



PLAN COMMISSION STAFF REPORT

To: Members of the Plan Commission

From: Rachel Christenson, AICP, On-call Planner for the Town of Munster

Meeting Date: August 8th, 2023

Agenda Item: PC Docket No. 23-018

Application: **Development Plan Review**

Hearing: **PUBLIC HEARING**

Summary: Maple Leaf Crossing LLC requesting approval of a Development Plan for a retail building at Maple Leaf Crossing Lot 5, located at 9470 Calumet Avenue

Applicant: Maple Leaf Crossing, LLC

Property Address: 9470 Calumet Avenue

Current Zoning: Planned Unit Development

Adjacent Zoning: North: SD-M
South: SD M/PUD
East: CD-4.A
West: SD-M

Action Requested: Development Plan Review Approval

Additional Actions Requested: Findings of Fact

Staff Recommendation: Approve with Conditions

Attachments:

1. Development Plan Review Application
2. Building Rendering
3. Maple Leaf Out-Building Lot 5 Architectural Drawings prepared by Michael E. Stanula dated 07.18.23
4. Maple Leaf Crossing PUD Drawings, including Site Plan, Details & Specs., and SWPPP for Lot 5 prepared by Torrenge dated 06.29.2023
5. Maple Leaf Crossing Landscape Plan, including Landscape Plan for Lot 5 prepared by Planned Environment Associates dated 07.07.2023
6. Maple Leaf Crossing Electrical Site Plan and Photometric Plan prepared by Nova Engineering, PC dated 05.22.2023

BACKGROUND

Figure 1: Maple Leaf Crossing PUD outlined in red.

Maple Leaf Crossing, LLC has applied for a Development Plan approval for a retail building at Maple Leaf Crossing Lot 5, located at 9470 Calumet Avenue.

This Lot is part of the Maple Leaf Crossing Planned Unit Development that is governed by Ordinance 1803. The ordinance was adopted in July 2020 by the Munster Town Council, on the recommendation of the Plan Commission. The approved PUD includes Developmental Standards and a Site Plan.

An ordinance amending the Maple Leaf Crossing Planned Unit Development (Ordinance 1878) was adopted amendment to this PUD was adopted by the Munster Town Council in December of 2022, on recommendation of the Plan Commission. This amendment provided for the development of Lot 7 as a cigar bar and restaurant.

An additional amendment to the PUD Ordinance was made in July of 2023 that add parking spaces and modified Lots 2-7 and Outlots A and B. Subsequently, a resubdivision of the Maple Leaf Crossing site was also pursued. A Final Plat has been filed and will be heard at the August 8th, 2023, Plan Commission meeting.

DESCRIPTION OF PROJECT

The submitted plans call for the development of Lot 5 at the Maple Leaf Planned Unit Development, including a 7098 square foot retail structure with five units. Additional site elements include sidewalks, landscaping, and lighting. The proposed structure will have a mixture of brick, stone, and aluminum siding. The façade of the structure includes steel canopies. The average square footage of each unit in the structure is approximately 1300 square feet per unit.

ANALYSIS

REVIEW OF DEVELOPMENTAL STANDARDS & SITE PLAN

Staff reviewed the submitted plans in comparison to the approved Maple Leaf PUD Developmental Standards and approved Site Plan. The proposed development plan appears to in compliance with the PUD Ordinance, with the exception of a couple of minor issues listed below:

Code/Ordinance	Section	Standard	Issue
Ord. 1803	I.B.5.	Screening of Mechanicals All mechanical equipment will be screened as to not be visible by those at street level on all sides of the building.	The electrical equipment to the rear (southeast) of the structure is not screened.
	III.9.	Lighting Lighting fixtures shall be high quality commercial grade. The fixtures shall be constructed and installed to be glare free and shall comply with all applicable code requirements	A lighting plan has been submitted for both the site and the structure, however, specifications for the light fixtures themselves have not been submitted.

Additionally, the lighting plan for the overall site that was submitted does not reflect the recent revisions to the Maple Leaf PUD Development Plan that was approved by the Town Council on July 17th, 2023.

STAFF RECOMMENDATION

Staff recommends that this petition be approved as presented with conditions. First, plans to screen the mechanical equipment proposed for the rear of the structure (southeast side) shall be submitted to staff to ensure it meets the intent of the Maple Leaf PUD Developmental Standards. Secondly,

specifications for the light fixtures for the structure and the site shall be submitted to staff to ensure they are meeting the intent of the Maple Leaf PUD Developmental Standards. Lastly, the lighting plan for the overall site will be updated to reflect the most recent revisions to the site that were approved on July 17th, 2023.

MOTION

The Plan Commission may wish to consider the following motion:

Motion to recommend approval of PC Docket No. 23-018, a Development Plan for a retail building at Maple Leaf Crossing Lot 5, located at 9470 Calumet Avenue, with the following conditions:

- 1. The petitioner will submit a plan satisfactory to staff that shows how the mechanical equipment at the rear of the structure (southwest elevation) will be screened from public view.*
- 2. The petitioner will submit high quality commercial grade light fixture specifications for the structure and the site that are satisfactory to staff.*
- 3. The petitioner will submit an updated lighting plan that reflects the site plan that was approved by the Town Council on July 17th, 2023.*



Petition PC _____ - _____

Date: _____

Application Fee: \$ 0

Sign Fee: \$ _____

Town of Munster Plan Commission Petition Application

OWNER INFORMATION:

Name of Owner MAPLE LEAF CROSSING, LLC Phone Number 219-746-0753
Street address, City, ST, ZIP Code 400 FISHER ST., SUITE J Email address JACKCLIESER@AOL.COM
MUNSTER, IN 46321

APPLICANT OR PETITIONER INFORMATION (if different than above):

Name of Applicant/Petitioner _____ Phone Number _____
Street address, City, ST, ZIP Code _____ Email address _____

PROPERTY INFORMATION:

Business or Development Name (if applicable) MAPLE LEAF CROSSING LOT 5
Address of Property or Legal Description 9470 CALUMET AVE Current Zoning PUD

APPLICATION INFORMATION:

Please select what this Application is for:

- ☐ Subdivision If yes, select one of the following: ☐ Preliminary Plat ☐ Final Plat
☒ Development Plan Review
☐ Rezoning (including Planned Unit Development) – Proposed Zoning District

