSI A117.1, ADA COMPLIANT
LAV.	HANDICAP ACCESSIBLE LAVATORY (WALL MOUNTED)	AMERICAN STANDARD	LUCERNE 0355.012 4" CENTERS	ZURN #Z8737 FLAT GRID SINK STRAINER, DELTA #501-DST CLASSIC CENTERSET FAUCET, JAY R. SMITH #0700-M31 FLOOR MOUNTED LAVATORY SUPPORTS IN WALL	2"	2"	3/4"	SEE NOTE 2. 1.5 GPM MAX.	ZURN	ANS A117.1 ASME A112.18.2, ADA COMPLIANT
M.V.	THERMOSTATIC MIXING VALVE	WATTS	#LMMV-M1-US-1/2"	THERMOSTATIC MIXING VALVE	-	-	1/2"	SEE DETAIL P2 & NOTE #4 110°F MAXIMUM WATER TEMP.	WILKINS, POWERS	ASSE 1070, IAPMO, ADA COMPLIANT, CUPC, NSF/ANSI 61
H.D.F.	BARRIER-FREE TWO STATION HI-LO DRINKING FOUNTAIN	ELKAY	EZSTL8LC	ACCESSORY APRON #LKAPREZL	2"	2"	1/2"	REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS	HALSEY TAYLOR	ADA COMPLIANT
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	2"	2"	-	COMBINATION WASTE VENT	WADE & JAY R. SMITH	ASSE 1019-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.1	CLEANOUT (EXTERIOR)	JAY R. SMITH	4250	-	SEE PLAN	-	-	SAME SIZE AS LINE SEE DETAILS P2 & 8/P2	WADE & ZURN	-
WCO	WALL CLEANOUT	ZURN	Z1441 STAINLESS STEEL	-	2"	-	-	SEE DETAIL 7/P2	WADE & JAY R. SMITH	-
W.H.A.	WATER HAMMER ARRESTER	SIOUX CHIEF	652-A	-	-	-	-	WILLIAMS	-	-
H.B.	HOSE BIBB	WOODFORD	MODEL 65	W/WALL CLAMP	-	-	3/4"	W/VACUUM BREAKER OPERATING POLE ASSEMBLY MUST BE ORDERED PER WALL WIDTH	-	-
M.B.	MOP BASIN	FIAT	FIAT MSB-2424	FIAT #832-AA HOSE & BRACKET, FIAT #889-CC-24" MOP HANGER, ZURN #Z842M4-WHK-5H SERVICE FAUCET	3"	2"	3/4"	W/VACUUM BREAKER ON FAUCET. ALSO ADD HOSE CONNECTION VACUUM BREAKER (WATTS #8) ON FAUCET'S SPOUT.	STERN-WILLIAMS	-
H.E.W.	HANDICAP ACCESSIBLE EYE WASH	SPEAKMAN	SE-1000-PT	P-TRAP, SPEAKMAN THERMOSTATIC MIXING VALVE (SEF-TW)	-	-	3/4"	SET MIXING VALVE TO DELIVER 80dgf. NOTE: TEPID WATER RANGE IS 60-100dgf.	HAWS	ASME A112.18.1-2000, CSA B125-98, ANSI Z358-1, ASSE 1011
URN.	URINAL (WALL MOUNTED)	ZURN	Z5755-U OMNI-FLO	SLOAN ROYAL #186-1 FLUSH VALVE, ZURN #Z1222 FLOOR MOUNTED URINAL SUPPORT	2"	2"	3/4"	BACK OF URINAL TO BE MOUNTED FLUSH WITH THE FACE OF FINISHED WALL. SEE DETAIL 9/P2	AMERICAN STANDARD	ASME A1212.19.2, ANSI A117.1, ADA COMPLIANT
EWK	HOT WATER RECIRCULATION KIT	BELL & GOSSETT	6050B4000	-	-	-	3/4"	KIT INCLUDES PUMP (120V) 20 WATTS AND PAIRED VALVE (BATTERY)	-	NSF/ANSI 372
NOTES:										
1. COORDINATE ROUGH-IN OF ALL PLUMBING FIXTURES W/ARCHITECTURAL DRAWINGS.										
2. SINKS & LAVATORIES FOR HANDICAPPED ACCESS SHALL BE INSTALLED W/OFFSET TAILPIECES. ALL SINK & LAVATORY DRAIN & WATER LINES SHALL BE INSULATED W/PROTECTIVE DEVICES EQUAL TO "MCGLURE" #PW 2150 WC, WHITE MOLDED CLOSED CELL VINYL, OR "TRUEBRO" #103W, WHITE MOLDED VINYL.										
3. FOR HANDICAPPED ACCESSIBLE WATER CLOSET, FURNISH & INSTALL W/THE FLUSH HANDLE ON THE WIDE SIDE OF THE RESTROOM.										
4. ALL LAVATORIES SHALL BE INSTALLED WITH A THERMOSTATIC MIXING VALVE.										
OWNER SUPPLIED, CONTRACTOR INSTALLED										
W.H.	WATER HEATER (ELECTRIC)	A.O. SMITH	EJCS-20	(19 GALLONS) 120V, 14.165 KW ELEMENT WITH 1.65 KW RELIEF VALVE	-	-	3/4"	PIPE DRAIN LINE FROM P & T RELIEF VALVE DOWN IN SHELF PAN SEE DETAIL 5/P2 & 6/P2	NO SUBSTITUTIONS	CSA, ASME RATED, NAECA
SHELF	WATER HEATER SHELF	HOLDRITE	#40-SWHP-WM	SUPPORTS WATER HEATERS UP TO 20 GALLON OR 300 LBS	-	-	-	PIPE DRAIN LINE FROM SHELF PAN SEE DETAIL 5/P2 & 6/P2	NO SUBSTITUTIONS	-
T.E.A.	Thermal Expansion Absorber	AMTROL	ST-12	-	-	-	-	-	NO SUBSTITUTIONS	-
NOTE: WATER HEATER SHELF & T.E.A. SHALL BE DIRECT ORDERED AND OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR:										
GRAYBAR ELECTRIC CO. INC. 11885 LACKLAND ROAD ST. LOUIS, MO 63146										
GRAYBAR O'REILLY TEAM EMAIL: o'reilly@graybar.com TOLL FREE: (314) 573-2080										

PLUMBING NOTES (SEE SPEC SECTION 22 00 00 FOR ADDITIONAL INFO)

A. The following applications are for inside, below & above the building slab and ending at a point 5'-0" outside the perimeter building walls.

1. Domestic Water Distribution Piping Below Ground: All interior domestic water piping shall be type "K" hard drawn copper tubing (SIL-FOS 2, FOS-FLO 7 or other silver brazing material). This is required for the water service line from the shut-off valve in the building to a point 5 feet outside the building.

2. Domestic Water Distribution Piping Above Ground: Hard copper tube, Type L

3. Soil, Waste, and Vent Piping Below Ground: Schedule 40 poly vinyl chloride (PVC) plastic DWV pipe;

4. Soil, Waste, and Vent Piping Above Ground: Hubless cast-iron soil pipe or Poly vinyl chloride (PVC) plastic DWV pipe

5. 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):

1. 3"-4" - 1-1/4", Schedule 40 PVC pipe with solvent-welded joints.

2. 1-1/2"- 3", SDR-21, PVC pipe (ASTM D2241) Class 200, Bell and Spigot with rubber gasketed joints.

3. 3/4"- 3", Type "K" hard drawn copper tubing (SIL-FOS 2, FOS-FLO 7 or other silver brazing material).

4. 4" and larger, SDR-18 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.

(See Site Utilities Plan for which piping material (copper or PVC) is required):

1. Polyvinyl chloride (PVC) sewer pipe shall conform to ASTM D3034 (SDR-35).

2. Cast iron or ductile iron pipe shall conform to USASI #A-21 class 50.

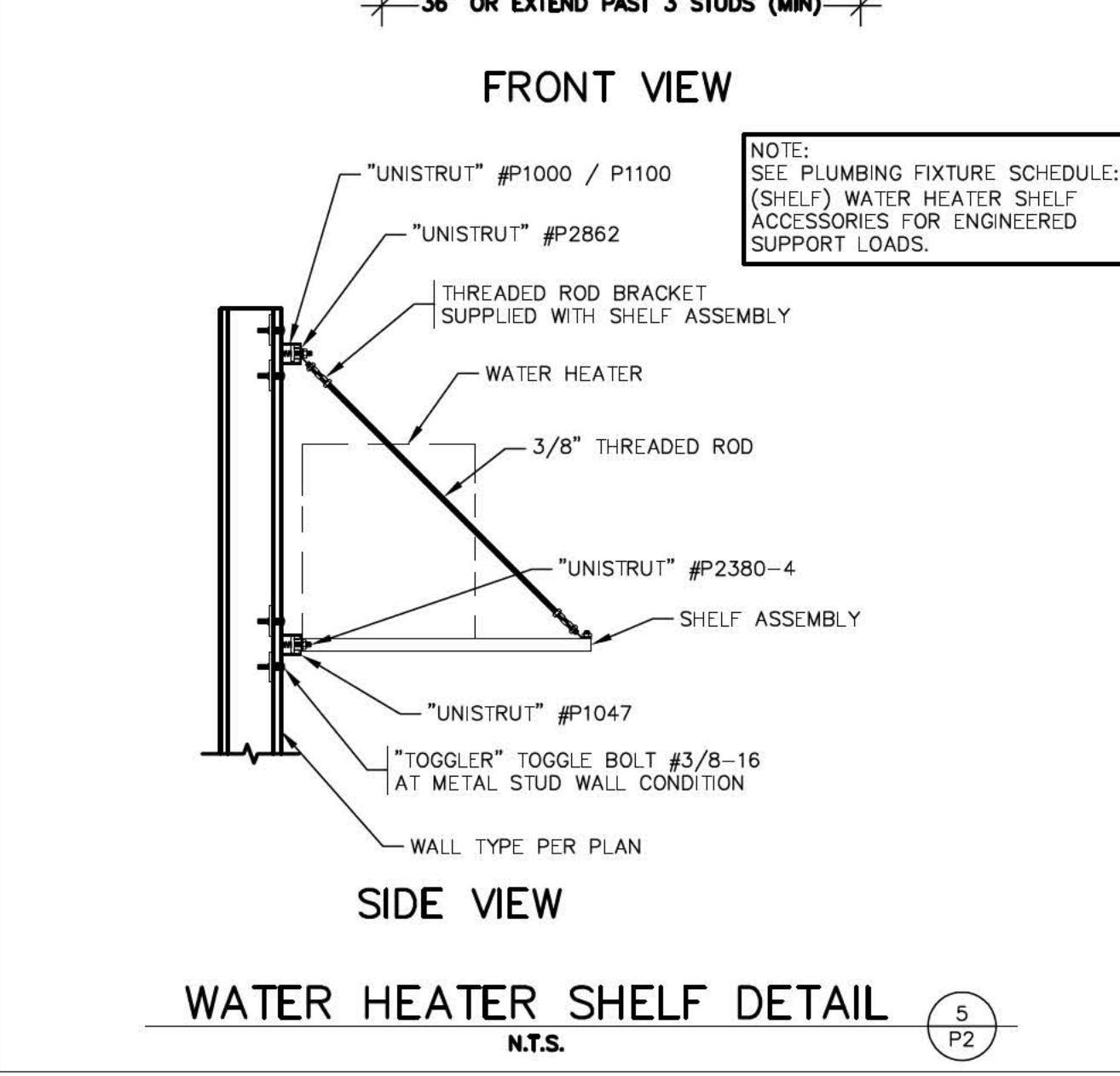
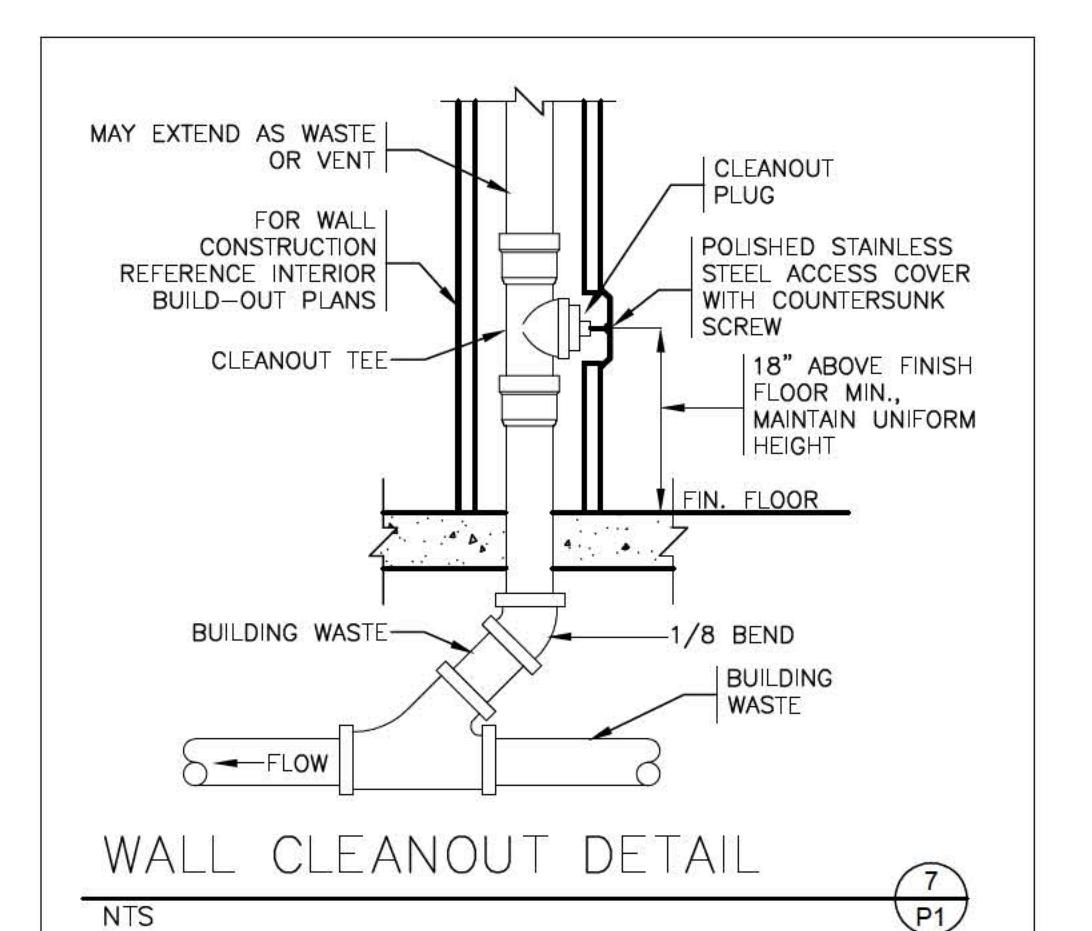
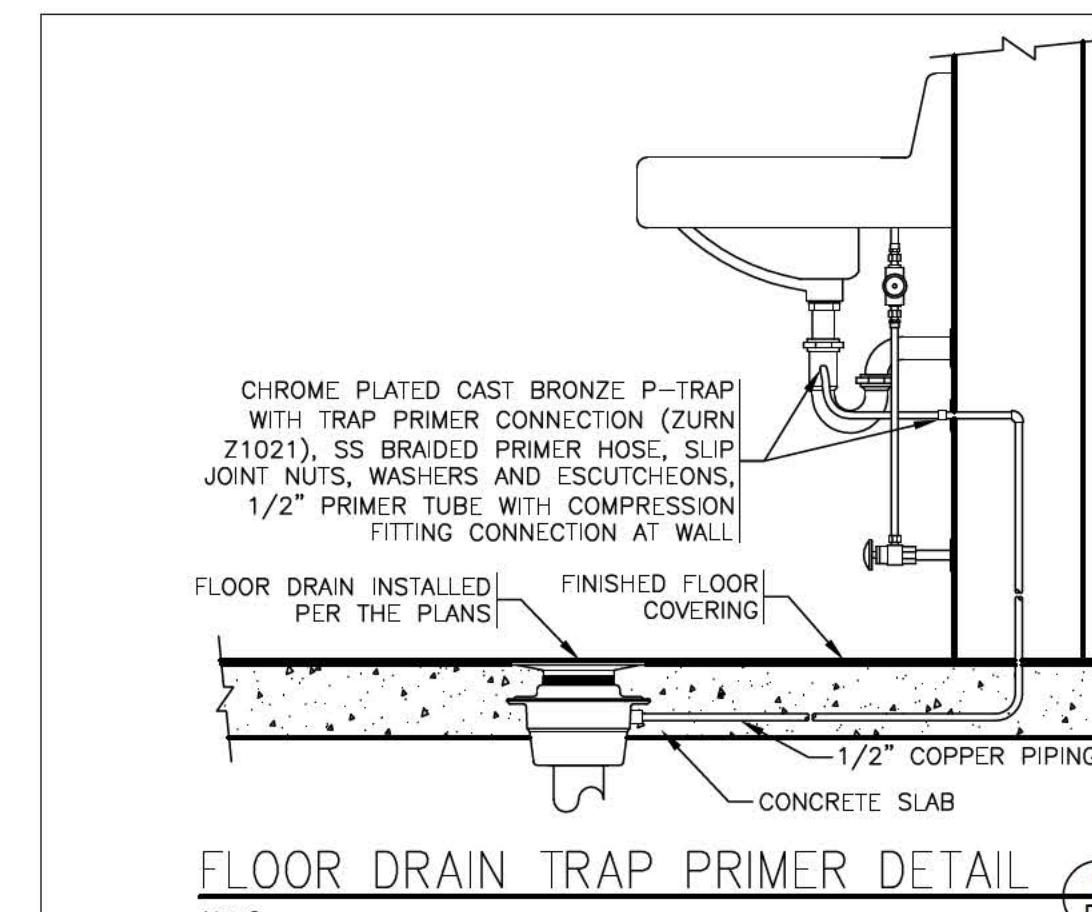
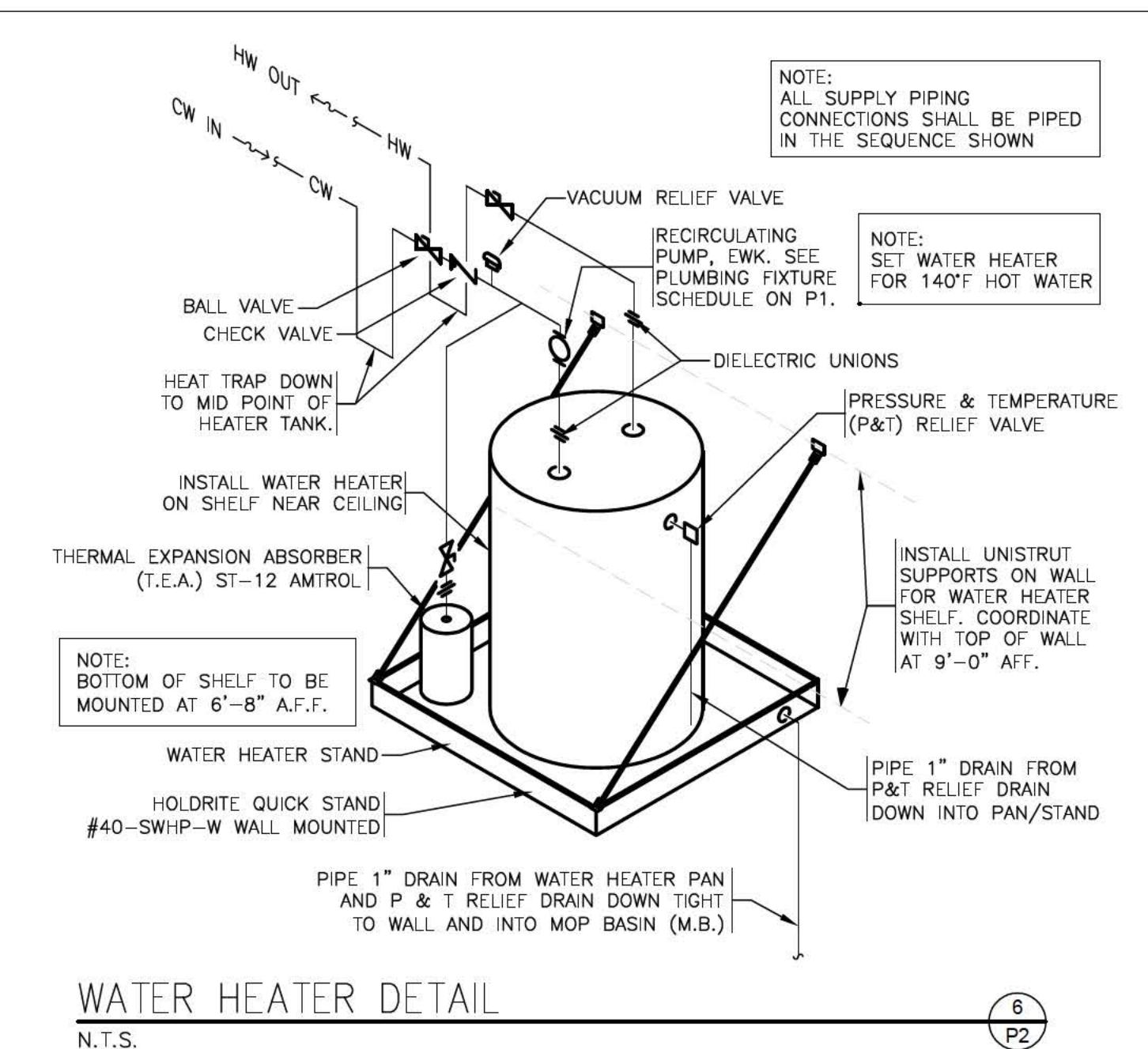
C. GAS pipe material:

Low-pressure Gas Systems, above Ground within or outside Building:

Use the following:

1. 2" and Smaller: Steel pipe, malleable-iron, threaded fittings, and threaded joints.

2. 2-1/2" and Larger: Steel pipe, butt-welding fittings, and welded joints.



SHEET TITLE
PLUMBING FIXTURE SCHEDULE
NOTES
1906

N P

O'REILLY AUTO PARTS
DOL

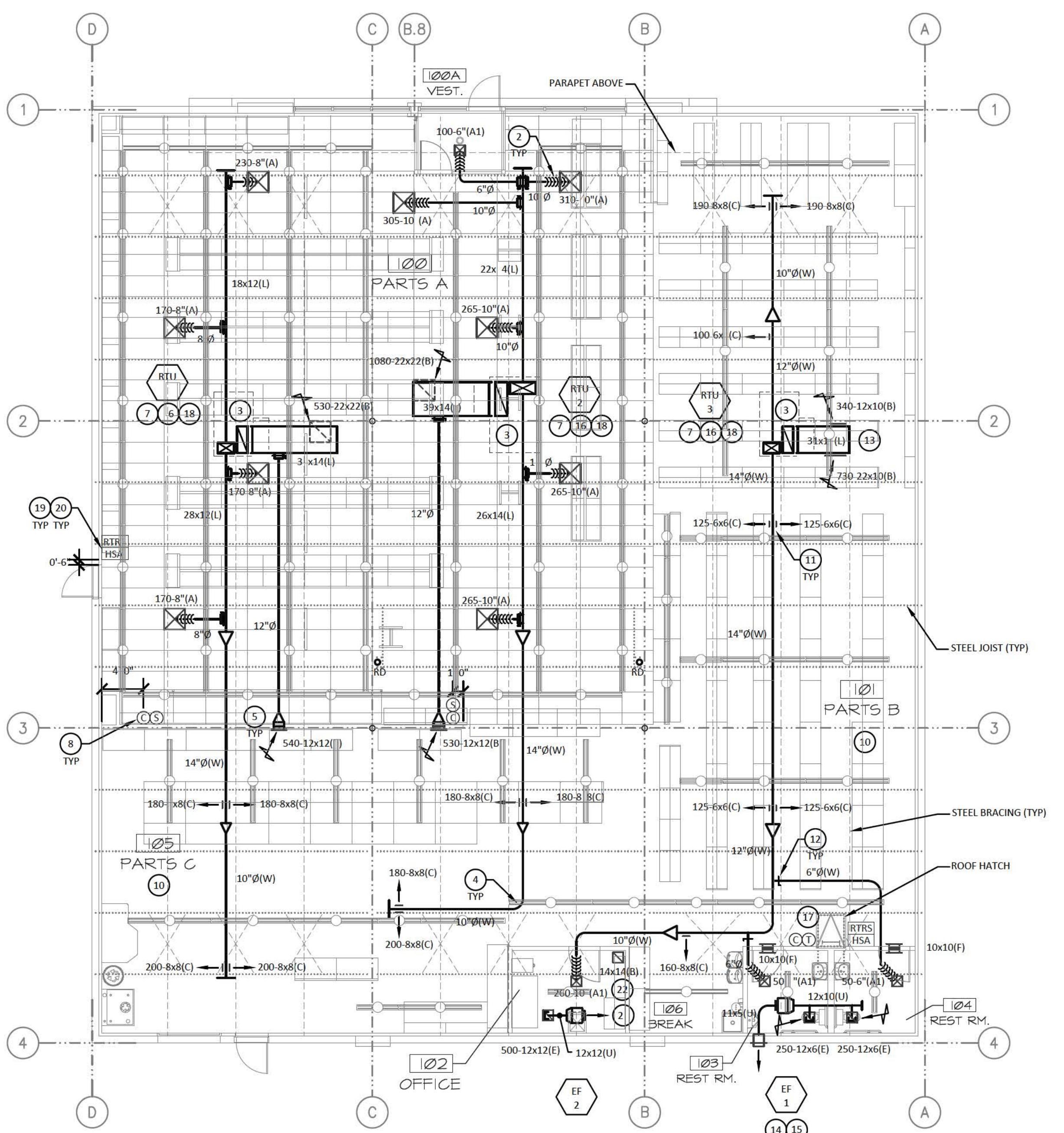
1/3/20
REVISIONS
THIS DRAWING
NOT FOR COORDINATION
FOR BIDDING
FOR PERMIT
NOT FOR CONSTRUCTION

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

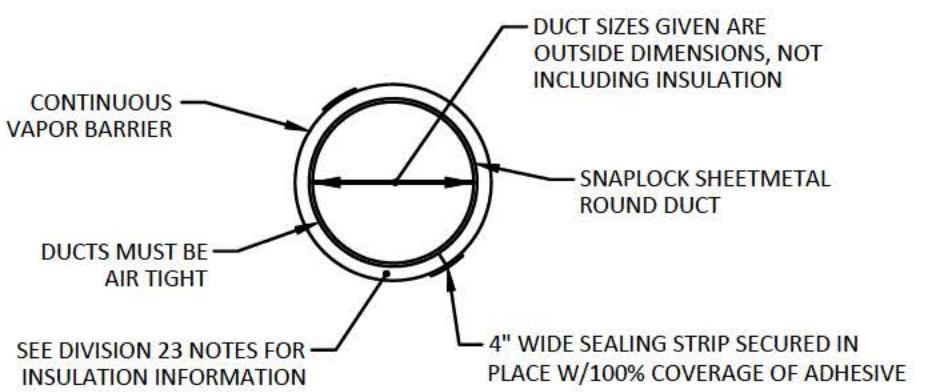
O'REILLY AUTO PARTS
DOLTON PLAZA
1817 E. SIBLEY BLVD. DOLTON, IL 60419
FOR: DEPARTMENT PROPERTY GROUP, LLC

SHEET TITLE
HVAC PLAN

1906
M
1

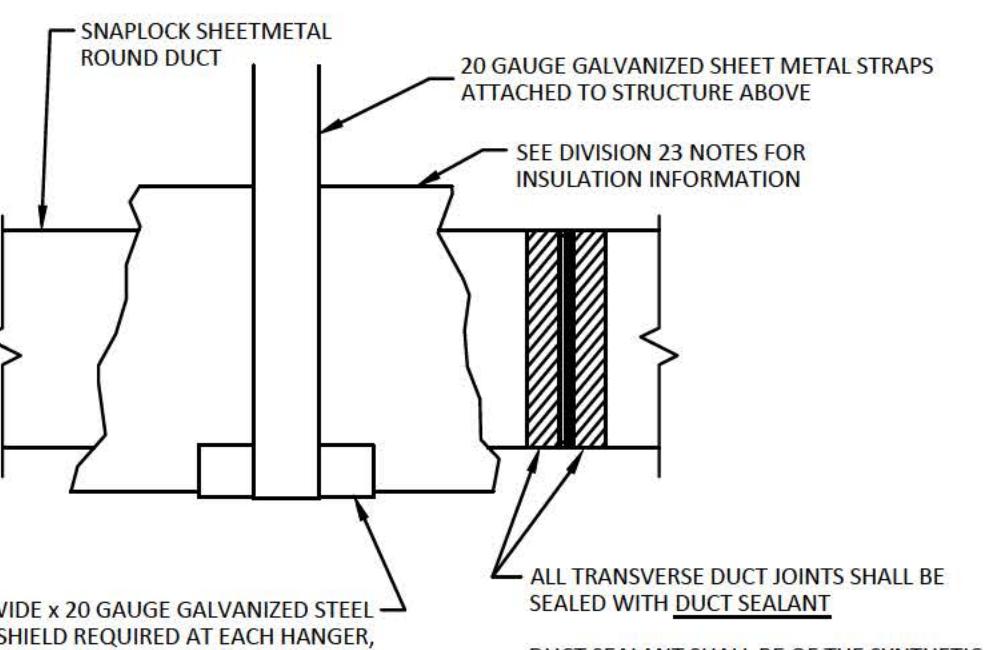


PRIOR TO INSTALLATION, VERIFY ALL DUCTWORK, PIPING, WIRING, CONDUITS AND EQUIPMENT LOCATIONS SHOWN ON DRAWINGS TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, WALLS, CEILINGS, LIGHTS, ELECTRICAL ITEMS AND/OR OTHER TRADE ITEMS. NOTIFY DESIGN ENGINEER IN WRITING PRIOR TO ANY CHANGES.



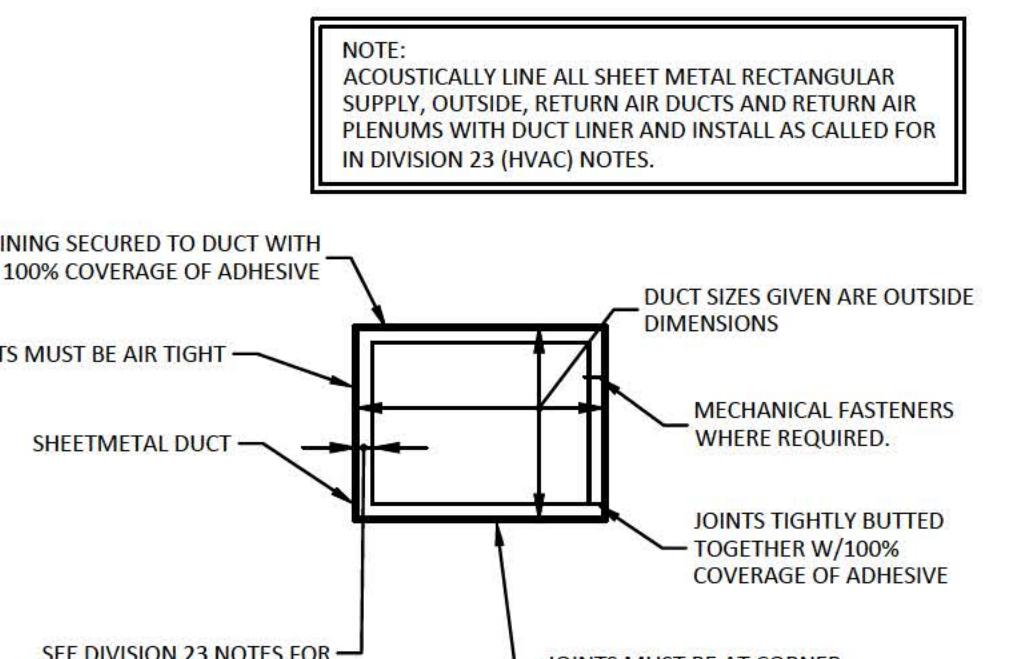
ROUND DUCT INSULATION DETAIL

NO SCALE



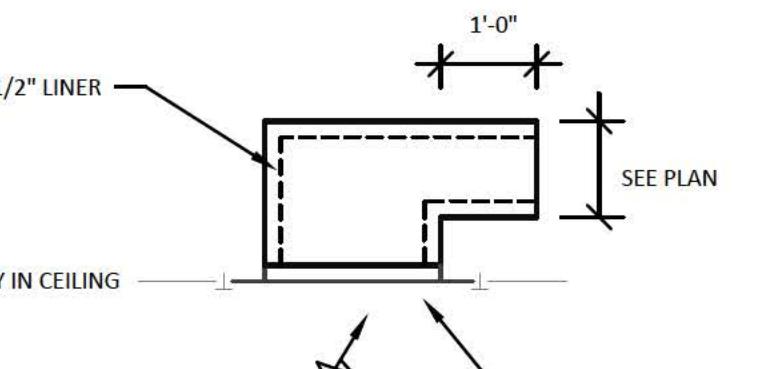
ROUND DUCT INSTALLATION DETAIL

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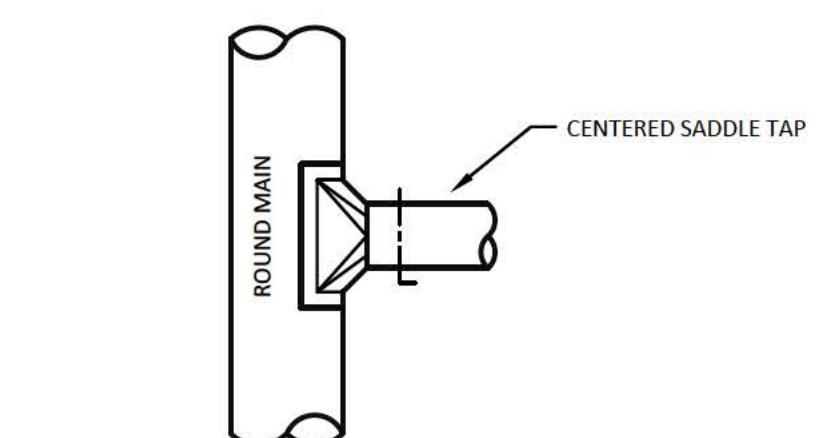
RECTANGULAR DUCT INSULATION DETAIL

NO SCALE



RETURN AIR PLENUM DETAIL

NO SCALE



ROUND TAP DETAIL

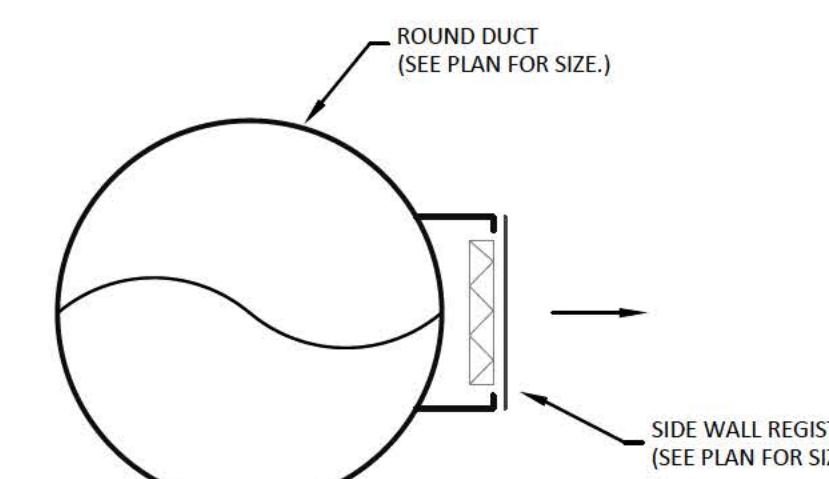
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PLAN NOTES