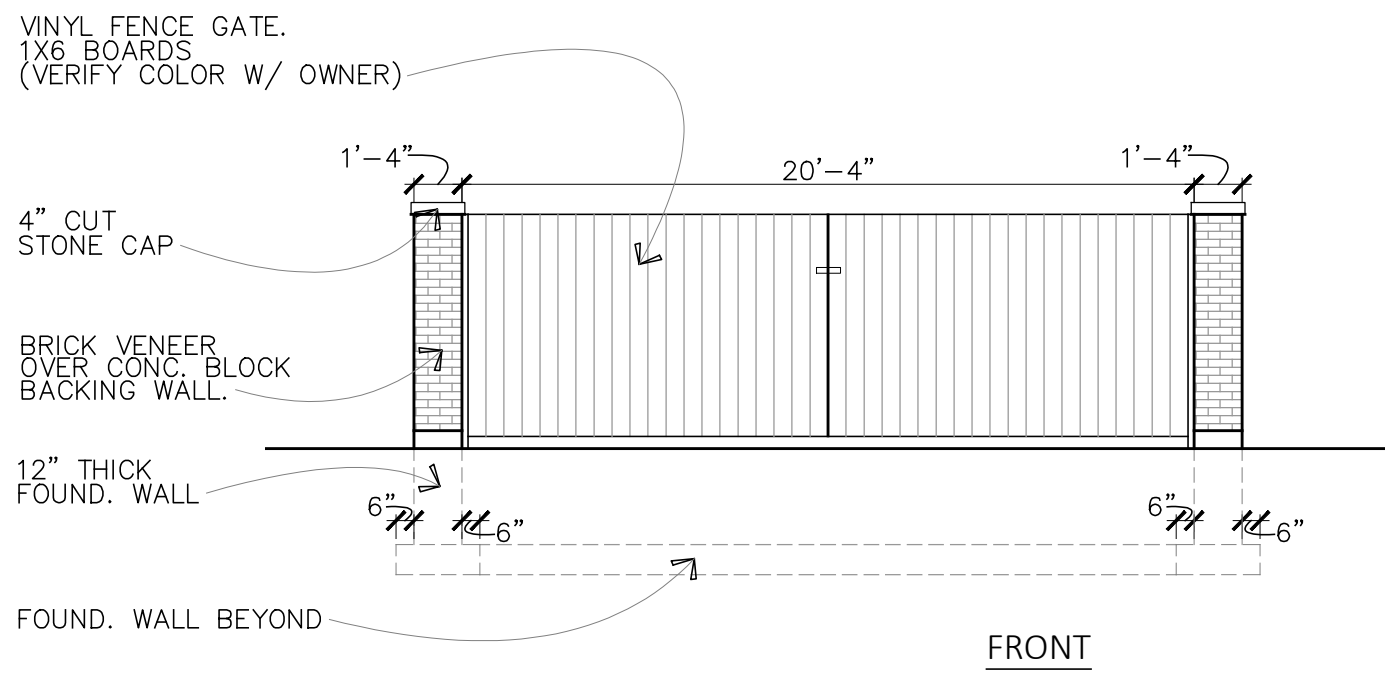
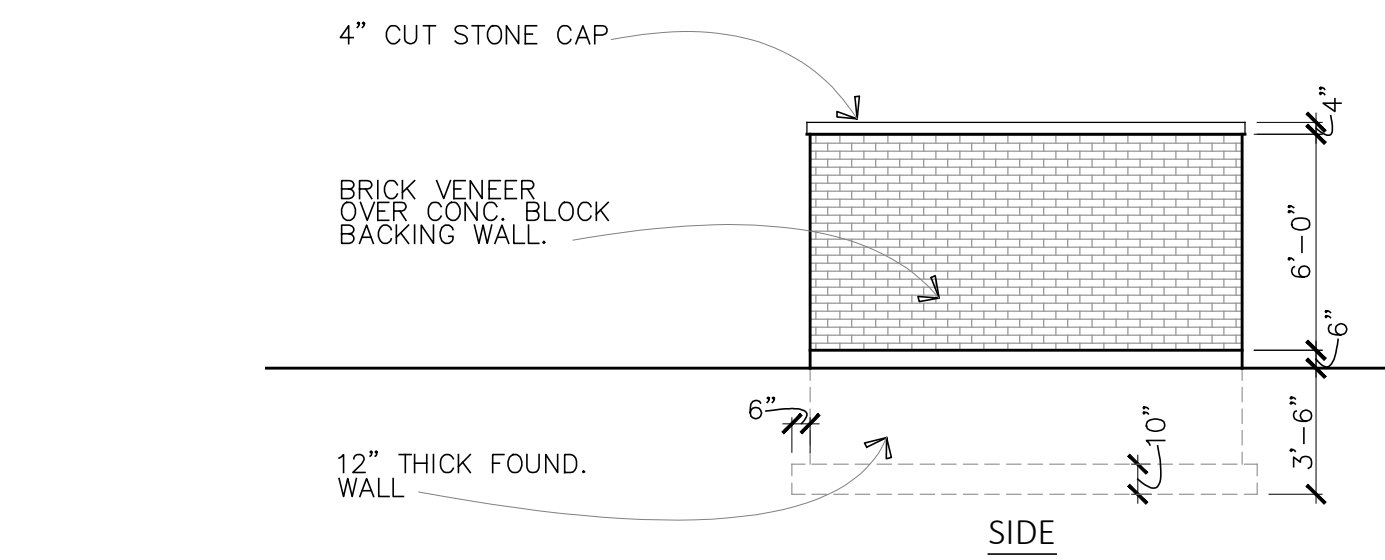
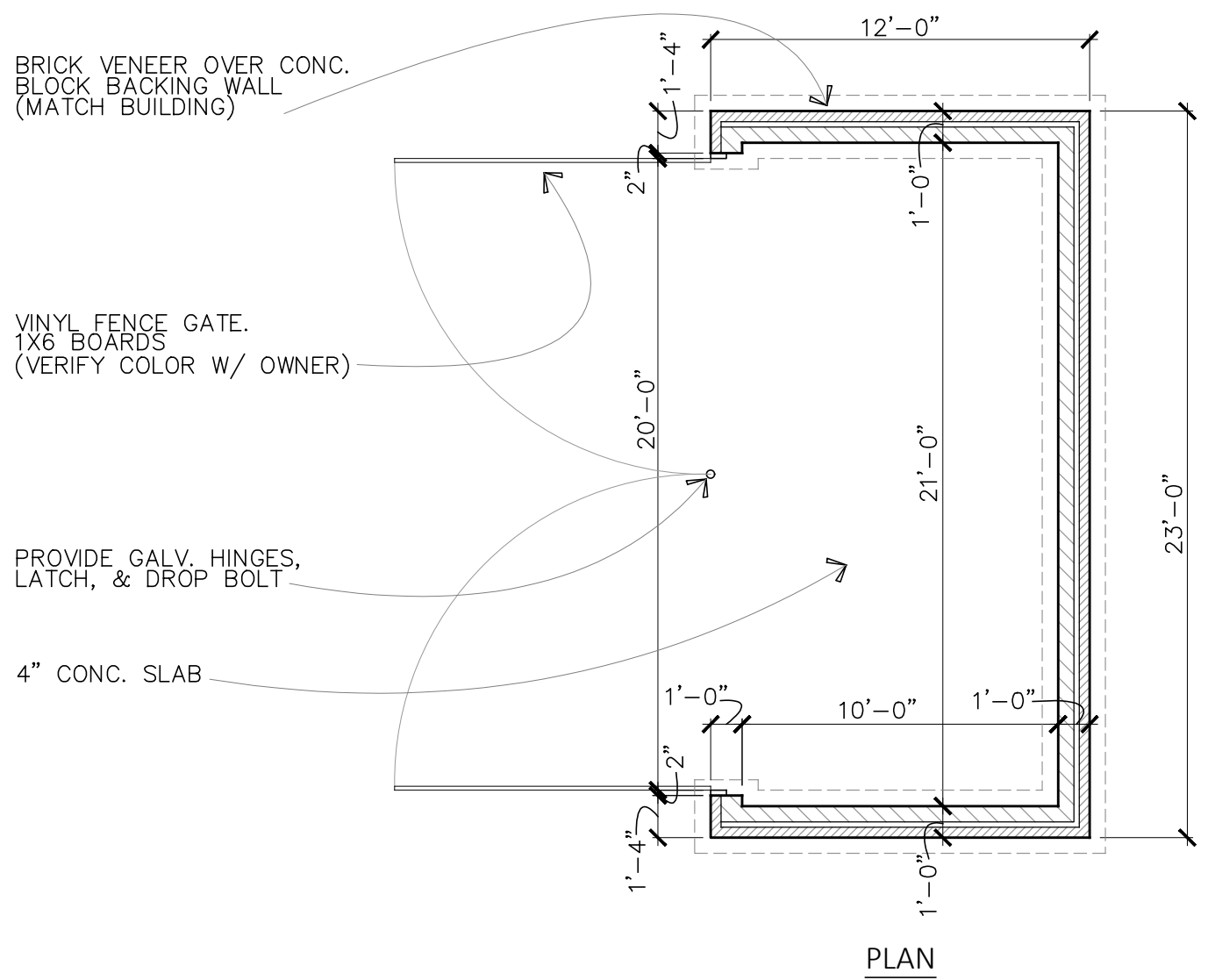
Brief Description of Project:

7098 SqFE RETAIL BUILDING
5 UNITS AVAILABLE
AVG. Sq.Ft. IS AN 1300 Sq.Ft. PER UNIT

Name of Registered Engineer, Architect or Land Surveyor MICHAEL E. STANULA, ARCHITECT Phone Number 708-567-3362
Street address, City, ST, ZIP Code 31800 S. STATE LINE RD., PESHER Email address STANULA.ARCH@JMAH.COM
IL







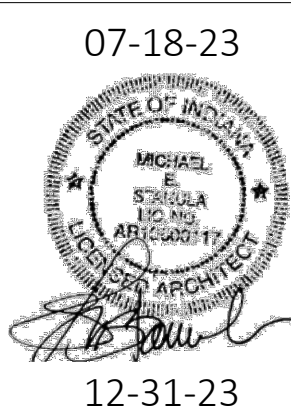
DUMPSTER ENCLOSURE
SCALE: 3/16"=1'-0"

LICENSED ARCHITECTS CERTIFICATION

PLANS AND SPECIFICATIONS FOR NEW CONSTRUCTION.

I HEREBY CERTIFY THAT THESE PLANS & SPECIFICATIONS, DATED 6/10/23, FOR CONSTRUCTION OF MAPLE LEAF CROSSING COMMERCIAL OUT-BUILDING LOCATED AT 9470 CALUMET AVE, MUNSTER, INDIANA WERE PREPARED UNDER MY SUPERVISION.

ARCHITECTS NAME: MICHAEL E. STANULA
LICENSE NUMBER: AR-19600117
LICENSE EXPIRES: 12-31-23
SIGNATURE:
DATE: 6-10-23

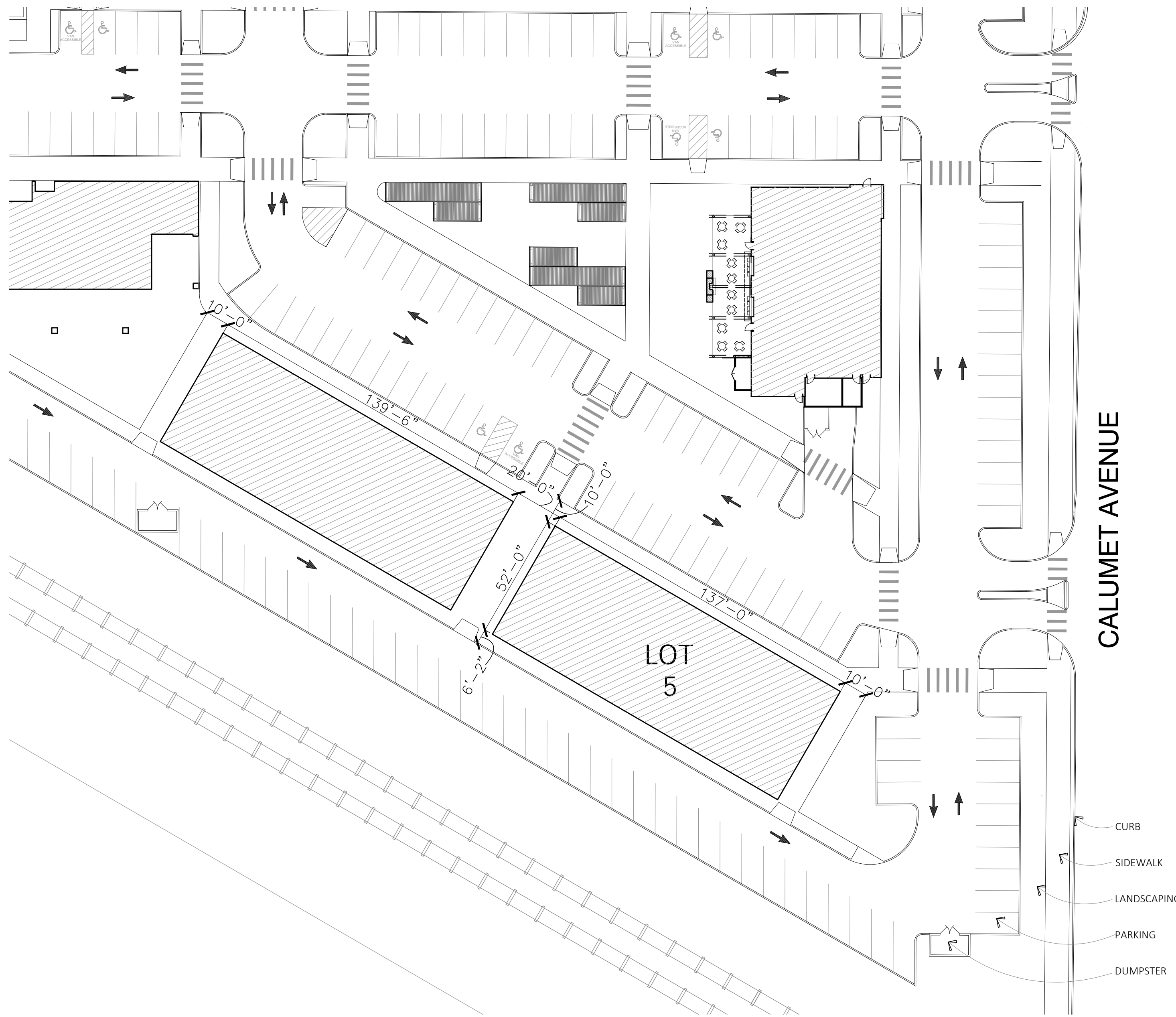


LIMITATION OF WARRANTY OF ARCHITECT/ENGINEER WORK PRODUCT
THE ARCHITECT AND HIS CONSULTANTS DO NOT WARRANTY OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE WORK PRODUCT HEREIN (DRAWINGS, ENGINEERING, SPECIFICATIONS AND REVIEW OF SHOP DRAWINGS) BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKE, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE WORK PRODUCT, THE ARCHITECT SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS ARE NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ARCHITECT OF SUCH CONDITIONS SHALL ABSOLVE THE ARCHITECT FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITH OUT THE KNOWLEDGE AND/OR CONSENT OF THE ARCHITECT OR IN CONTRADICTION TO THE ARCHITECT'S WORK PRODUCT OR RECOMMENDATIONS SHALL NOT BE THE RESPONSIBILITY OF THE ARCHITECT.

SCOPE DOCUMENT
THESE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ARCHITECTURAL DESIGN CONCEPT, THE DIMENSIONS OF THE BUILDING, THE MAJOR ARCHITECTURAL ELEMENTS, AND THE TYPE OF STRUCTURAL MECHANICAL AND ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS THESE DRAWINGS AND SPECIFICATIONS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE CONTRACT DOCUMENTS. ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED THE CONTRACTORS SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. DECISIONS OF THE ARCHITECT AS TO THE ITEMS OF WORK INCLUDED WITHIN THE SCOPE OF THIS DOCUMENT SHALL BE FINAL.

MAPLE LEAF OUT-BUILDING LOT 5

9470 CALUMET AVE.
MUNSTER, IN 46321



SITE PLAN
SCALE: 1/32"=1'-0"

FOR ADDITIONAL SITE INFORMATION & DETAILS, REFER TO PLANS DEVELOPED BY TORRENGA ENGINEERING

INDEX OF DRAWINGS

COVER: ARCHITECTURAL SITE PLAN
A-1: ELEVATIONS
A-2: FOUNDATION PLAN & DETAILS
A-3: FLOOR PLAN
A-4: SECTIONS
A-5: SECTIONS
S-1: STRUCTURAL FLOOR PLAN
M-1 MECHANICAL PLAN, SCHEDULES
E-1: ELECTRICAL POWER & LIGHTING PLAN
P-1 PLUMBING PLAN