- ① SEE DETAILS ON THIS SHEET & SHEET M-2 FOR ADDITIONAL INFORMATION.
- ② ALL TERMINATIONS TO CEILING MOUNTED DIFFUSERS TO BE MADE WITH A MAXIMUM OF 5' OF FLEXIBLE DUCTWORK. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS FOR ALL GRILLES AND DIFFUSERS. SEE DIVISION 23 (HVAC) NOTES.
- ③ ALL TERMINATIONS TO EXPOSED CEILING GRILLES, REGISTERS AND DIFFUSERS TO BE MADE WITH HARD DUCT CONNECTIONS. PROVIDE SPIN COLLAR AND/OR LOCKING TYPE DAMPER AT ALL FINAL BRANCH TAPS. SEE DIVISION 23 (HVAC) NOTES.
- ④ ALL LAY-IN DIFFUSERS MOUNTED IN GYPSUM CEILINGS TO HAVE PLASTER FRAMES.
- ⑤ SEPARATE NEW BRANCH DUCT TAP LOCATIONS. MINIMUM CENTERLINE SEPARATION DISTANCE TO BE (2) EQUIVALENT DUCT MAIN DIAMETERS.
- ⑥ SEE DIVISION 23 NOTES FOR INSULATION INFORMATION.
- ⑦ TRANSITION FROM UNIT CONNECTION SIZE(S) TO PLAN SIZE AND TURN HORIZONTAL WITH SQUARE THROAT VANEDED ELBOW(S). TAPS NOT ACCEPTABLE. (SEE DUCTWORK SYMBOLS LEGEND)
- ⑧ ALL ELBOWS TO BE RADIUS TYPE - UNLESS NOTED OTHERWISE (SQUARE THROAT ELBOWS ARE NOT ACCEPTABLE). (SEE DUCTWORK SYMBOLS LEGEND)
- ⑨ INSTALL ALL NEW DUCTS, DIFFUSERS, GRILLES AND/OR REGISTERS BETWEEN WALL STUDS.
- ⑩ VERIFY ACCESS TO ALL EQUIPMENT.
- ⑪ INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE BELOW ALL BUILDING STEEL. BOTTOM OF ALL HVAC EQUIPMENT AND DUCTWORK TO BE AT A MINIMUM OF 12'-3" A.F.F. EXCEPT IN FINISHED CEILING AREAS. SEE GAS ROOF TOP UNIT DETAILS.
- ⑫ INSTALL ALL GRIDPOINT REMOTE SENSORS & CO2 SENSORS AT AN ACCESSIBLE LOCATION. SENSORS ARE NOT TO BE LOCATED BEHIND TENANT SHELVING. CONTRACTOR SHALL FIELD SPLICE CABLE & EXTEND CABLE TO LOCATIONS AS SHOWN. SEE TENANT'S "EM" SHEETS FOR MORE INFORMATION. LOCATIONS ARE PER O'REILLY'S REQUIREMENTS.
- ⑬ COORDINATE LOCATION OF LIGHT FIXTURE(S).
- ⑭ EXPOSED CEILING AREA. ALL OTHER AREAS ARE GYPSUM OR LAY-IN AS SHOWN.
- ⑮ SEE ROUND DUCT MOUNTED REGISTER DETAIL #D-1-9
- ⑯ SEE ROUND TAP DETAIL #D-1-8.
- ⑰ SIDEWALL RETURN AIR GRILLE(S). SEE RETURN DUCT DETAIL.
- ⑱ RUN EXHAUST DUCT TO EXHAUST FAN AND OUT TO WALL CAP. COORDINATE ELEVATION (MINIMUM 10'-0") OF WALL CAP WITH GENERAL CONTRACTOR.
- ⑲ ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A ONE-COMPONENT NON-SAG URETHANE ELASTOMERIC SEALANT (NO EXCEPTIONS).
- ⑳ COVER ALL DUCT OPENINGS AND PROTECT ALL MECHANICAL EQUIPMENT DURING CONSTRUCTION AND STORAGE PRIOR TO CONSTRUCTION UNTIL FINAL START UP OF THE HVAC EQUIPMENT. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS TO REDUCE THE AMOUNT OF DUST OR DEBRIS COLLECTING IN THE HVAC SYSTEMS.
- ㉑ THERMOSTAT BANK LOCATION. GRIDPOINT THERMOSTATS PROVIDED BY THE TENANT AND INSTALLED BY THE TENANT'S SUGGESTED EMS CONTRACTOR.
- ㉒ PROVIDE TEMPORARY THERMOSTAT AND WIRING FOR UNIT START UP. PERMANENT THERMOSTAT TO BE INSTALLED BY TENANT'S SUGGESTED EMS CONTRACTOR.
- ㉓ REMOTE TEST STATION FOR DUCT SMOKE DETECTOR. MOUNT AT 5'-0" A.F.F.
- ㉔ REMOTE ALARM/STROBE FOR DUCT SMOKE DETECTOR. MOUNT AT 7'-6" A.F.F.
- ㉕ OFFICE INLINE FAN TO DISCHARGE INTO PLENUM SPACE.
- ㉖ SEE RETURN AIR PLUMA DETAIL D-1-10A. INSTALL ELBOW JUST ABOVE CEILING PLATFORM.

United Engineering, Inc.

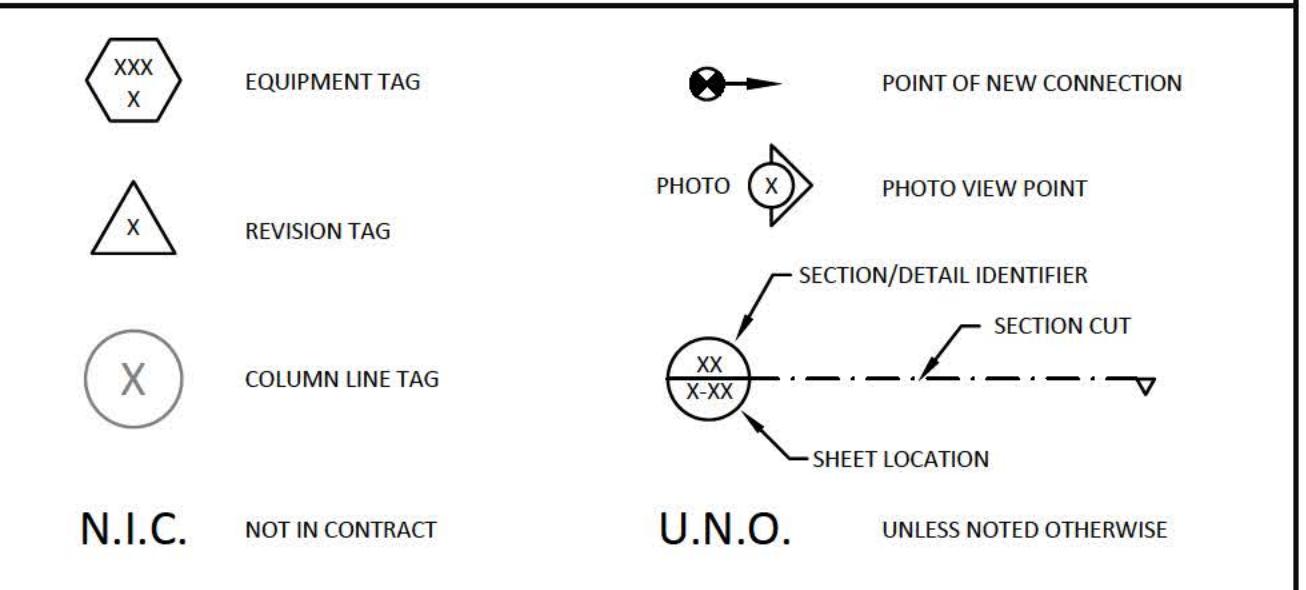
PROJECT ENGINEERING AND LAYOUT SERVICES
1006 GENEVA ST. * SHOREWOOD, IL 60404
PHONE: (815)744-1010 * FAX: (815)744-1516
www.unitedep.com



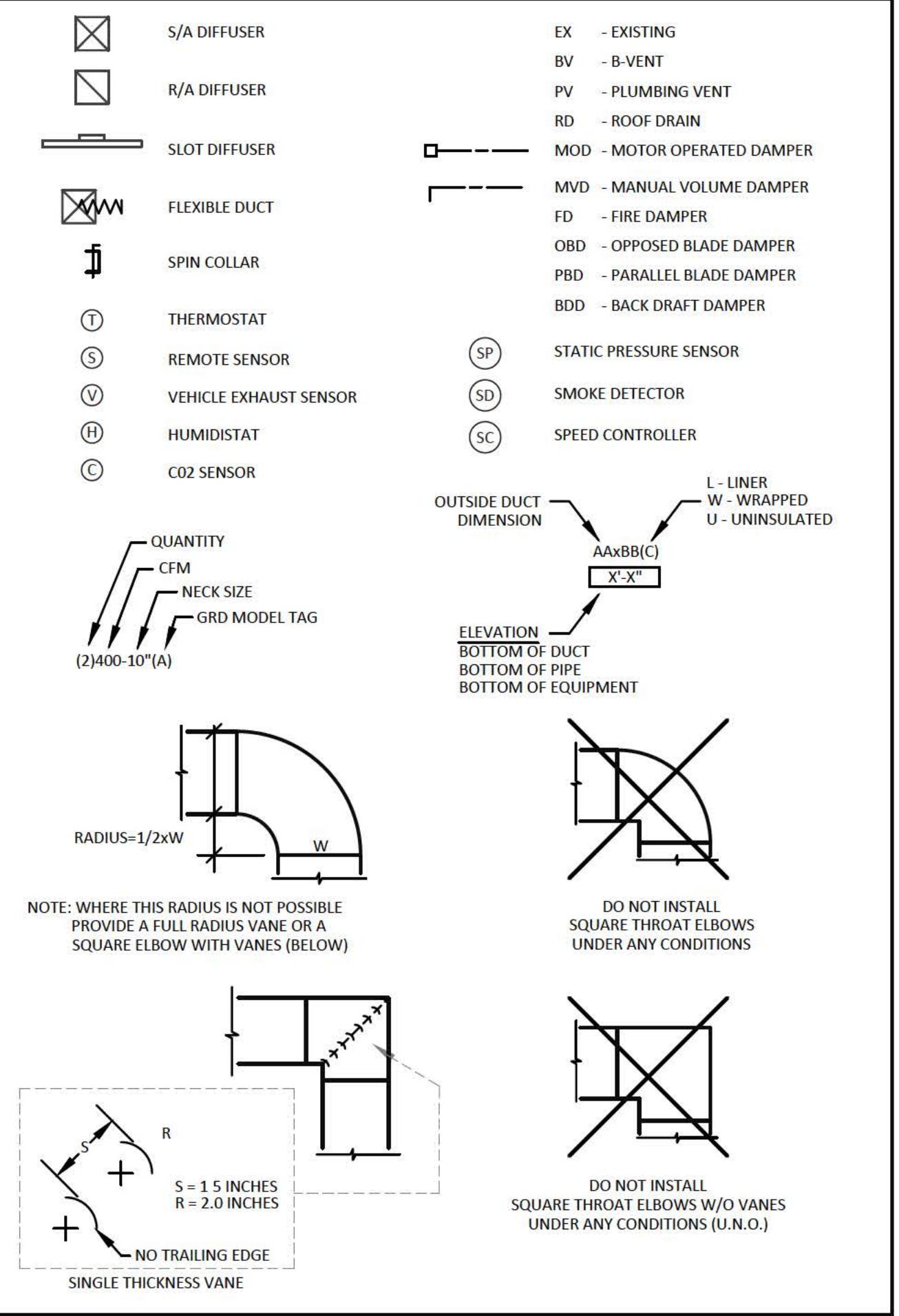
ROUND DUCT MOUNTED REGISTER DETAIL

NO SCALE

STANDARD SYMBOLS LEGEND



DUCTWORK SYMBOLS LEGEND



PROJECT NAME: O'REILLY, DOLTON PROJECT NUMBER: 1957.1

PROJECT NAME:		O'REILLY - DULTON		PROJECT NUMBER:		1937-1											
MC Ventilation		ROOM INPUT															
ROOM NUMBER & NAME	AREA (S.F.)	OCCUPANCY		P/1000	VENTILATION								EXHAUST			Equipment Note	
		Ref. No.	CLASSIFICATION		PEOPLE		Rp		Ra		Vbz	CFM	FIX	CFM/ S.F.	CFM/ S.F.		
					CODE	ACTUAL	CFM/P	CFM	CFM/SF	CFM							
L00A-VESTIBULE	40	58	PS-CORRIDORS						0.06	2	2						RTU-2
L00-PARTS A	2,850	72	RET-SALES	15	42.8	43	7.5	323	0.12	342	665						RTU-1,2
L01-PARTS B	2,000	77	RET-STORAGE ROOMS						0.12	240	240						RTU-3
L02-OFFICE	85	53	OFF-OFFICE SPACES	5	0.4	1	5	5	0.06	5	10						RTU-3
L03-RESTROOM	60	63	PS-TOILET ROOMS (INT) (Jan Clos =1 WC)										2	70		140	RTU-3, EF-1
L04-RESTROOM	60	63	PS-TOILET ROOMS (INT) (Jan Clos =1 WC)										1	70		70	RTU-3
L05-PARTS C	1,650	77	RET-STORAGE ROOMS						0.12	198	198						RTU-1,2
L06-BREAK	90	33	F&B-DINING ROOMS	70	6.3	4	7.5	30	0.18	16	46						RTU-3
	6,835				49	48		358		804	1,161	Vou				210	
					Ps =	48				D =	1						

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.

ROOFTOP UNIT SCHEDULE

	TAG	RTU-1	RTU-2	RTU-3
LOCATION SERVING	SALES/STOCK	SALES/STOCK	STOCK	
MANUFACTURER	CARRIER	CARRIER	CARRIER	
MODEL	48GCTM06	48HCSD08	48GCTM06	
TONS (NOMINAL)	5	7.5	5	
COOLING ENERGY EFFICIENCY	16 SEER	12 EER	16 SEER	
REFRIGERANT TYPE	R-410A	R-410A	R-410A	
SUPPLY FAN DATA	CFM	1,500	2,250	1,500
	ESP (DUCT ONLY)	1	1	1
	RPM	1895	846	1895
	BHP	0.72	1.08	0.72
COOLING COIL DATA	MBH	61	90	61
	EAT (DB/WB)	81.5/67	81.5/67	81.5/67
	COIL LAT (DB/WB)	54/53.5	54/53.5	54/53.5
	UNIT LAT (DB/WB)	55.5/54.5	55.5/54.5	55.5/54.5
HEATING DATA MIN. REQ'D)	STAGES	1	2	1
	INPUT (MBH) (MAX)	115	125	115
	OUTPUT (MBH) (MAX)	93	103	93
	STAGES	2	2	2
HEATING DATA ALTERNATE)	INPUT (MBH) (MAX)	150	180	150
	OUTPUT (MBH) (MAX)	120	150	120
	STAGES	2	2	2
	MCA / MOCP	29/40	41/50	29/40
LECTRICAL DATA	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, 22	1,2,4-21,22	1-19, 22	

ISION 23 (HVAC)

- GENERAL:**
SPECIFICATIONS ARE AS FOLLOWS:

EQUIPMENT - 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 REVISED DIGITAL SHOP DRAWINGS (IN AUTOCAD FORMAT) FOR REVIEW PRIOR TO INSTALLATION. THE REVISED DRAWINGS TO INCLUDE (BUT ARE 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.

IOP 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.]

CLOSE OUT CONSTRUCTION DOCUMENTS - CONTRACTOR TO EMAIL A MICROSOFT WINDOWS 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.]

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, DAMPERS, 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.

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" MIN.

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) DUCTWORK:

 - ALL DUCTWORK SHALL MEET S.M.A.C.N.A. STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE. DUCTWORK TO BE GALVANIZED SHEET 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 TAPES. 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.

4) LOW PRESSURE:

○ RTU S/A & R/A DROPS	- 2" LINER
○ RECTANGULAR S/A	- 2" LINER.
○ RECTANGULAR R/A	- 2" LINER.
○ RECTANGULAR E/A	- UNINSULATED.
○ ROUND S/A	- 2" FIBERGLASS WRAP
○ ROUND R/A	- 2" FIBERGLASS WRAP
○ ROUND E/A	- UNINSULATED.
○ ROUND (EXPOSED)	- UNINSULATED SPIRAL TYPE WITH GASKETED FITTINGS (LINDAB OR EQUAL)
○ FLEX S/A	- INSULATED (5'-0" MAXIMUM LENGTH)
○ FLEX R/A	- INSULATED (5'-0" MAXIMUM LENGTH)
○ FLEX E/A	- UNINSULATED. (5'-0" MAXIMUM LENGTH)
○ RECT. DUCT LENGTHS	- 59" WITH S&D JOINTS
○ DIMENSIONS	- OUTSIDE DIMENSIONS SHOWN ON PLANS
○ ELBOW RADIUS	- ONE HALF THE DUCT WIDTH (SEE DUCTWORK SYMBOLS LEGEND)
○ SHOE-TAPS	- 6" LONG
○ BALANCING DAMPERS	- AT ALL FINAL DIFFUSER & GRILLE TAP LOCATIONS (LOCKING TYPE)
○ RECT. BALANCING	- OPPOSED FLAT BLADE, LOCKABLE (RUSKIN CD355-OBD)
○ RECT. MIXING	- PARALLEL FLAT BLADE, LOCKABLE (RUSKIN CD355-PBD)
○ E/A AND O/A (MOD)	- OPPOSED AIRFOIL BLADE, LOW LEAK, CLASS 1 (RUSKIN CD60)
○ BACKDRAFT DAMPER	- ALUMINUM MEDIUM DUTY TYPE (RUSKIN BD6)
○ BACKDRAFT DAMPER W/CB	- ALUMINUM MEDIUM DUTY TYPE WITH COUNTER BALANCE. LOW LEAK BLADE EDGE SEALS (RUSKIN CBD4)
○ DUCT PRESSURE CLASS	- 1" W.C. (LOW PRESSURE)
○ DUCT SEAL CLASS	- CLASS A

5) INSULATION & LINER:

 - MINIMUM R-6 FOR INTERIOR DUCTWORK. MINIMUM R-12 FOR EXTERIOR DUCTWORK.
 - ADD INSULATION TO LINED DUCTWORK IF NEEDED.
 - INSIDE DUCT LINER TO BE KNAUF SONIX XP DUCT LINER (1.5 PCF) OR OWENS CORNING EQUIVALENT.
 - DUCT WRAP FOR INTERIOR DUCTWORK TO BE KNAUF FRIENDLY FEEL DUCT WRAP (1.5 PCF) OR OWENS CORNING EQUIVALENT.

6) CURBS:

 - CURBS TO BE INSULATED AND A MINIMUM 12" HIGH. CURBS TO BE PITCHED TO MATCH SLOPE OF ROOF.

7) PIPING:

 - ALL HVAC PIPING AND PIPE MATERIALS TO MEET ASTM AND ASME STANDARDS AS LISTED IN THE INTERNATIONAL MECHANICAL CODE AND LOCAL CODES. CONTACT THE CITY/TOWNSHIP FOR THE PROPER EDITIONS AND AMENDMENTS OF THE ALL RELATIVE CODE PUBLICATIONS. ALL GAS PIPING AND MATERIALS TO MEET ASTM STANDARDS AS LISTED IN THE INTERNATIONAL FUEL GAS CODE.
 - PRESSURE RATINGS - PIPE, FITTING AND VALVE PRESSURE RATINGS TO EXCEED MAXIMUM SYSTEM OPERATING PRESSURE BY A MINIMUM OF 20%. VERIFY EACH PIPE SYSTEM OPERATING PRESSURE BEFORE INSTALLATION.

8) GAS PIPING:

 - ALL ABOVE GROUND GAS PIPING TO BE SCH. 40 BLACK STEEL WITH SCREWED MALLEABLE FITTINGS FOR 2" AND SMALLER PIPING AND WELDED FOR 2 1/2" AND LARGER PIPING.

9) DRAIN PIPING:

 - ALL DWV PIPING TO BE PLAIN END SCH. 40 DWV PVC WITH SOCKET TYPE DWV PVC FITTINGS.

10) ANCHORING, SUPPORT & ISOLATION (EQUIPMENT, PIPING & DUCTWORK):

 - ANCHORING & SUPPORT:

WORK ITEM SCHEDULE

ITEM	PROVIDED BY	INSTALLED BY	WIRED BY	NOTES/REMARKS
T-STAT(S)	T	T	T	INSTALLED BY TENANT'S EMS CONTRACTOR
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
OCCUPANCY SENSOR(S)	EC	EC	EC	TOILET EF
SPEED CONTROLLER(S)	MC	EC	EC	OFFICE EF

USER SCHEDULE

	A	A1	B	C	E	F
	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
	TMS	TMSA	50F	300RL	350ZRL	T700L (STEEL)
	S/A DIFFUSER	S/A DIFFUSER	R/A GRILLE	REGISTER	E/A GRILLE	DOOR GRILLE
	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN
	LAY IN	SURFACE	LAY IN/SURFACE	SURFACE	SURFACE	SURFACE
	-	-	-	OBD	OBD	-
	12	12.4	1.2	1.2	1.2	1.2.3

- | | | |
|---|-----|--|
| ECT
O EXCEPTIONS): PRICE, KRUEGER,
BROW, CARNES ANEMOSTAT | (3) | GRILLE WITH BORDER ON BOTH SIDES OF DOOR |
| | (4) | DIRECTIONAL TABS |

SECTION 23 (HVAC-CONTROLS)

- GENERAL:**
THE FOLLOWING ARE CONTROL SEQUENCES ONLY. CONTROLS DESIGN AND INSTALLATION TO BE BY LICENSED DESIGN/BUILD CONTROLS CONTRACTOR. CONTROL ACCESSORIES TO BE INSTALLED AND WIRED AS PER THE ORIGINAL EQUIPMENT MANUFACTURERS (OEM) REQUIREMENTS. NON-OEM BUILT UP CONTROL EQUIPMENT TO BE HONEYWELL OR CARRIER. CONTROLS CONTRACTOR TO PROVIDE (4) SETS OF CONTROLS DIAGRAMS AND EQUIPMENT BMMITALS FOR APPROVAL PRIOR TO INSTALLATION FOR ALL BUILT UP CONTROL SYSTEMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR AND TO COORDINATE INSTALLATION OF CONTROLS, CONTROL WIRING AND CONTROLS EQUIPMENT REQUIRED FOR ALL MECHANICAL EQUIPMENT. COORDINATION OF ALL NEW CONTROL PANELS AND CONTROLLERS WITH OWNER PRIOR TO INSTALLATION.

MERCIAL VENTILATION

- LINE EXHAUST TOILET FAN - TO BE ENERGIZED BY OCCUPANCY SENSOR FOR BOTH FAN AND LIGHT.
LINE EXHAUST OFFICE FAN - TO BE ENERGIZED BY WALL MOUNTED SPEED CONTROLLER.

SUPPLY (Cfm)			VENTILATION (CFM)			Ventilation Note	
110% Target	110% Adjstd	110% Vpz	Voz		OA Fraction Zp=Voz/Vpz		
			Ez	CFM			
111	100	100	1	2	2.4%	-	
2,143	2,150	2,150	1	665	30.9%	-	
1,002	990	990	1	240	24.2%	-	
292	260	260	1	10	3.9%	-	
20	50	50	1			-	
35	50	50	1			-	
1,474	1,470	1,470	1	198	13.5%	-	
172	180	180	1	46	25.7%	-	

5,250	5,250	5,250	1,161	
	Max Zp =	30.9%	O/A Percent- Critical Space	
	Ev =	0.8	1,452	Corrected Total Outdoor Airflow Rate

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HEAT TITLE
HVAC NOTES & SCHEDULES

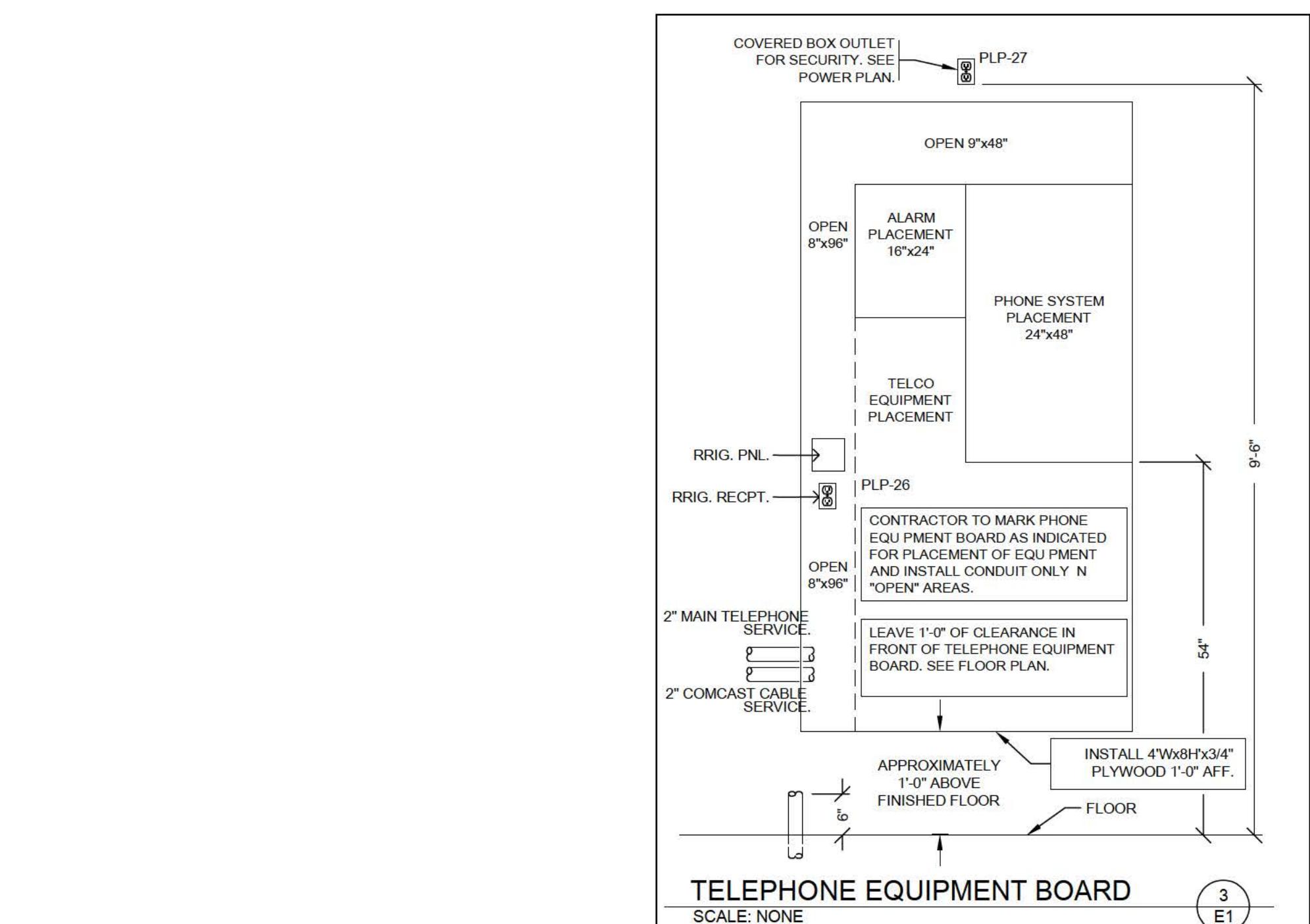
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LIGHT FIXTURE SCHEDULE														
MARK	MFR.	CATALOG NUMBER	SUPPLY VOLTAGE	FINISH	MOUNTING		LAMPS			TOTAL				
					RECESSED	SURFACE	CEILING	FLUORESCENT	H.I.D.	LED	INCANDESCENT	OTHER	LAMP QUANTITY	
LED DIMMABLE LIGHTS - ALL INDOOR LIGHT FIXTURES SHALL HAVE DISCONNECTING MEANS TO COMPLY WITH NEC 410.130 (G)														
A	LSI	SDL 8 LED 80L FL UNV DIMI 40 800RI OR NO SUBSTITUTIONS	120	WHITE	X			X			---	62	GRID HANGER (2 PER FIXTURE)	
B	LSI	SDL 4 LED 40L FL UNV DIMI 40 800RI OR NO SUBSTITUTIONS	120	WHITE	X			X			---	30	GRID HANGER (2 PER FIXTURE)	
C	LSI	SDL 8 LED 80L FL UNV DIMI 40 800RI OR NO SUBSTITUTIONS	120	WHITE		X		X			---	62	5' CHAIN HANGING KIT (1 PER FIXTURE)	
D	LSI	SDL 4 LED 40L FL UNV DIMI 40 800RI OR NO SUBSTITUTIONS	120	WHITE		X		X			---	30	5' CHAIN HANGING KIT (1 PER FIXTURE)	
COMBINATION EXIT/EMERGENCY LIGHTS, EMERGENCY LIGHTS & EXTERIOR EMERGENCY REMOTE HEADS														
XR	COOPER	APCH7R (RED LETTERS)	120	WHITE	X	X		X		2	LED EXIT + (2) 3.6V	2.34	BACKUP BATTERIES SHALL MAINTAIN 100% ILLUMINATION FOR A MINIMUM OF 90 MINUTES TO COMPLY WITH ARTICLE 700.12 (A) OF THE N.E.C.	
EM	COOPER	APEL	120	WHITE	X	X		X		2	3.6V.	0.33	UNIVERSAL WALL/CLG.	
RH2	COOPER	APWR2 Dual Voltage (IFC 1003.2.10.5.)	6V DC	WHITE	X			X		0	WALL MOUNT		BACKUP BATTERIES SHALL MAINTAIN 100% ILLUMINATION FOR A MINIMUM OF 90 MINUTES TO COMPLY WITH ARTICLE 700.12 (A) OF THE N.E.C.	
LED EXTERIOR LIGHTS														
PC	INTERMATIC	PHOTOCELL #4251	120	DARK BRONZE	X						---	-	---	MOUNT ABOVE WALL PACK LOCATED NEAR FREIGHT DOOR.
L	LSI	LAD6 41 LED 40 75 UE TR6R SFHAZ	120	CLEAR	X			X	1	---	45	---	---	RECESSED CAN.
WP1	LSI	XWM-FT-LED-06L-40-UE-BRZ	120	DARK BRONZE	X			X	1	---	59	---	---	FULL CUT-OFF, MOUNT 12' A.F.F. TO CENTERLINE OF FIXTURE.
WS1	LSI	XWM-FT-LED-DBL-40-UE-BRZ	120	DARK BRONZE	X			X	1	---	59	---	---	FULL CUT-OFF, PARAPET WALL
F4	LSI	XWM-FT-LED-06-40-UE-BRZ	120	DARK BRONZE	X			X	1	---	59	---	---	FULL CUT-OFF.

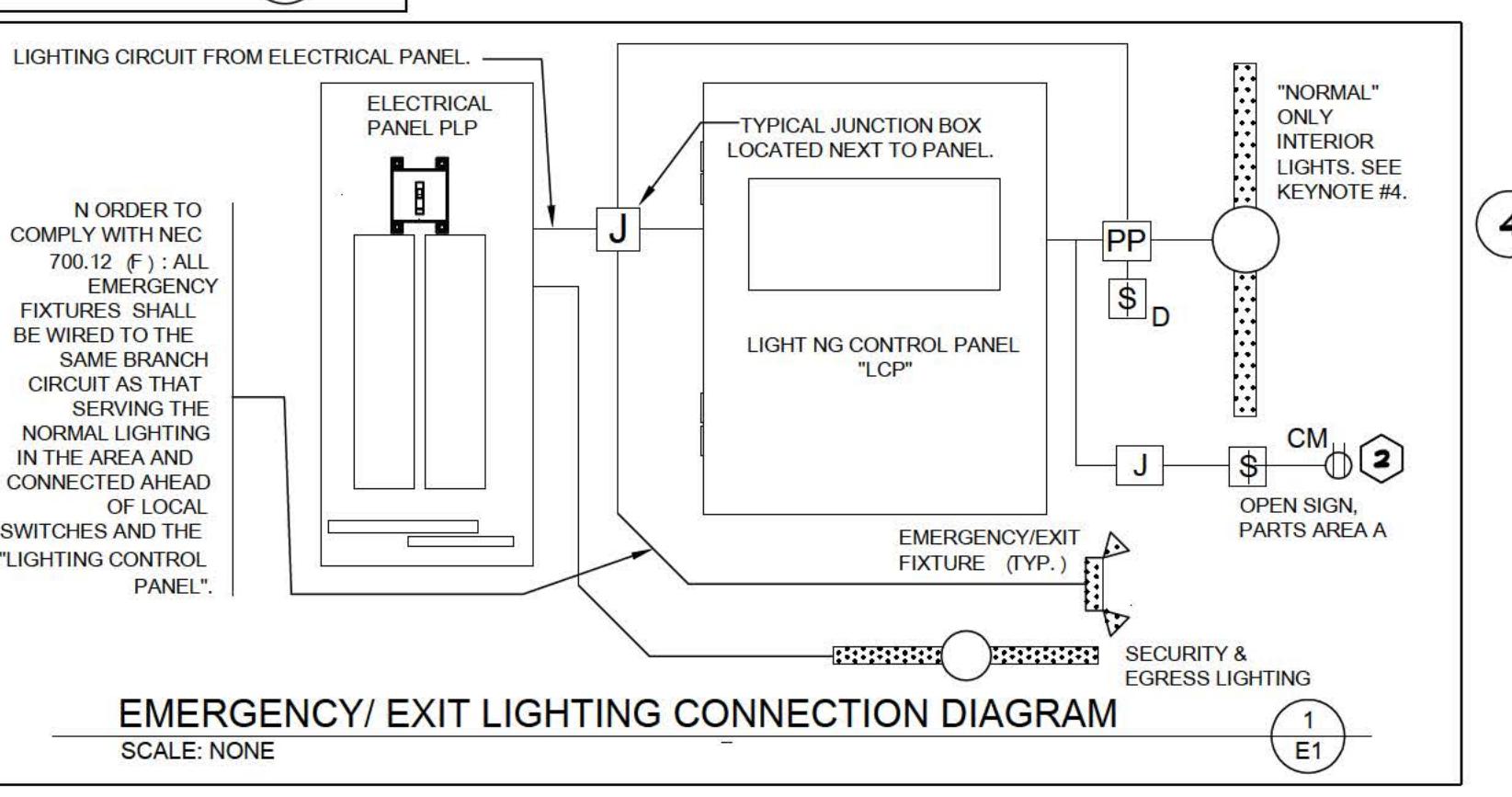
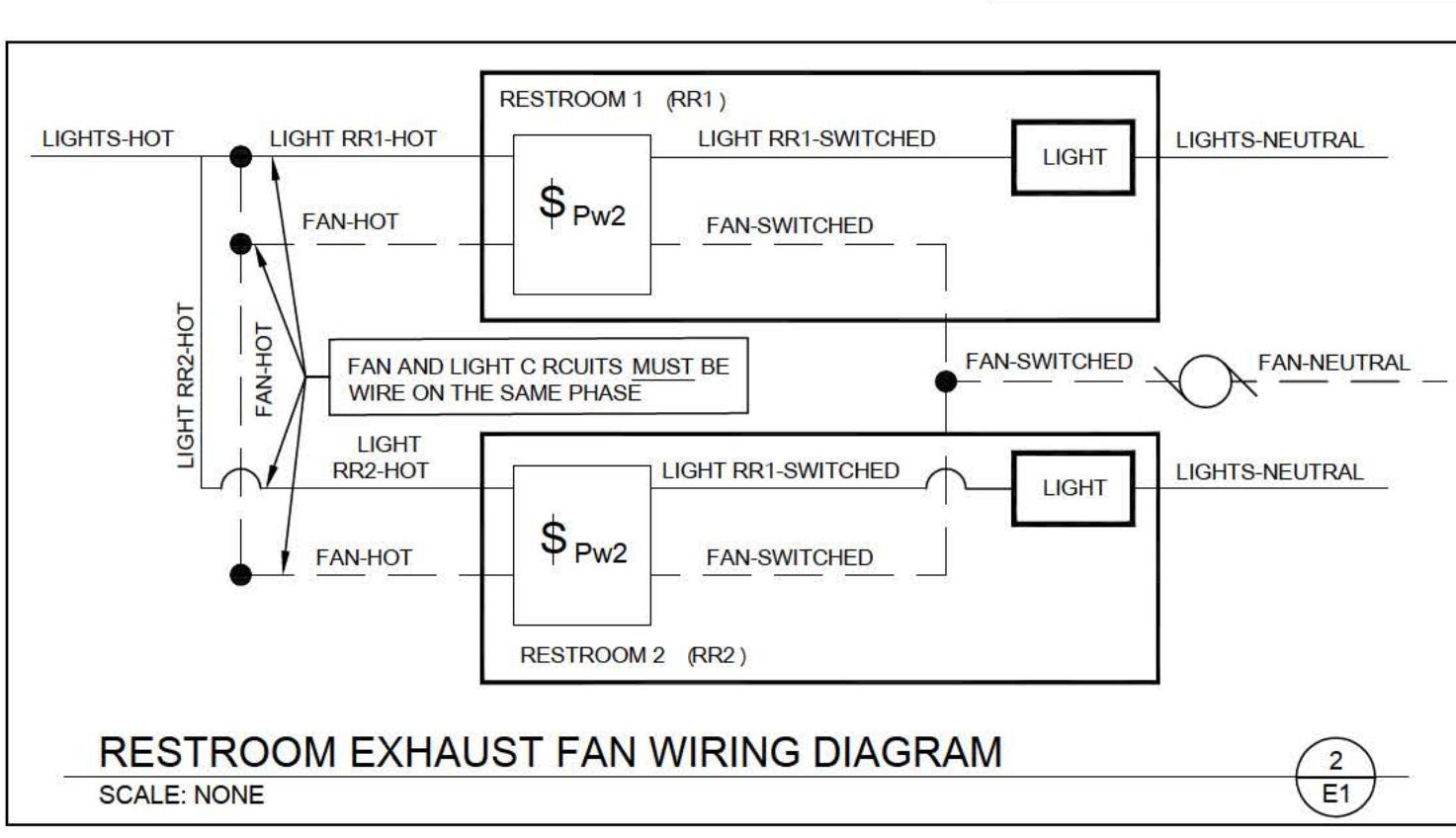
GENERAL NOTES

- A. LIGHTING AND EQUIPMENT BRANCH CIRCUIT BREAKERS ARE SERIES RATED WITH REMOTE MAIN BREAKERS IN ACCORDANCE WITH UL 489.
- B. PANELBOARD COMPONENTS INCLUDING OVERCURRENT PROTECTION DEVICES SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT.
- C. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND THE ELECTRICAL INSPECTOR.
- D. A.I.C. RATING SHOWN AT THE PANEL BOARD IS MINIMUM RATING FOR OVERCURRENT PROTECTION DEVICES. EACH DEVICE SHALL BE FULLY RATED WITH UPSTREAM DEVICES AT AFC AS SHOWN ON PANEL SCHEDULE.
- E. ELECTRICAL BOXES AND/OR CONDUIT INSTALLED IN SUSPENDED CEILINGS SHALL NOT EXCEED 100 CUBIC INCHES IN SIZE, AND THEY SHALL EITHER BE FASTENED TO FRAMING MEMBERS BY BOLTS, SCREWS, RIVETS OR APPROVED CLIPS, OR SECURED TO CEILING SUPPORT.