BUILDING CODES

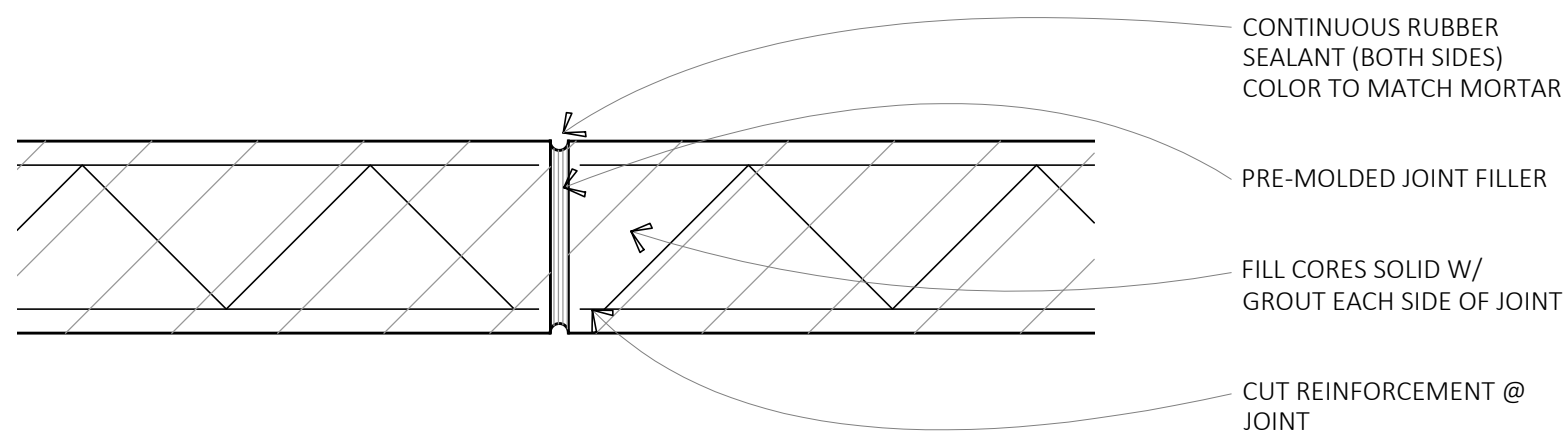
2012 International Building Code w/ 2014 Indiana Amendments
2012 International Mechanical Code w/ 2014 Amendments
2012 International Fuel Gas Code w/ 2014 Amendments
2012 International Fire Code w/ 2014 Amendments
2006 Indiana Plumbing Code w/ 2012 Amendments
2008 National Electric Code w/ 2009 Amendments
2007 ANSI/ASHRAE 90.1
2010 ADA Accessibility Guidelines w/ 2009 ANSI 117.1

MICHAEL E. STANULA
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET
architect

REVISIONS	DATE

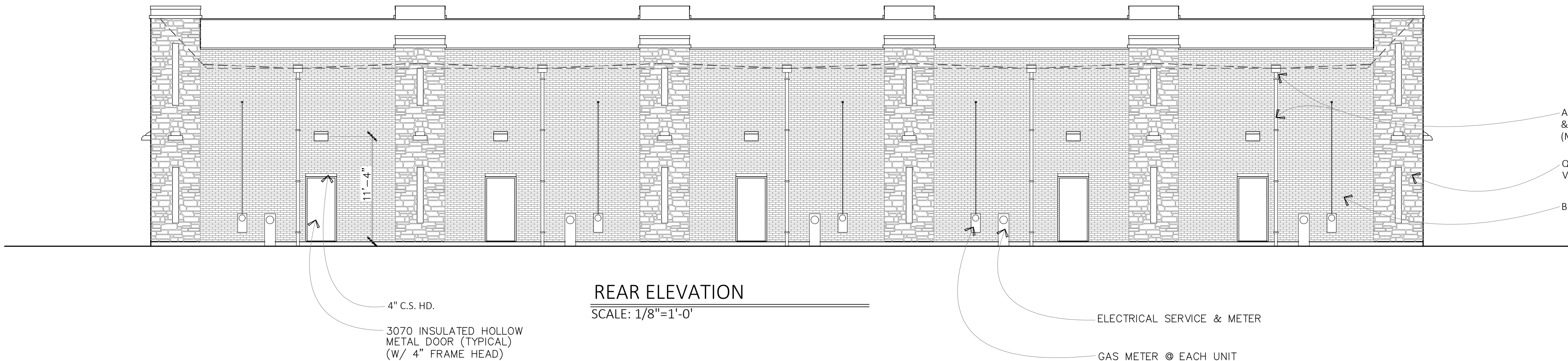
DRAWN N.G.
PROJECT MAPLE LEAF OUT-BUILDING LOT 5
DATE 07/18/23
SCALE AS NOTED
JOB NO. C1-23
SHEET COVER

A.D.A. COMPLIANCE STATEMENT
To the best of my knowledge these drawings are in compliance with the Environmental Barriers Act & Indiana Accessibility Code.



TYPICAL MASONRY CONTROL JOINT

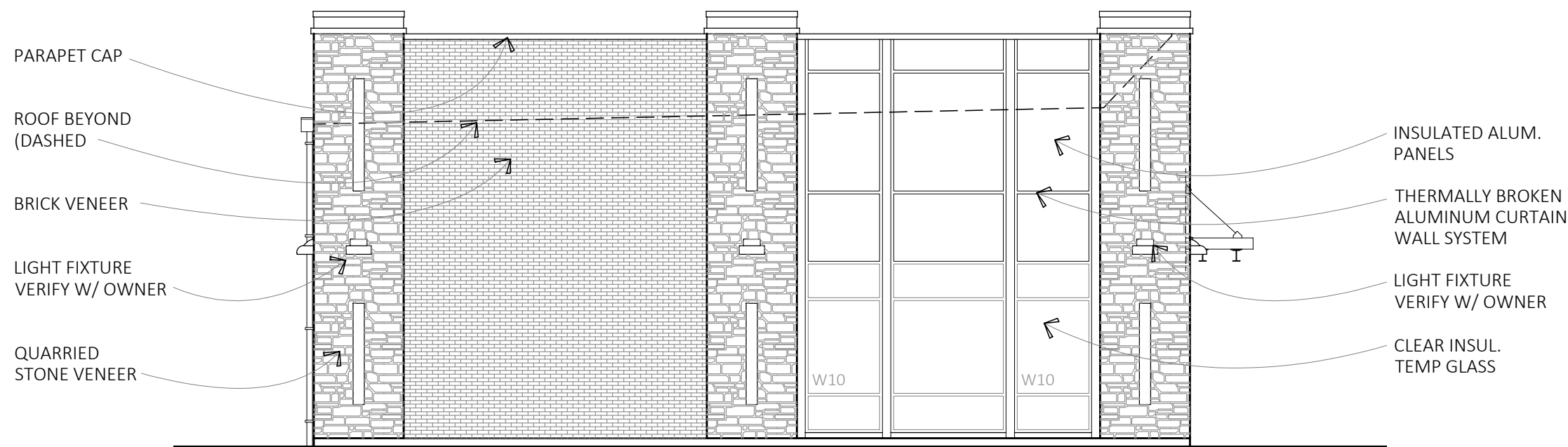
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ALUM. ROOF SCUPPER & DOWNSPOUTS (MIN. 3 STRAPS)

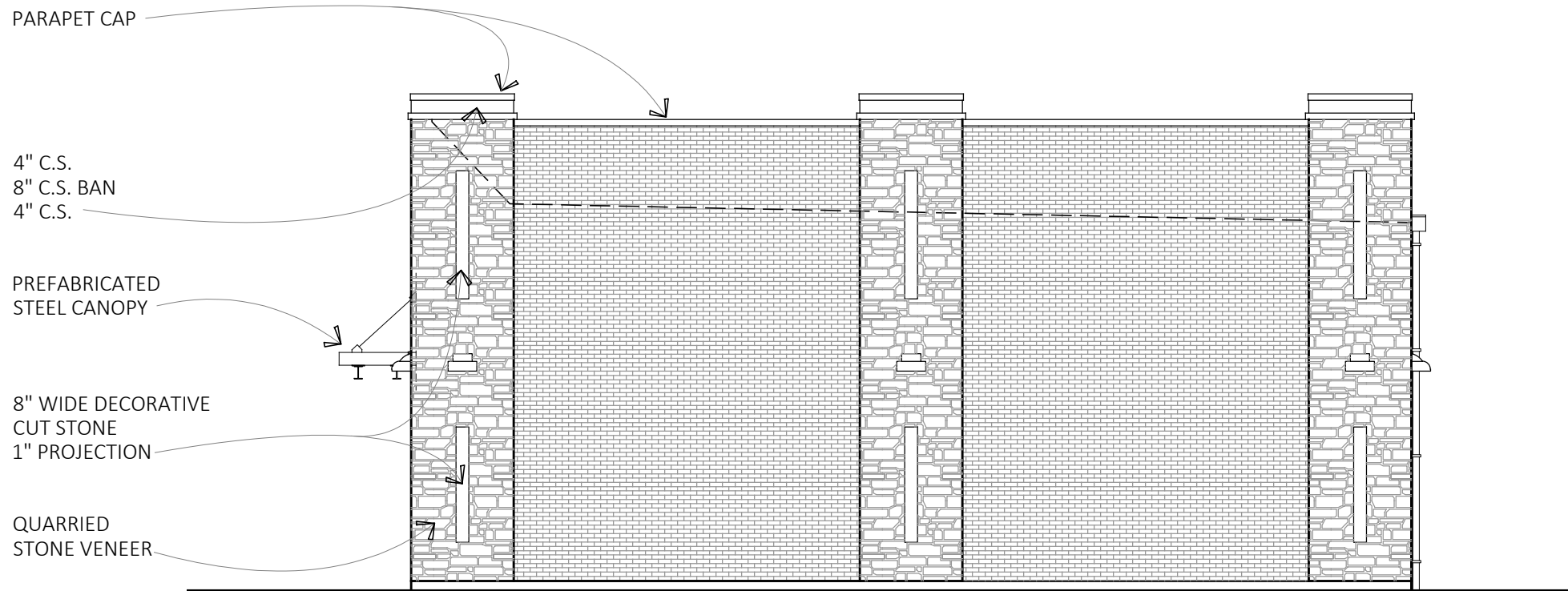
QUARRIED STONE VENEER

BRICK



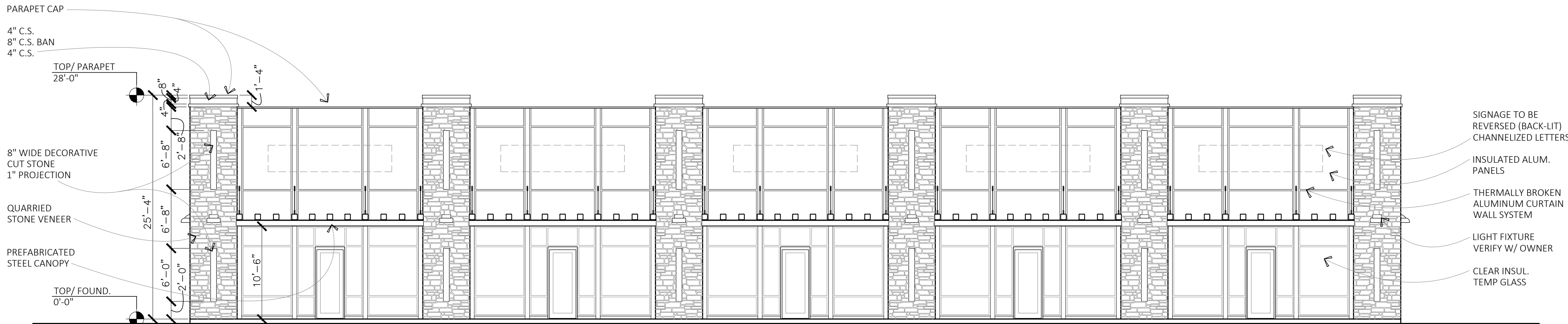
LEFT ELEVATION

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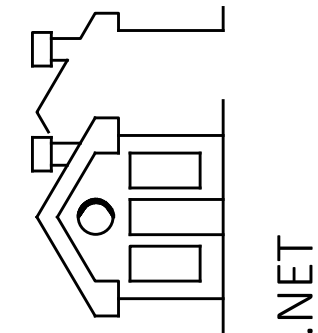