LIGHTING - KEYNOTES

- 1 MOUNT J-BOX INSIDE BUILDING & FLEX CONDUIT THRU WALL FOR POWER SUPPLY TO ILLUMINATED SIGN. EXACT LOCATIONS OF PENETRATIONS SHALL BE COORDINATED WITH SIGN COMPANY. PENETRATIONS SHALL BE KEPT SIGNAGE. WATERPROOF WI ELASTOMERIC POLYURETHANE. (NO EXCEPTIONS) EQUAL TO "VULKEM 116. WIRE TO SIGN WITH 15' OF WIRING "WHIP" (SHALL BE FLEX OR TYPE MC CABLE). COIL AND "CABLE TIE" W RING "WHIP" TO WALL ABOVE CEILING. TYPICAL.
- 2 TO "OPEN" SIGN. SEE SHEET E2.
- 3 SEE "E" PANEL TRANSFER SWITCH SCHEDULE FOR POSITION OF CIRCUIT W RES THROUGH TRANSFER SWITCH.
- 4 VIA LIGHTING CONTROL PANEL. SEE EM SHEET.
- 5 DIMMER LIGHTING CONTROL SWITCHES LOCATED ON OUTSIDE WALL OF OFFICE. SEE LIGHTING PLAN FOR QUANTITY. SEE DETAILS ON SHEET E4 FOR MORE INFORMATION.
- 6 SUSPEND 8'-0" A.F.F. THIS FIXTURE ONLY.
- 7 ROUTE THE OFFICE AND RESTROOM'S LIGHTING CIRCUIT THRU LOCAL OCCUPANCY SENSORS AND DIRECTLY TO THE CIRCUIT BREAKER. THESE FIXTURES SHALL NOT BE SWITCHED BY THE LIGHTING CONTROL PANEL. SEE "E" PANEL TRANSFER SWITCH SCHEDULE FOR POSITION OF CIRCUIT WIRES THROUGH TRANSFER SWITCH.
- 8 WALL MOUNTED FIXTURES TO BE ROUTED TO GRIDPOINT SYSTEM AS NOTED. PROVIDE BACK BOXES. FIXTURES MOUNTED AT 16'-0".
- 9 SECURITY & EGESS FIXTURE TO BE AS CLOSE AS POSSIBLE BUT NOT OVER THE OVERHEAD DOOR WHEN OPEN.
- 10 ROUTE SECURITY & EGESS LIGHTING CIRCUIT DIRECTLY TO THE ELECTRICAL PANEL.
- 11 EC SHALL PROVIDE CEILING SUPPORT AS REQUIRED FOR EXIT AND EMERGENCY INSTALLATION.
- 12 EC SHALL PROVIDE ADDITIONAL SUPPORT AT STRUCTURAL AS REQUIRED FOR EXIT AND EMERGENCY INSTALLATION.



INTERIOR LIGHTING ZONES

ALL INTERIOR LIGHTING WITH N PARTS AREA "A" SHALL BE CONSIDERED "SALES" ZONE (ON ONLY WHEN STORE IS OPEN FOR BUSINESS).

1. ONCE THE EMS HAS BEEN PROGRAMMED, THE INTERIOR AND EXTERIOR LIGHTS WILL TURN ON AND OFF USING THE FOLLOWING LOGIC: SEE EM SHEETS.

INTERIOR WORK LIGHTS WILL TURN ON WITH FIRST MOTION IN THE STORE AND WILL TURN OFF 15 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.

EXTERIOR SIGN LIGHTS WILL TURN ON WHEN IT'S DARK ENOUGH OUTSIDE ANYTIME DURING STORE HOURS, AND WILL TURN OFF AT STORE CLOSING.

EXTERIOR SITE LIGHTS WILL TURN ON WHEN IT'S DARK ENOUGH OUTSIDE AND IT IS IN STORE HOURS OR THERE IS MOTION IN THE STORE. THEY WILL TURN OFF 30 MINUTES AFTER LAST MOTION ONCE THE STORE IS CLOSED.

FOR NEW CONSTRUCTION LOCATIONS ONLY, THERE IS A TEMPORARY PROGRAM TO KEEP SIGN AND SITE LIGHTS ON UNTIL MIDNIGHT RATHER THAN THE TIMES INDICATED ABOVE. O'REILLY WILL DISABLE THIS PROGRAM ONE YEAR AFTER STORE OPENING.

2. RESTROOMS AND OFFICES: ALL LIGHTING IN THESE AREAS ARE CONTROLLED BY OCCUPANT-SENSING DEVICES.

AUTOMATIC LIGHTING CONTROL

COMPLIANCE WITH ENERGY CODE IS ACHIEVED BY:

1. MC-CABLE (MAXIMUM CABLE LENGTH OF 67') MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.

B. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DATA L 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON E2 SHEET. SEE SHEET E4 FOR MORE REQUIREMENTS

CONDUIT REQUIREMENTS

ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:

- A. MC-CABLE (MAXIMUM CABLE LENGTH OF 67') MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WIRING TO LIGHT FIXTURES.

B. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DATA L 2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON E2 SHEET. SEE SHEET E4 FOR MORE REQUIREMENTS

1/13/20
REVISIONS

1/13 DRAWING	1/13 COORDINATION	1/13 BIDDING	1/13/19
FOR COORDINATION	FOR COORDINATION	FOR BIDDING	1/13/19
FOR CONTRACTING	FOR CONTRACTING	NOT FOR BIDDING	1/13/19
FOR CONSTRUCTION	FOR CONSTRUCTION	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION

KMA & ASSOCIATES, INC. ARCHITECTS
1121 LAKE COOK ROAD
DEERFIELD, ILLINOIS 60015-5235
(847)945-6699 FAX(847)945-6699

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

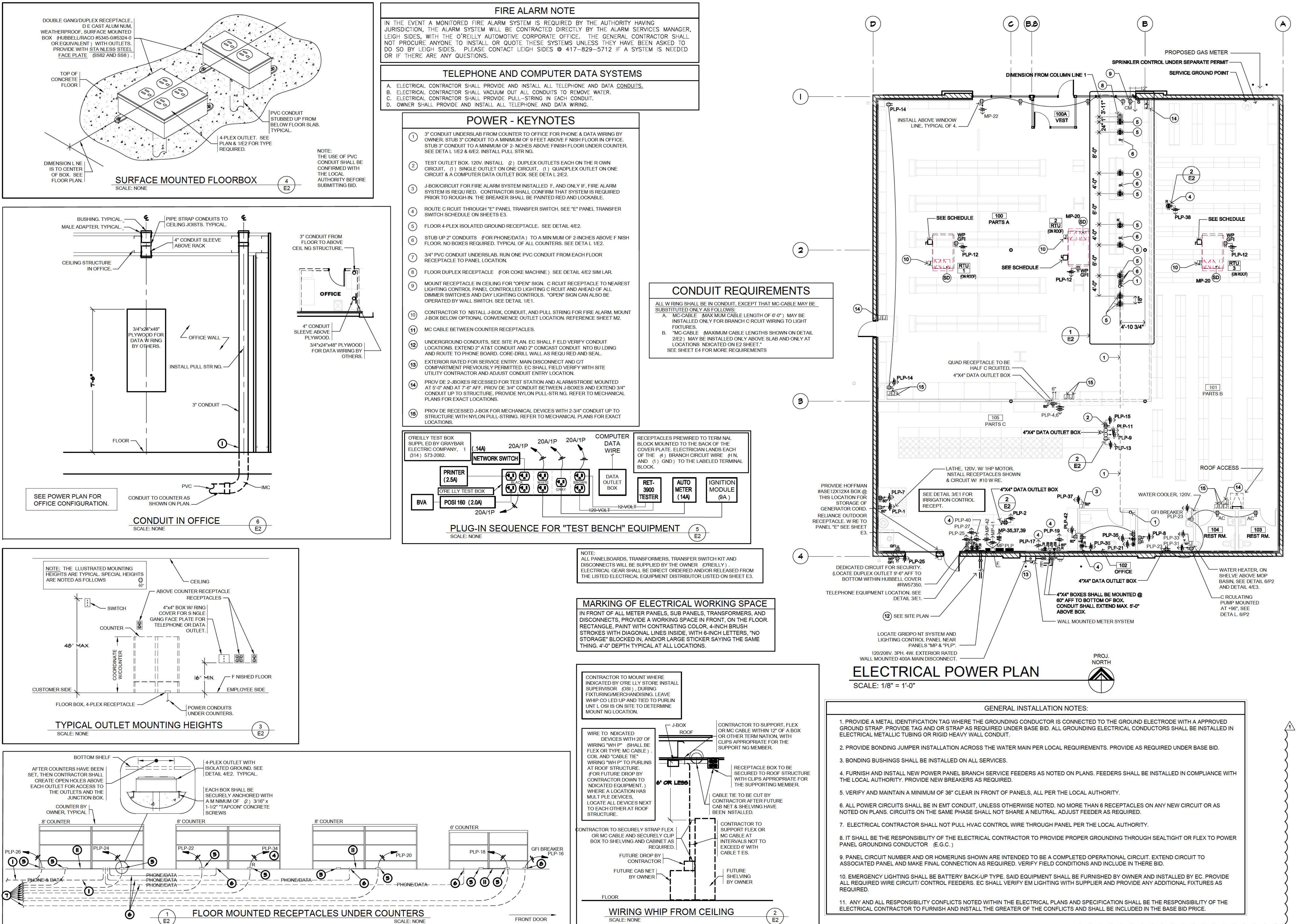
SHEET TITLE
ELECTRICAL LIGHTING PLAN
ELECTRICAL EQUIPMENT
ELECTRICAL CIRCUITS
ELECTRICAL NOTES

1906
E
1

ELECTRICAL LIGHTING PLAN

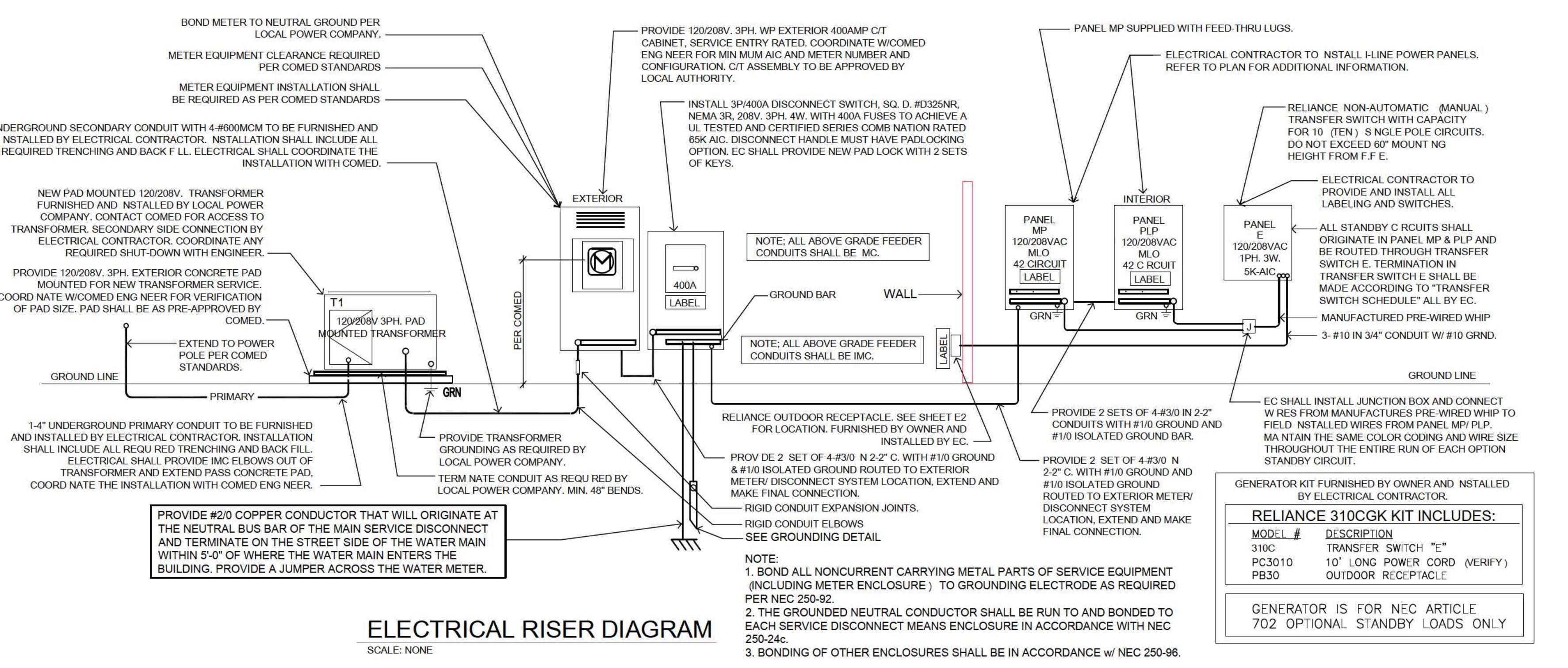
SCALE: 1/8" = 1'-0"

PROJ. NORTH



PANELBOARD: MP									
BUS AMPS: 400									
MAIN SIZE/TYPE: MLO									
VOLT/PHASE: 120Y/208V, 3PH, 4W									
SECTION (S): 1									
PANELBOARD: PLP									
BUS AMPS: 400									
MAIN SIZE/TYPE: MLO									
VOLT/PHASE: 120Y/208V, 3PH, 4W									
SECTION (S): 1									
E TRANSFER SWITCH SCHEDULE									
POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	KVA	BREAKER	POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	KVA	BREAKER
A	20A/1P	OFFICE COMPUTER	0.36	PLP-36	H	20A/1P	LIGHTING HARD PARTS (DIMMED TO 30%)	0.29	MP-5
B	20A/1P	COUNTER RECEPTACLES	0.36	PLP-34	I	20A/1P	INSTALLER (ISOLATED GRD. RECEPTACLE)	0.72	PLP-17
C	20A/1P	PRINTER	0.50	PLP-38	J	20A/1P	INSTALLER (RECEPTACLE)	0.36	PLP-19
D	20A/1P	TELEPHONE EQUIPMENT RECEPTACLE	0.72	PLP-40					
E	20A/1P	LIGHTING OFFICE/BATHROOM (100% ON)	0.53	MP-1					
F	20A/1P	LIGHTING SECURITY (100% ON)	0.70	MP-13					
G	20A/1P	LIGHTING HARD PARTS (DIMMED TO 30%)	0.43	MP-3					
TOTAL 4.97									
* ELECTRICAL CONTRACTOR SHALL WIRE LIGHTING CIRCUITS TO 20A BREAKERS									
ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE OPERATIONAL SYSTEM									

GENERAL ELECTRICAL NOTES	
1. DRAWINGS ARE DIAGRAMMATIC & ARE NOT TO BE SCALED. SEE THE ARCHITECTURAL PLANS & FIELD VERIFY CONDITIONS FOR DIMENSIONS.	
2. ALL ELECTRICAL WORK SHALL COMPLY WITH THE EDITION OF NFPA 70-NATIONAL ELECTRIC CODE (NEC) AS NOTED ON THE CODE SUMMARY SHEET.	
3. ALL WIRING SHALL BE IN CONDUIT, EXCEPT THAT MC-CABLE MAY BE SUBSTITUTED ONLY AS FOLLOWS:	
A. MC-CABLE (MAXIMUM CABLE LENGTH OF 6'-0") MAY BE INSTALLED ONLY FOR BRANCH CIRCUIT WRNG TO LIGHT FIXTURES. B. MC-CABLE (MAXIMUM CABLE LENGTHS SHOWN ON DETAIL E2/E2) MAY BE INSTALLED ONLY ABOVE SLAB AND ONLY AT LOCATIONS INDICATED ON SHEET E2/E2.	
4. FEEDER CONDUIT SHALL BE IMC OR RGS ABOVE GRADE & PVC BELOW GRADE WITH MC OR RGS ELLS & RISERS. INTERIOR BRANCH CIRCUIT CONDUIT SHALL BE ELECTRICAL METALIC TUBING. EXTERIOR BRANCH CIRCUIT CONDUIT SHALL BE PVC BELOW GRADE WITH MC OR RIGID GALVANIZED STEEL CONDUIT CONTINUING ABOVE GRADE. (SPEC 26 05 33).	
5. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATION DOES NOT MEAN "I WAS HERE FIRST."	
6. ALL WIRING IN FINISHED SPACES SHALL BE COORDINATED, UNLESS NOTED OTHERWISE.	
7. THE CONTRACTOR SHALL PROVIDE POWER FOR OPERATING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.	
8. COORDINATE ALL EQUIPMENT ROUGH-IN CONNECTION REQUIREMENTS.	
9. ALL OUTLET BOXES SHALL BE METALIC. (SPEC 26 05 34).	
10. ALL CAULKING ON BUILDING PENETRATIONS SHALL BE ELASTOMERIC POLYURETHANE (NO EXCEPTIONS), EQUAL TO "VULKEM" 116. ANY CONTRACTOR WHO USES SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH ELASTOMERIC POLYURETHANE.	
11. RECEPTACLES INSTALLED IN RESTROOMS SHALL BE GFCI TYPE OR SHALL BE PROTECTED BY A GFI DEVICE.	
12. ALL DEVICES SHALL BE IVORY & SHALL BE EQUAL TO THE FOLLOWING: - SINGLE POLE SWITCHES - THREE-WAY SWITCHES - DUPLEX RECEPTACLE - GFCI DUPLEX RECEPTACLE - ISG GRD. RECEPTACLES (SPEC 26 27 26)	
13. USE DEVICE PLATES MANUFACTURED BY THE DEVICE MANUFACTURER. (SPEC 26 27 26)	
14. FEEDER CONDUIT & CONDUCTORS SHALL BE COPPER STRANDED 600 MCM WHTHWN INSULATION. EXCEPTION: WIRE SIZES #10 AWG & SMALLER SHALL BE SOLID. (SPEC 26 05 19)	
15. CONTRACTOR SHALL PROVIDE A TYPED CIRCUIT DIRECTORY FOR ALL PANELS. (SPEC 26 05 53)	
16. CONTRACTOR SHALL PROVIDE NEW WORKING LAMPS IN ALL LIGHT FIXTURES AT JOB COMPLETION.	
17. CONTRACTOR SHALL COORDINATE WITH & SHALL INCLUDE ALL FEES FOR THE SERVING "ELECTRIC UTILITY CO." TO PROVIDE ELECTRIC SERVICE AS SHOWN. CONTRACTOR SHALL ALSO INCLUDE ALL FEES FOR THE "SERVING PHONE COMPANY" TO INSTALL, NO LESS THAN 10 PAIR CABLE TO BUILDING.	
18. CONTRACTOR SHALL ALLOW FOR & INCLUDE ALL PERMITS & FEES FOR HIS SCOPE OF WORK.	
19. CONTROL W/RING BY HVAC CONTRACTOR. F/NL CONNECTIONS BY HVAC CONTRACTOR. SEE SHEET M1.	
20. APPROVED MANUFACTURERS: A. PANELBOARDS & SAFETY: B. DEVICES: C. FLOOR BOXES:	
SWITCHES (DISCONNECTS): - "SQUARE D" - "G.E." - "AT&T" - "CUTLER HAMMER" (SPEC 26 24 00) 22. MULTIWIRE BRANCH CIRCUITS WITH A "SHARED NEUTRAL" ARE NOT ALLOWED FOR SINGLE PHASE CIRCUITS. 23. ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS. THIS MEANS THAT ALL CONDUITS MUST HAVE A "GREEN" WIRE INSTALLED IN THEM AND SIZED IN ACCORDANCE WITH TABLE 250.122 OF THE NEC.	

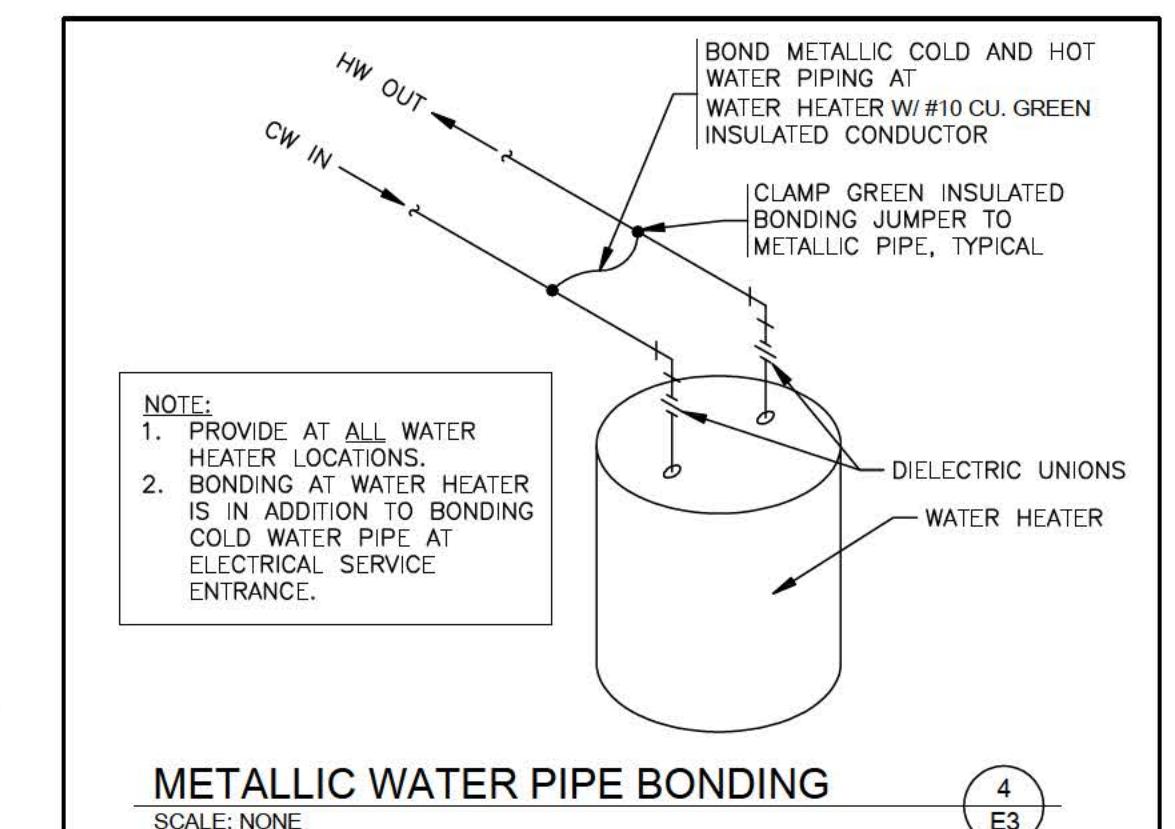


NOTE:
ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTOR. THIS MEANS ALL CONDUITS MUST HAVE A GREEN WIRE INSTALLED IN THEM AND SIZED IN ACCORDANCE WITH NATIONAL ELECTRIC CODE.

NOTE:
1. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED PER NEC 250-92.
2. THE GROUNDED NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECT MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24c.
3. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.

BONDING REQUIREMENTS

SCALE: NONE



ELECTRICAL SYMBOL LEGEND & ABBREVIATIONS

S SINGLE POLE SWITCH
S2 TWO POLE SWITCH
S3 THREE-WAY SWITCH
S-M MOTOR STARTING SWITCH WITH PILOT LIGHT

S-X CLASS 1, DIVISION 1 HAZARDOUS LOCATION RATED SWITCH ASSEMBLY
S-M1 WALL MOUNTED OCCUPANCY SENSOR EQUAL TO "SENSORSWITCH WSX D IV"

S-P FAN SPEED SWITCH (SUPPLIED BY HVAC CONTRACTOR / INSTALLED BY ELECTRICAL CONTRACTOR)
0-10V LED DIMMER SWITCH, EQUAL TO "LEVITON, P710-LFZ". SEE DATA LS THIS SHEET
6-GANG MAX

■ LEVITON POWER OPF PP20-0D2

○ SINGLE RECEPTACLE

□ DUPLEX RECEPTACLE

● ISOLATED GROUND DUPLEX RECEPTACLE. DEVICES AND COVERPLATE SHALL BE ORANGE. SEE DATA L1/E3

○ DUPLEX RECEPTACLE. DEVICES AND COVERPLATE SHALL BE RED

◆ ISOLATED GROUND QUADPLEX RECEPTACLE. TWO ISO. GRD. DUPLEX RECEPTACLES IN ONE 2-GANG BOX UNDER A SINGLE COVERPLATE. DEVICES AND COVERPLATE SHALL BE RED

◆ QUADPLEX RECEPTACLE. (C RCUT TO BE WIRED THRU OCCUPANCY SENSOR. INSTALL A PERMANENT LABEL ON EACH OUTLET STATING "SENSOR CONTROLLED OUTLET". SEE DETAIL ON SHEET 2)

▲ ABOVE COUNTER GFCI (GROUND FAULT CIRCUIT INTERRUPTING) DUPLEX RECEPTACLE

● WEATHER PROOF GFCI (GROUND FAULT CIRCUIT INTERRUPTING) DUPLEX RECEPTACLE. COVER TO PROVIDE WEATHER PROOF PROTECTION WITH CORD AND PLUG IN USE

■ POWER/WIRE POLE

□ JUNCTION BOX

□ REMOTE PHOTO CONTROL

□ COMPUTER DATA OUTLET BOX

▼ TELEPHONE OUTLET BOX

□ TELEPHONE OUTLET FLOOR BOX. SEE DATA L4/E2

□ 4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/DIQUADPLEX RECEPTACLE. SEE ABOVE RECEPACLE DESCRIPTION. SEE DATA L4/E2 FOR INSTALLATION OF BOX

□ 4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX ISOLATED GROUND RECEPTACLE. SEE ABOVE ISOLATED GROUND RECEPTACLE DESCRIPTION. SEE DETAIL 4/E2 FOR INSTALLATION OF BOX

□ 4" SQUARE STEEL BOX MOUNTED FLUSH ON FLOOR W/QUADPLEX ISOLATED GROUND RECEPTACLE. SEE ABOVE ISOLATED GROUND RECEPTACLE DESCRIPTION. SEE DETAIL 4/E2 FOR INSTALLATION OF BOX. DEVICES AND COVERPLATE SHALL BE RED

□ 2" x 4" RECTANGULAR STEEL BOX MOUNTED FLUSH ON FLOOR W/DIQUADPLEX RECEPTACLE. SEE ABOVE RECEPACLE DESCRIPTION. SEE DATA L4/E2 FOR INSTALLATION OF BOX

NEMA L5-30P - SPECIAL RECEPTACLE

MOTOR

■/xx FUSED DISCONNECT (SAFETY) SWITCH W/ SWITCH AMPACITY / FUSE AMPACITY AS INDICATED

■ NON-FUSED DISCONNECT (SAFETY) SWITCH

POWER OR LIGHTING PANEL W/PANEL DESIGNATION SHOWN ON PLAN (SIZES & MOUNTING INDICATED ON PLANS)

● 24 HOUR EGRESS & SECURITY LIGHT, WIRE DIRECT TO ELECTRIC PANEL AHEAD OF ANY LOCAL SWITCHES AND LIGHTING CONTROL PANEL

X-R WALL/CEILING MOUNTED COMBINATION "EXIT/EMERGENCY" SIGN W/SHADING INDICATING FACES

EM EMERGENCY LIGHTING FIXTURE WITH BATTERY

FEEDING PANEL AND CIRCUIT NUMBER (S)

NOTE: EQUIPMENT GROUND CONDUCTOR NOT SHOWN

CIRCUIT CONDUCTORS

GROUNDED CIRCUIT CONDUCTOR (OR NEUTRAL)

MD MOTION DETECTOR - SEE EM SHEETS FOR MORE INFORMATION

OS OCCUPANCY SENSOR EQUAL TO "LEVITON, OSC20-MAW" WITH POWER PACK

AC LOCATED ABOVE COUNTER

RTU INTERMEDIATE METALLIC TUBING

LC LIGHTING CONTRACTOR

CDU MOTOR STARTING

EF EXHAUST FAN

FURN ELECTRIC FURNACE

AHU AIR HANDLER

HP HEAT PUMP UNIT

PP POWER PACK

UPD UN-POWERED OUTLET

TS TIME SWITCH

W WALL OUTLET (46" AFF SEE MOUNTING HEIGHTS)

WP WATER POWER

X RECESSED CEILING LIGHT

GRD GROUND FAULT CIRCUIT INTERRUPT

EMT ELECTRICAL METALLIC TUBING

CM CEILING MOUNTED

RGS RIGID GALVANIZED STEEL

AC AIR CONDITIONER

COND CONDENSING UNIT

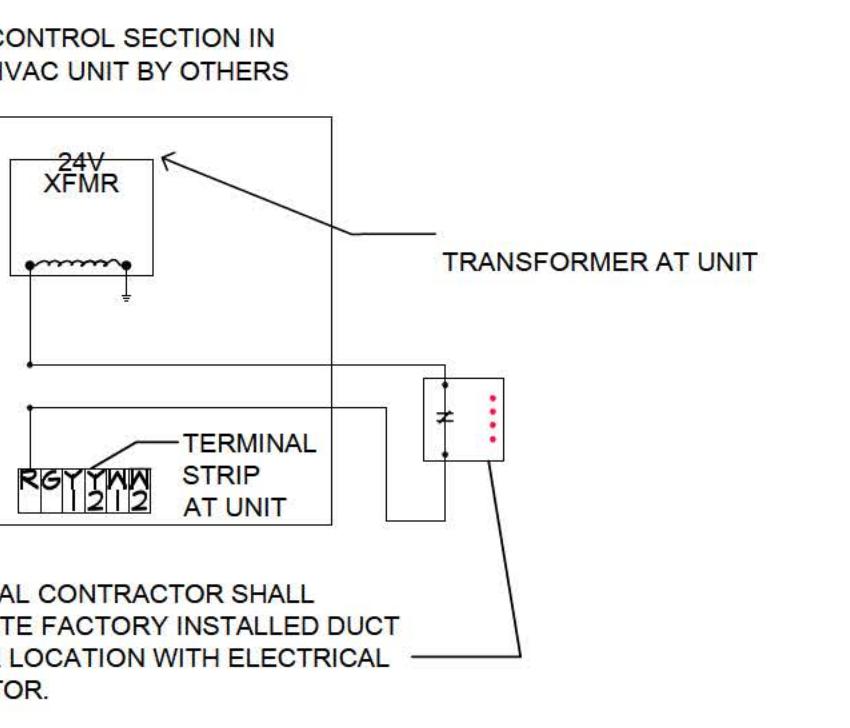
COV COVERS

MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE													
DESCRIPTION	VOLTAGE AND PHASE	MCA	HP/WATT	CONNECTION		PANEL	CIRCUIT NO.	CIRCUIT BREAKER SIZE	DISC. SWITCH	GFI RECEPTACLE	CIRCUIT NO.	SMOKE DETECTOR	NOTES
				DIRECT CONNECT	CONDUIT AND WIRE SIZE								
RTU-1	208V-3Ø	29.0	-	●	3#8, 1#10 (G), 1#C.	MP	2,4,6	40A/3P	60A-NF-3R	YES	PLP-12	YES	1,2,3,5,6,8
RTU-2	208V-3Ø	41.0	-	●	3#8, 1#10 (G), 1#C.	MP	8,10,12	50A/3P	60A-NF-3R	YES	PLP-12	YES	1,2,3,5,6,8
RTU-3	208V-3Ø	29.0	-	●	3#8, 1#10 (G), 1#C.	MP	14,16,18	40A/3P	60A-NF-3R	YES	PLP-12	YES	1,2,3,5,6,8

1. THE E.C. SHALL VERIFY ALL EQUIPMENT SPECIFICATIONS (VOLTAGE, OVERCURRENT PROTECTION, FUSE SIZES, ETC.) WITH M.C. PRIOR TO DISTRIBUTION OF EQUIPMENT AND ROUGH-IN. THE E.C. SHALL ALSO BE RESPONSIBLE FOR PROVIDING ALL CONNECTIONS, DEVICES, SAFETY SWITCHES, ETC. LISTED ON THIS SCHEDULE UNLESS NOTED ON THIS SCHEDULE AS BEING PROVIDED BY OTHERS.
 2. EC SHALL PROVIDE INTEGRAL STARTER AND/OR DISCONNECT SWITCH. E.C. SHALL BRANCH TO FINAL CONNECTION VIA LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
 3. ROUTE CONDUIT THRU EQUIPMENT CURB OR PROVIDE SEPARATE ROOT CONDUIT BOOT. COORDINATE WITH M.C.
 4. CONNECT TO LOCAL LIGHTING CIRCUIT FOR FAN SERVICE.
 5. GFI RECEPTACLE IS PROVIDED WITH RTU UNIT.
 6. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS, OR SHAFTS SHALL BE SEALED IN ACCORDANCE WITH WALL TYPE AS SHOWN ON SHEET A1.0.
 7. PROVIDE 120V TOGGLE SWITCH FOR DISCONNECTING MEANS.
 8. PROVIDE SMOKE DETECTOR CONTROL CIRCUIT AND WIRING CONTROL, SEE DETAIL.
 * NOT ALL NOTES MAY APPLY