RIGHT ELEVATION

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



REVISIONS	DATE

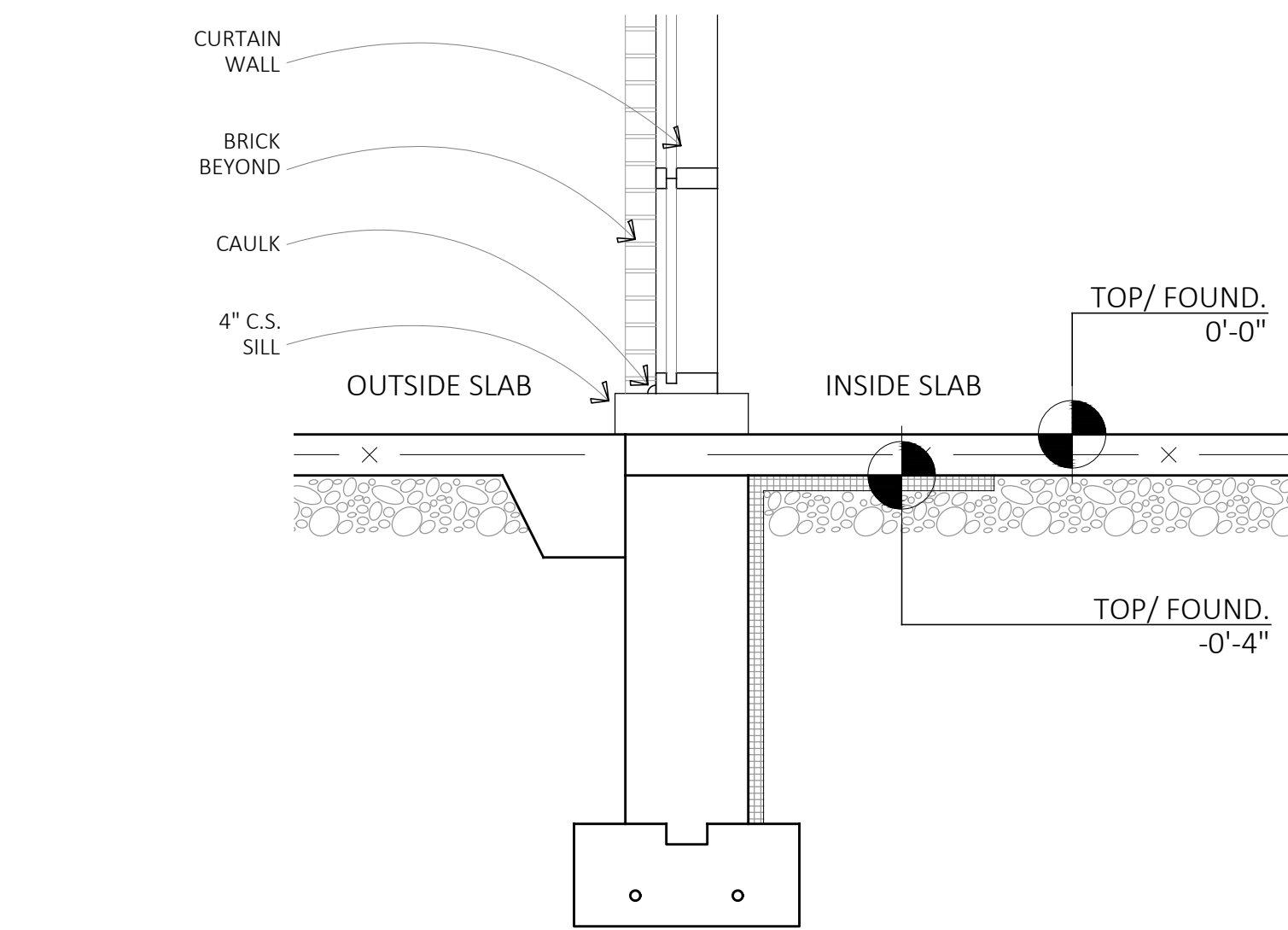


MICHAEL E. STANULA

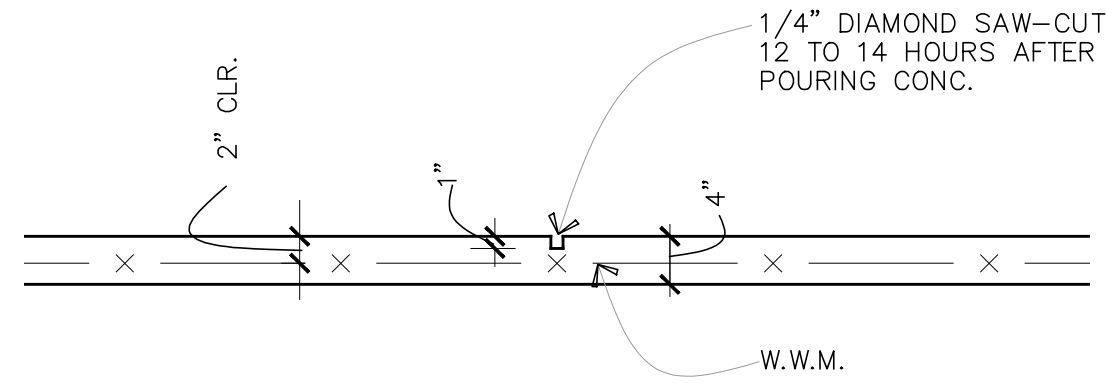
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architect

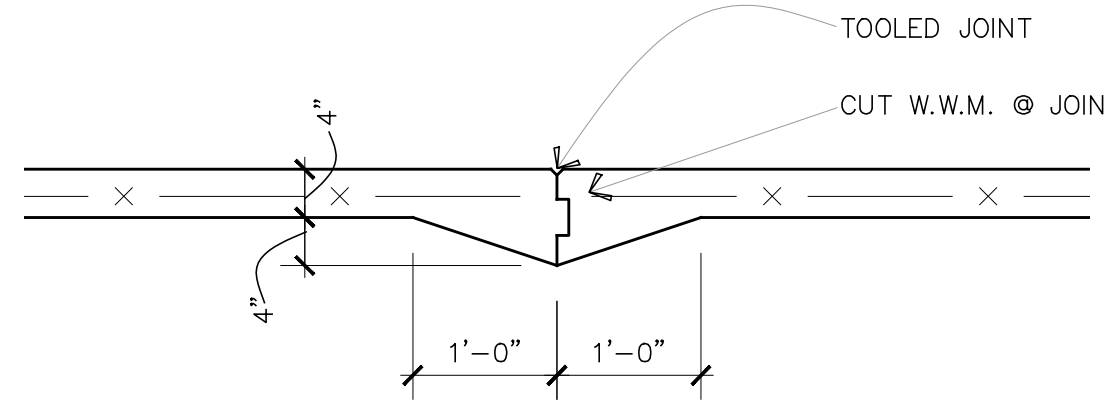
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PROJECT MAPLE LEAF OUT-BUILDING LOT 5
DATE 07/18/23
SCALE AS NOTED
JOB NO. C1-23
SHEET A-1
OF 10 SHEETS