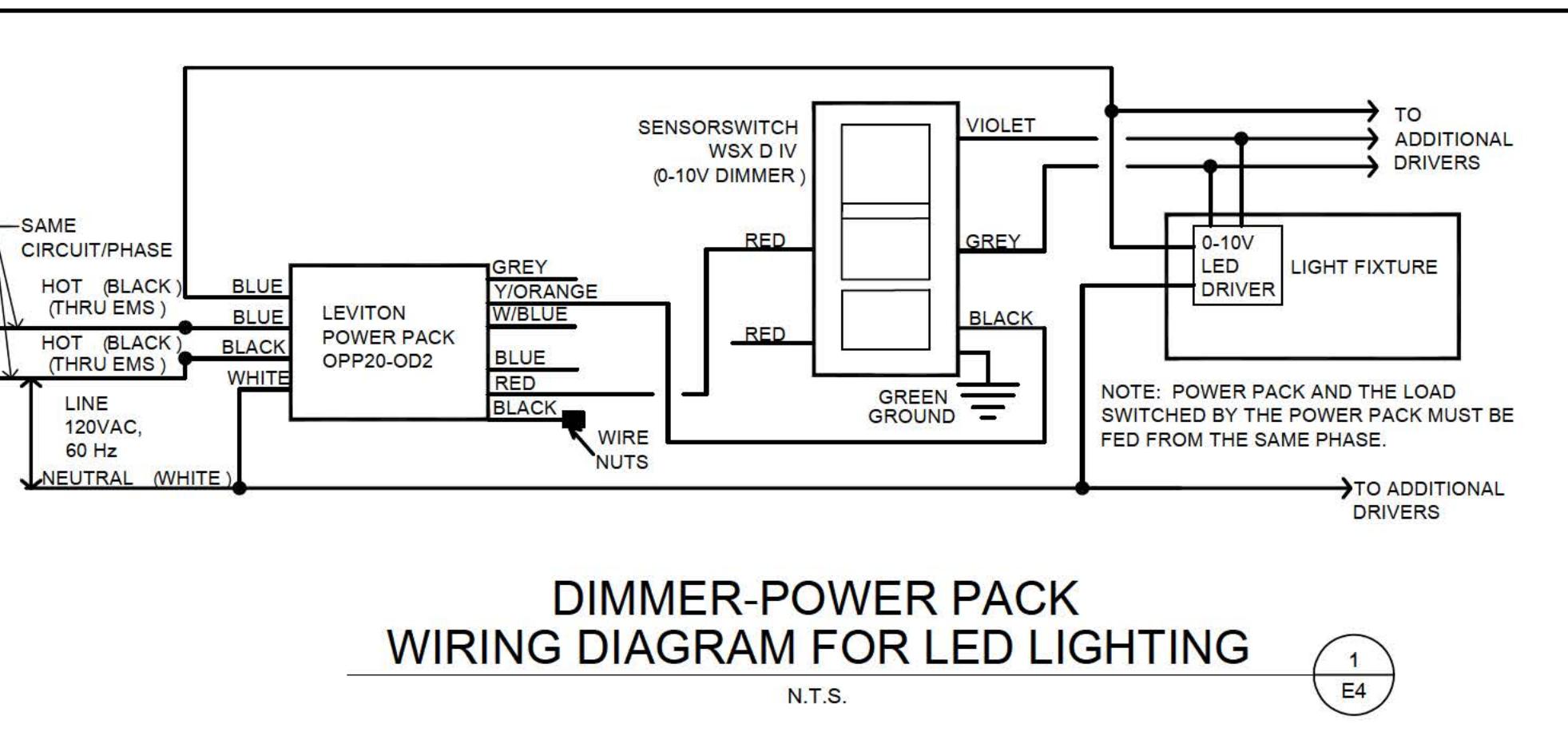
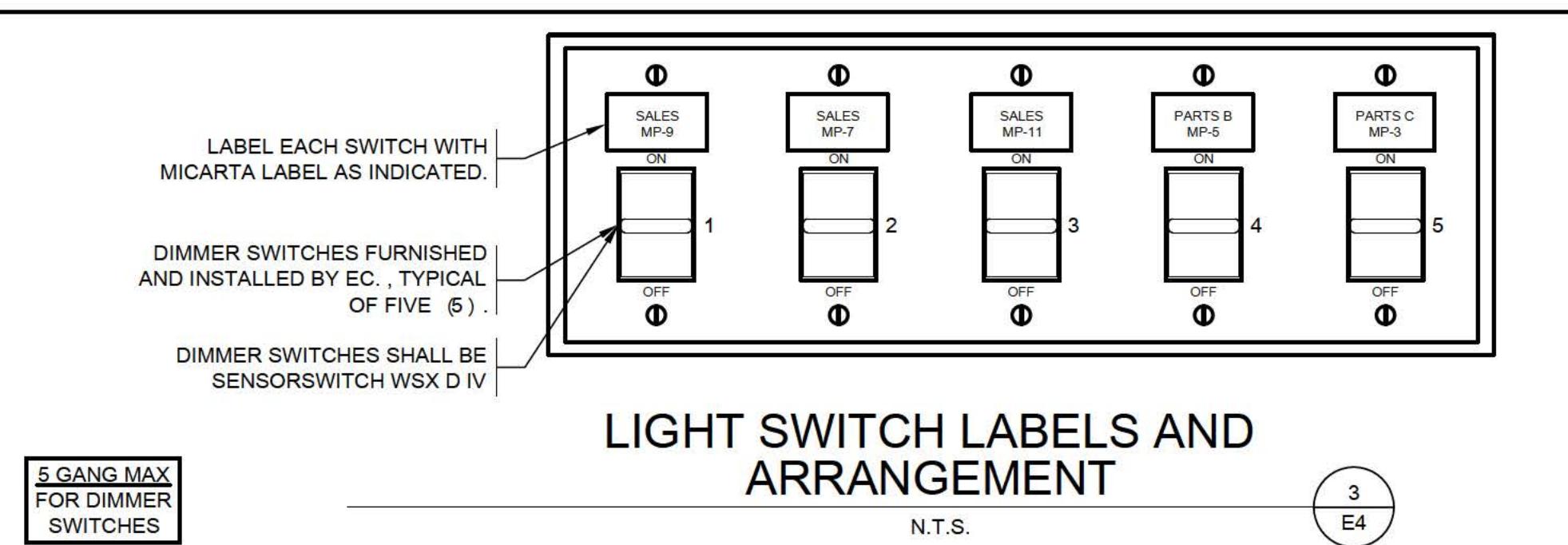
GENERAL NOTES

- COORDINATE ALL RECEPTACLE LOCATIONS & HEIGHTS WITH EQUIPMENT MANUFACTURER CUTSHEETS PRIOR TO ROUGH-IN.
- COORDINATE ALL NON-EQUIPMENT RELATED RECEPTACLE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.



HVAC CONTROL WIRING SCHEMATIC

SCALE: NONE



EQUIPMENT LABELS CHART

EQUIPMENT	LABELS					
	SERVICE DISCONNECT	OPTIONAL STANDBY SOURCE	SERIAL NUMBER	STANDBY RATING	GENERATOR POWER INLET	AVAILABLE FAULT CURRENT
DISCONNECT	X	X				
MP						
PLP						
E						
GENERATOR POWER INLET					X	
CT CABINET						

SERVICE DISCONNECT LABEL

THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED "SERVICE DISCONNECT". REFER TO SPEC SECTION 26_00_20 FOR FURTHER IDENTIFICATION PLATE REQUIREMENTS.

OPTIONAL STANDBY SOURCE LABEL

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED ON DISCONNECT DOOR.

CAUTION

TWO SOURCES OF SUPPLY

STANDBY POWER SOURCE: PORTABLE 6kw GENERATOR LOCATION: OVERHEAD DOOR.

EXAMPLE OF OPTIONAL STANDBY SOURCE LABELING ABOVE.

GENERATOR POWER INLET LABEL

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 6 INCHES ABOVE GENERATOR RECEPTACLE.

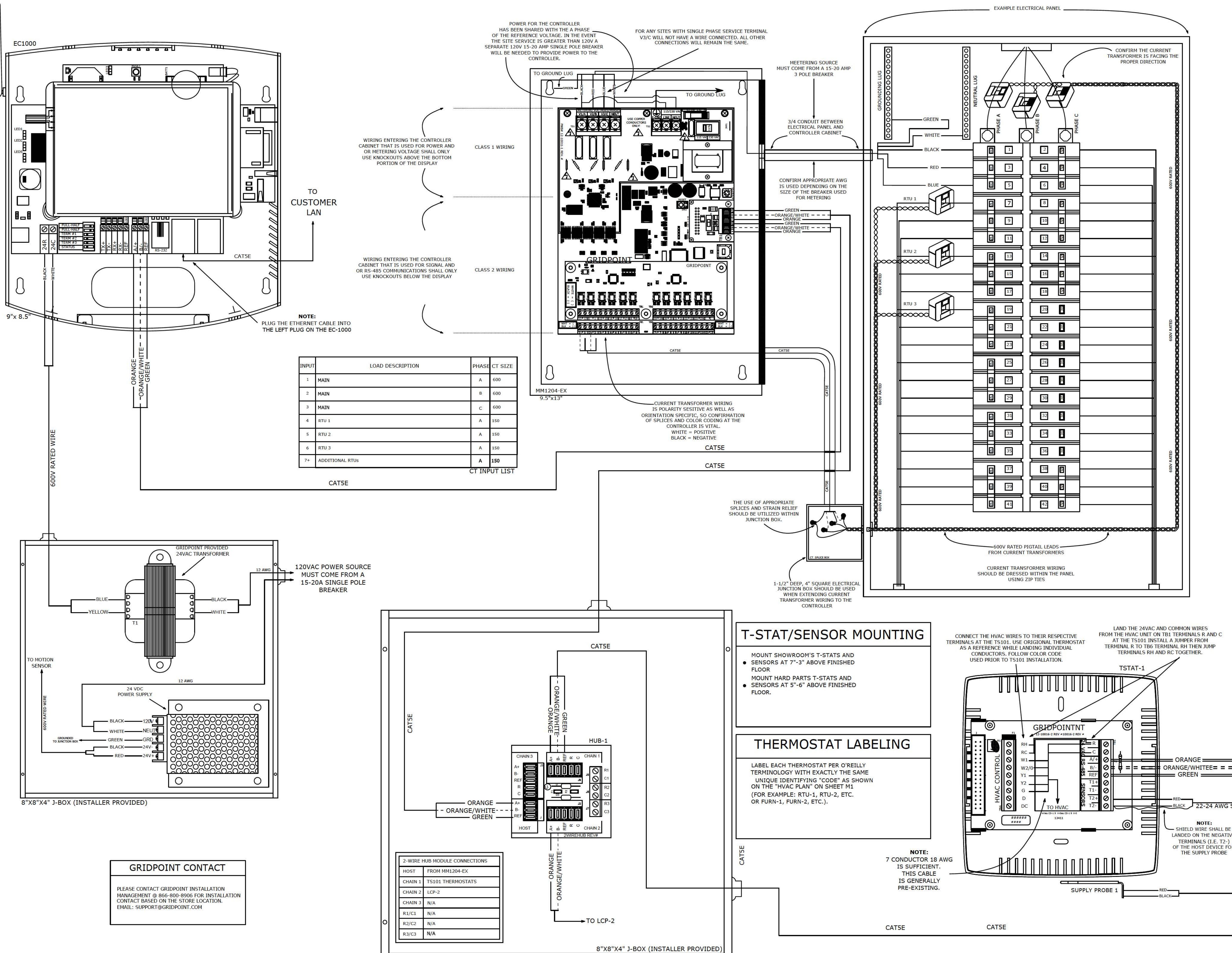
WARNING:

FOR CONNECTION OF A NONSEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY (MAX. 6000 WATT GENERATOR)

EXAMPLE OF LABELING ABOVE.

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 CADDIE 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 FMC, 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.



1906

O'REILLY AUTO PARTS
DOLTON PLAZA DOLTON, IL 604
1317 E. SIBLEY BLVD.
FOR: DEPARTMENT PROPERTY GROUP, IL

1/15/20

REVIEWS

DRAWING	INFORMATION	11/12/19	11/12/19

THIS IS	FOR COORDINATING	FOR BIDDING	FOR PERMIT	FOR CONTRACTING	FOR CONSTRUCTION
STRUCTS					

ES. INC. ARCHI
DAD 60015
FAX(847)945

ASSOCIATE
E COOK RO-
D, ILLINOIS
—6869

KMA & A
1121 LAK
DEERFIELD
(847)945

PHOTO DIODE SENSOR

a) **LOCATION/MOUNTING**
A PHOTO DIODE SENSOR SHALL BE MOUNTED IN A WATERTIGHT ENCLOSURE ON THE NORTHERN MOST SIDE OF THE BUILDING.
THE PHOTO DIODE MUST BE MOUNTED IN THE PROPER ORIENTATION. THE WATERTIGHT ENCLOSURE SHALL BE MOUNTED USING THE APPROPRIATE WALL ANCHORS. ANY EXTERIOR WALL PENETRATION SHALL BE SEALED PROPERLY WITH WEATHER-TIGHT CAULK/SILICON.

b) **CONNECTIONS**
THE PHOTO DIODE LEADS MUST BE EXTENDED USING 18-24 AWG SHIELDED TWISTED PAIR CABLE, AND ROUTED BACK TO THE LCA/LCP JS P3+/- TERMINALS. TERMINALS ARE POLARITY SENSITIVE.

LCP-2 (LOAD CONTROL PANEL) – NOT APPLICABLE FOR SITES CONTAINING EXISTING SMART LIGHTING CONTROLS

- a) **LOCATION/MOUNTING**
(1) LCP-2 SHALL BE MOUNTED WITHIN THE ELECTRICAL ROOM.
THE LCP-2 SHALL BE MOUNTED USING THE APPROPRIATE WALL ANCHORS.
- b) **POWER REQUIREMENTS**
THE 120 VAC POWER SOURCE FOR THE LCP-2 MUST BE OBTAINED FROM A DEDICATED 15-20 AMP SINGLE POLE BREAKER.
HIGH VOLTAGE KNOCKOUTS FOR THE LCP-2 ARE LOCATED ON THE SIDE/BOTTOM OF THE CABINET ENCLOSURE. WHEN USING SIDE KNOCKOUTS THE INSTALLER SHALL ONLY UTILIZE KNOCKOUTS BELOW THE GROUNDING BAR WITHIN THE LCP-2 CABINET.
LOW VOLTAGE KNOCKOUTS FOR THE LCP-2 ARE LOCATED ON THE TOP OF THE CABINET ENCLOSURE.
- c) **CONNECTIONS**
THE LCP-2 SHALL CONTROL THE FOLLOWING:
 - o EXTERIOR SIGNS AND BUILDING LIGHTING
 - o EXTERIOR PARKING LOT LIGHTS
 - o INTERIOR LIGHTINGTHE LIGHTING ZONES SHALL BE SEPARATED PER THE SOW.
LINE AND LOAD WIRING SHALL BE Routed FROM THE ELECTRICAL PANEL CONTAINING THE CIRCUITS TO BE CONTROLLED BACK TO THE LCP-2. SINCE THE LCP-2 DOES NOT REQUIRE NEUTRAL WIRES, LINE AND LOAD WIRING MUST ENTER AND EXIT THE LCP-2 THROUGH THE SAME CONDUIT. LINE SIDE WIRING IS ON THE LEFT SIDE OF THE CONTACTORS AND LOAD SIDE WIRING IS ON THE RIGHT SIDE OF THE CONTACTORS.
DO NOT BREACH CONDUIT WIRING CAPACITY, AND INSTALL ADDITIONAL CONDUIT IF NEEDED TO CONTAIN LINE AND LOAD PAIRS.
- d) **COMMUNICATION**
RS-485 CONNECTIONS SHALL BE OBTAINED USING THE A+/B- TERMINALS USING CAT5E CABLE AND WIRED BACK TO AN OPEN CHAIN OF THE HUB.
- e) **LABELING**
THE LCP-2 SHALL BE LABELED PER POWER SOURCE. THE LABEL SHALL BE APPLIED TO THE FRONT CABINET DOOR.

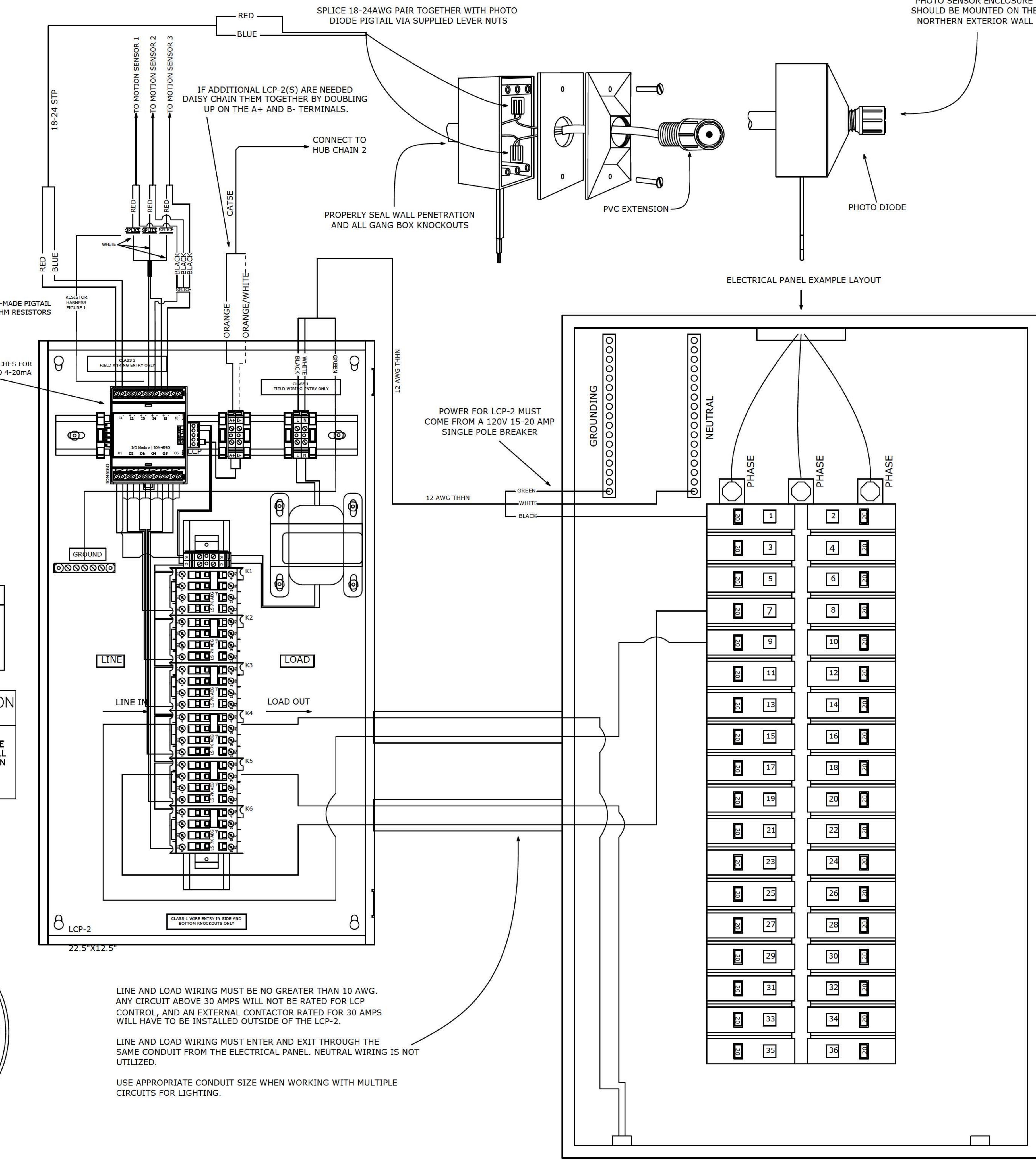
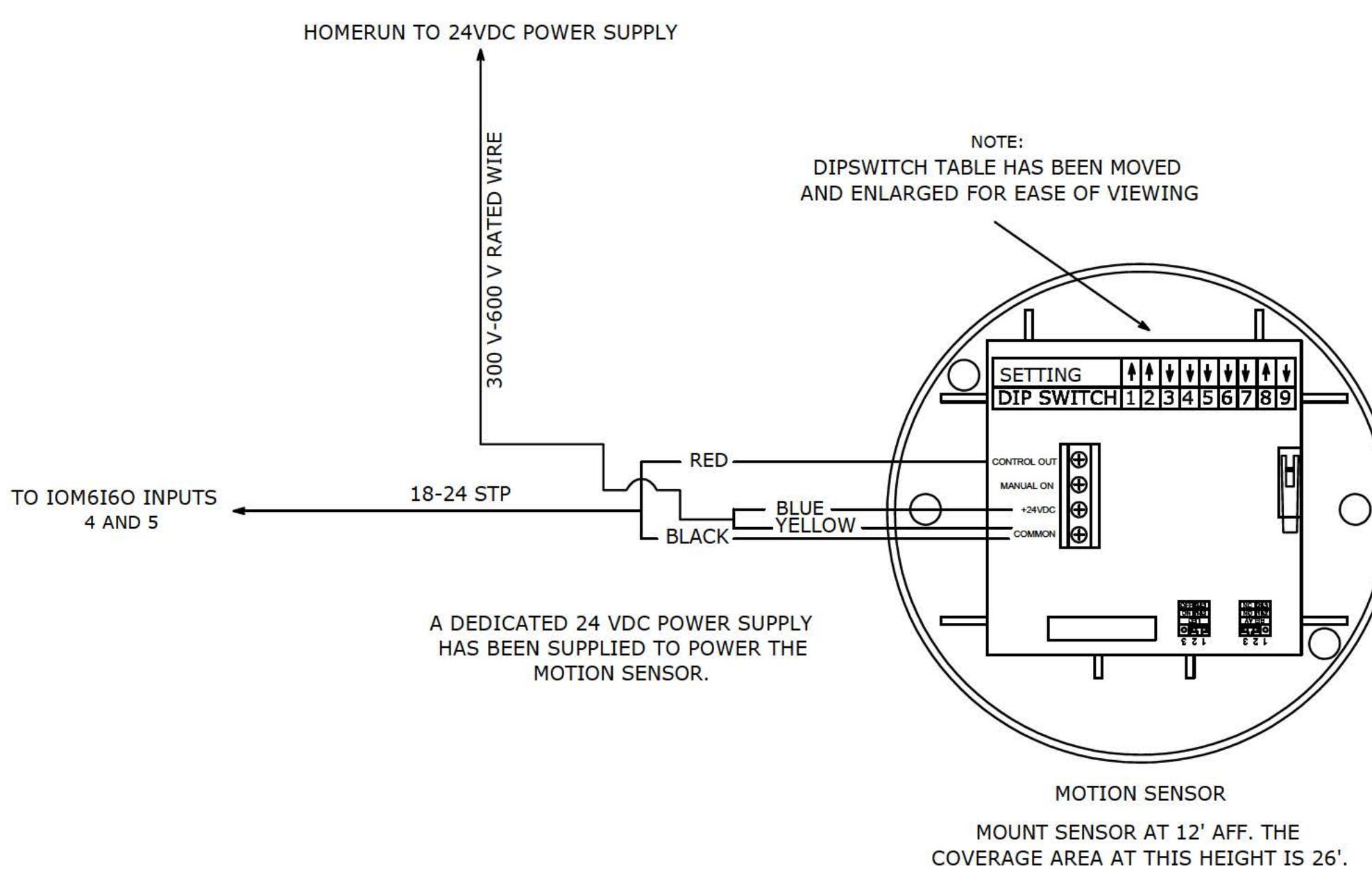
Terminal		Load Description
K2		
		Signs (Building and Pole)
K4		Exterior Lighting
K5		Spare

CONTACTOR SCHEDULE

FOR ANY SITES THAT REQUIRE MORE THAN 6 CONTACTORS A SECOND LCP-2 WILL BE REQUIRED.

GRIDPOINT CONTACT
PLEASE CONTACT GRIDPOINT INSTALLATION MANAGEMENT @ 866-800-8906 FOR INSTALLATION CONTACT BASED ON THE STORE LOCATION.
EMAIL: SUPPORT@GRIDPOINT.COM

FIRE ALARM COORDINATION PER NFPA 2015
IF THE LCP IS OFF, THEN ALL THE LIGHTS WILL TURN ON. IF THE LCP IS ON AND THE FIRE ALARM TRIGGERS, THEN GRIDPOINT WILL MONITOR THE FIRE ALARM SIGNAL AND TURN LIGHTS ON. NOTE: THE FIRE ALARM SIGNAL NEEDS TO STAY ACTIVE FOR AT LEAST 1 MINUTE.



GridPoint - EMS Installation
1. Scope

- The EMS shall control/monitor the following:
1. Total electrical load (Main Load)
 2. Additional Loads - HVAC
 3. Control all HVAC units
 4. Control all interior and exterior lights and signs
 5. Monitor Rear Entrance Motion

Note: The EMS Controller must be installed and communicating with the GridPoint server before moving forward with any other part of the installation.

2. Controller (See EM1.0)M 1.0

EC1000 Controller (Mounting on MM1204-EX Door) with Transformer Power

A. Location/Mounting: (1) EC1000 Controller shall be mounted on the door of the MM1204-EX at an appropriate eye level.

B. Power Requirements: The 24 VAC power source for the controller must be obtained from a provided dedicated 120 to 24 VAC transformer, obtained from 15-20 amp single pole breaker.

C. Communication: LAN communication shall be obtained via the client's network/switch gear. RS-485 connections to peripheral devices shall be obtained using the J14 terminal block using Cat5e cable.

D. Labeling: Labeled per power source and site name on the front cover.

3. Sub-metering (See EM 1.0)

All current transformer wiring shall be routed through an existing trough or raceway where feasible. If no trough/raceway is available, then the wiring shall be run through conduit to the sub-metering panel. Splicing shall take place inside junction boxes/troughs and not inside breaker panels.

MM1204-EX Metering Module

A. Location/Mounting: (1) MM1204-EX shall be mounted within the electrical area at an appropriate eye level using correct wall anchors.

B. Power Requirements: 120V Power (15-30A single pole breaker) and site metering voltage (15-30A 3-pole breaker) must be pulled to the module. If metering voltage is 120/208V, power and neutral may be jumped.

C. Current Transformer Connections: Connect the supplied current transformers to the TB1/TB2 terminals. These terminals are polarity sensitive. Use wire meeting the 6 twists per foot ratio for extension wire (i.e. Cat5e).

D. Communication: RS-485 connections shall be obtained using the TB1 (orange punch-down) terminals using Cat5e cable.

E. Labeling: Labeled per metering and power source on the front door.

Current Transformer Schedule

CT INPUT / CT SIZE / PHASE / LOAD DESCRIPTION

- 1 / 600A / A / Main Load
- 2 / 600A / B / Main Load
- 3 / 600A / C / Main Load
- 4 / 50A / A / AC 1
- 5 / 50A / A / AC 2
- 6 / 50A / A / AC 3
- 7-12 / 50A / A / Additional RTUs as needed

4. HUB's/Peripherals/Power Supplies

A. Location/Mounting: (2) Installer provided NEMA-1 enclosures shall be installed to house the peripherals and power supplies provided. The NEMA-1 enclosures shall be used to separate the HV/LV wires to the transformers/power supplies and peripherals. 300-600 volt rated wire is required when extending LV output to the EMS.

B. Connections: Cat5e cable will be used to connect each set of peripherals.

C. Communication: RS-485 connections to the EMS controller shall be run to the HUB.

D. Labeling: Each wire cable must be identified / labeled per peripherals connected.

5. HVAC Controls (See EM 1.0)

The HVAC units shall be added to the GridPoint system one at a time, confirming proper operation before moving on to the next unit.

TS101 Wired (Thermostat in the Zone – TSTAT and Supply Combination) and RTU Power

A. Location/Mounting: (3) TS101 thermostats shall be placed in an appropriate position as to monitor the associated zone.

B. Power/Communications: The 24 VAC power source for the TS101 thermostats shall be obtained from the existing 24 VAC transformer within the HVAC unit via HVAC control cabling. RS-485 connections for the TS101 thermostats shall be made using the daisy chain method back to the HUB using cat5e cable.

C. Connections: The installer shall re-use existing thermostat cable and store the old thermostats in a box to leave with the manager on site.

a. (3) Supply duct sensors shall be located as close to the plenum/roof penetration of the supply duct as practical and routed back to their respective thermostat T2+/- terminal using 18-24 AWG STP cable.

D. Labeling: The thermostats shall be labeled to accurately describe the zone controlled.

Note: For each additional RTU the following parts are needed: 1 TS101, 1 temperature probe, 1 50A CT.

6. Lighting Controls and Motion Sensors (See EM 1.1) Photo Diode Sensor with Water-Tight Enclosure Kit 002

A. Location/Mounting: A photo diode sensor shall be mounted in the included watertight enclosure kit on the northern most side of the building. Follow all included directions for the kit installation. Any exterior wall penetration shall be sealed properly with weather-tight caulk/silicon.

B. Connections: The photo diode leads must be extended using 18-24 AWG shielded twisted pair cable and routed back to the LCP 2.0 IOM6160 I1+/- terminals. Terminals are polarity sensitive.

LCP 2.0(Load Control Panel)

A. Location/Mounting: (1) LCP 2.0 shall be mounted near the MM1204-EX.

B. Power Requirements: The 120 VAC power source for the LCP 2.0 must be obtained from a dedicated 15-20 amp single pole breaker. High voltage knockouts for the LCP 2.0 are located on the side/bottom of the cabinet enclosure and must remain below the grounding bar within the LCP 2.0. Low voltage knockouts for the LCP 2.0 are located on the top of the cabinet enclosure.

C. Connections: The LCP 2.0 shall control the following: All interior and exterior lights except for the manager lights, which is independently controlled via switch. (the below load descriptions may change per site)

Lighting Schedule:

- Contactor 1 - Work/Stock Room Lights
- Contactor 2 - Sales Lights
- Contactor 3 - Signs (Building and Pole)
- Contactor 4 - Exterior Lighting
- Contactor 5 - Spare
- Contactor 6 - Spare

a. Line and Load wiring shall be routed from the electrical panel containing the circuits to be controlled back to the LCP 2.0. Since the LCP 2.0 does not require neutral wires, line and load wiring must enter and exit the LCP through the same conduit. Line side wiring = left side and load side wiring = right side of the contactors. Do not breach conduit wiring capacity and install additional conduit if needed to contain line and load pairs.

D. Communication: RS-485 connections shall be obtained using the A+/B- terminals on the top din rail of the LCP 2.0 using Cat5e cable.

E. Labeling: The LCP 2.0 shall be labeled on the front cabinet per power source. The LCP 2.0 panel schedule inside the door shall be completed showing contactor use with a description of the zone controlled.

Motion Sensors

A. Mount motion sensor by rear building entrance as shown on the Power Plan 2/E-1 of the construction plans. Mount sensor directly on ceiling facing down. Avoid placement near moving items (i.e. hanging banners). Placement should provide best coverage of employees entering the store and working late.

a. Power the motion sensor from the dedicated 24VDC power supply in the power box via homerun using plenum rated wire. See EM 1.1.

b. Wire the motion sensor alarm signals using 18-24 AWG Shielded Twisted Pair cable back to the IOM6160 module as shown in EM 1.0.

c. Label the motion sensor wire rear entrance.

7. Inventory

EC1000 x 1

MM-1204EX x 1

600A Current Transformer x 3

*50A Current Transformer x 3

LCP 2.0 x 1

Water Resistant Photo-Cell 002 x 1

Motion Sensor x 2

*TS101 x 3

*Temperature Probe x 3

HVAC Supply temperature (model used is the Aprilaire 8052 probe temperature sensor) x 3

24VAC Transformer x 1

24VDC Power Supply x 1

1.2 K Ohm Resistor x 2

HUB x 1

Note: *For each additional RTU the following parts are needed: 1 TS101, 1 temperature probe, 1 50A CT.

Installation/Commissioning Prerequisites

I. Class 1 Wiring

It is the installer's responsibility to make sure all class 1 wiring is properly installed using EMT/Rigid conduit. Flexible conduit is only acceptable within electrical rooms and/or above customer visibility per GridPoint standards.

II. Class 2 Wiring

It is the installer's responsibility to make sure all class 2 wiring is properly installed. Any class 2 wiring that pertains to the GridPoint system must be contained within EMT/Rigid conduit and out of customer view. Class 2 wiring can run freely while secured to the building structure above ceiling grids. For electrical rooms with open ceilings, class 2 wiring must be contained within EMT/Rigid conduit within 10 feet from the finished floor. Class 2 wiring above 10 feet can be secured to the building structure using appropriate anchors. The patch cable from the LAN jack to the EMC is the only exception.

LOCAL LIGHTING CONTROL

MANAGER OFFICE, RESTROOMS, SECURITY, AND EXIT/EMERGENCY.

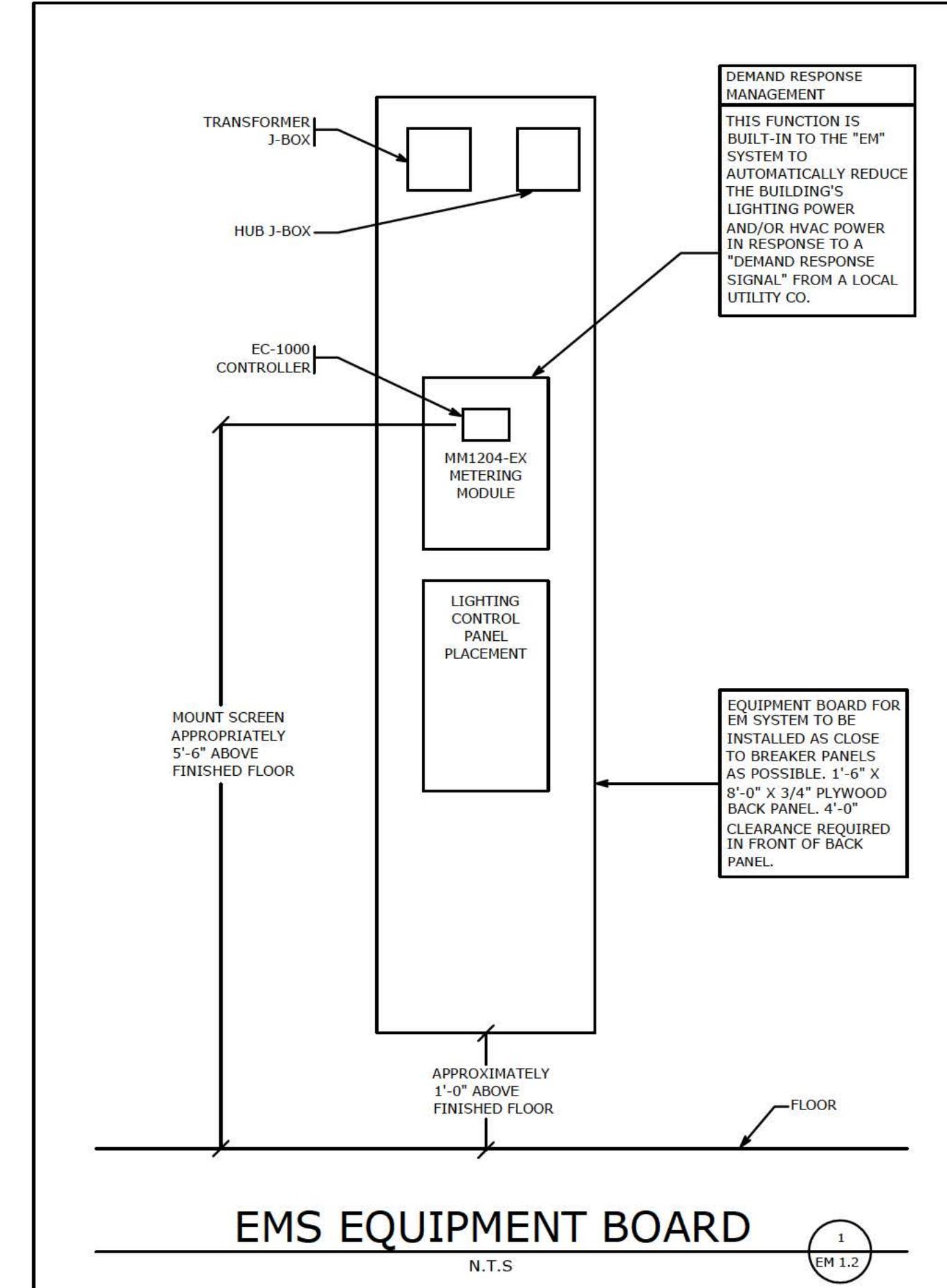
1/13/20
REVISIONS

T-HIS DRAWING		NOT FOR COORDINATION	FOR BIDDING	FOR PERMIT	NOT FOR CONTRACTING	NOT FOR CONSTRUCTION
KMA & ASSOCIATES, INC. ARCHITECTS	SUITE F	60015-5235	60015-5235	(847)945-6869	FAX(847)945-6869	

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

SHEET TITLE
O'REILLY PREFERRED
SCOPE OF WORK

1906



THERMOSTAT LABELING

LABEL EACH THERMOSTAT PER O'REILLY TERMINOLOGY WITH EXACTLY THE SAME UNIQUE IDENTIFYING "CODE" AS SHOWN ON THE "HVAC PLAN" ON SHEET M1 (FOR EXAMPLE: RTU-1, RTU-2, ETC. OR FURN-1, FURN-2, ETC.).

T-STAT/SENSOR MOUNTING

- MOUNT SHOWROOM'S T-STATS AND SENSORS AT 7'-3" ABOVE FINISHED FLOOR
- MOUNT HARD PARTS T-STATS AND SENSORS AT 5'-6" ABOVE FINISHED FLOOR.

GRIDPOINT CONTACT

PLEASE CONTACT GRIDPOINT INSTALLATION MANAGEMENT @ 866-800-8906 FOR INSTALLATION CONTACT BASED ON THE STORE LOCATION. EMAIL: SUPPORT@GRIDPOINT.COM

EM
1.2