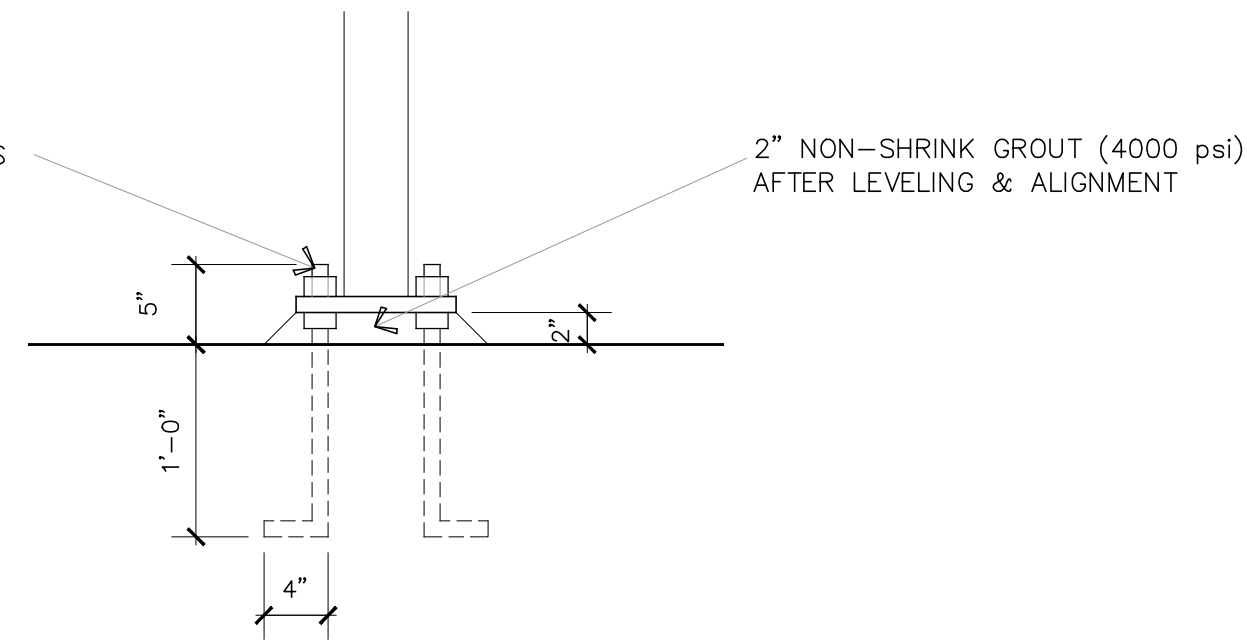
3 WINDOW/ FOUND. DETAIL
A-2 SCALE: 3/4"=1'-0"



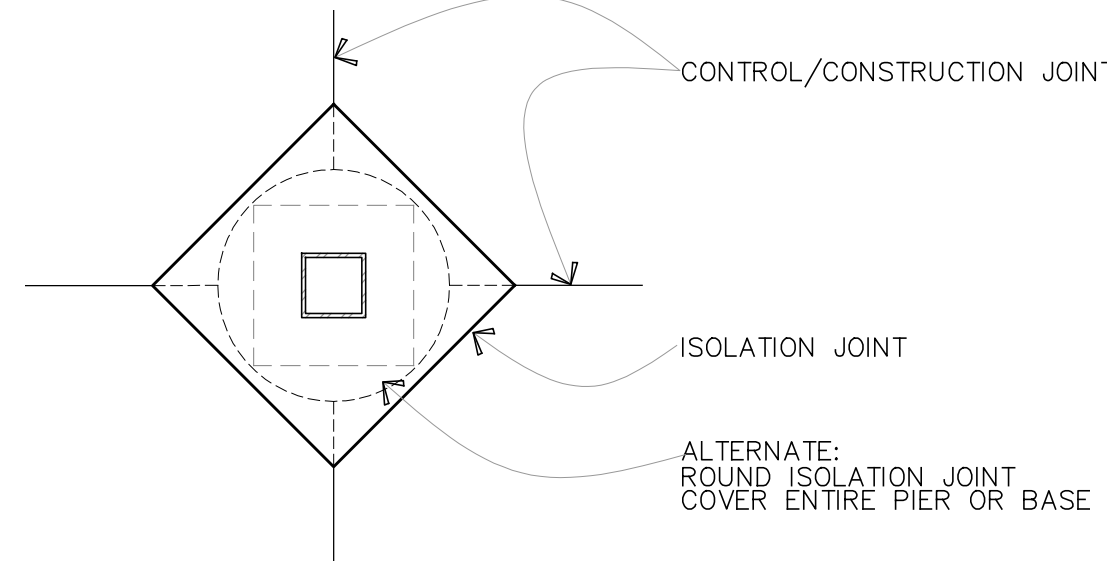
TYPICAL CONTROL JOINT
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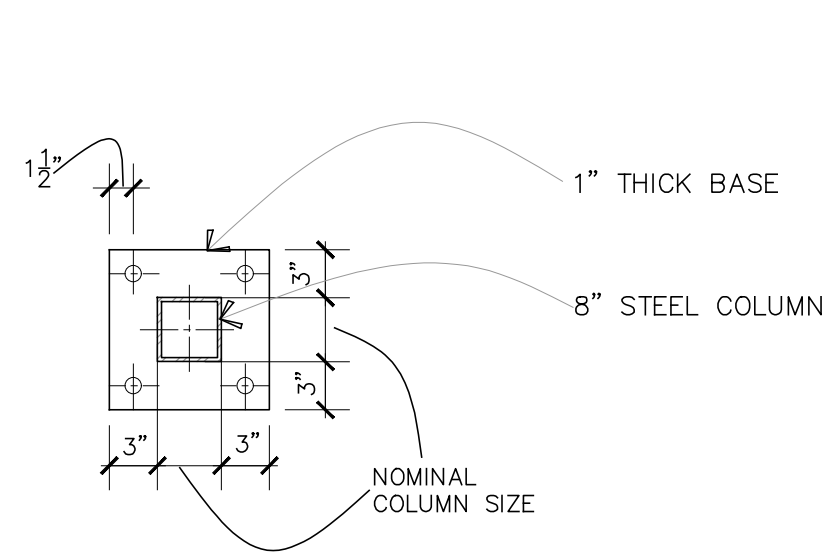
TYPICAL CONSTRUCTION JOINT
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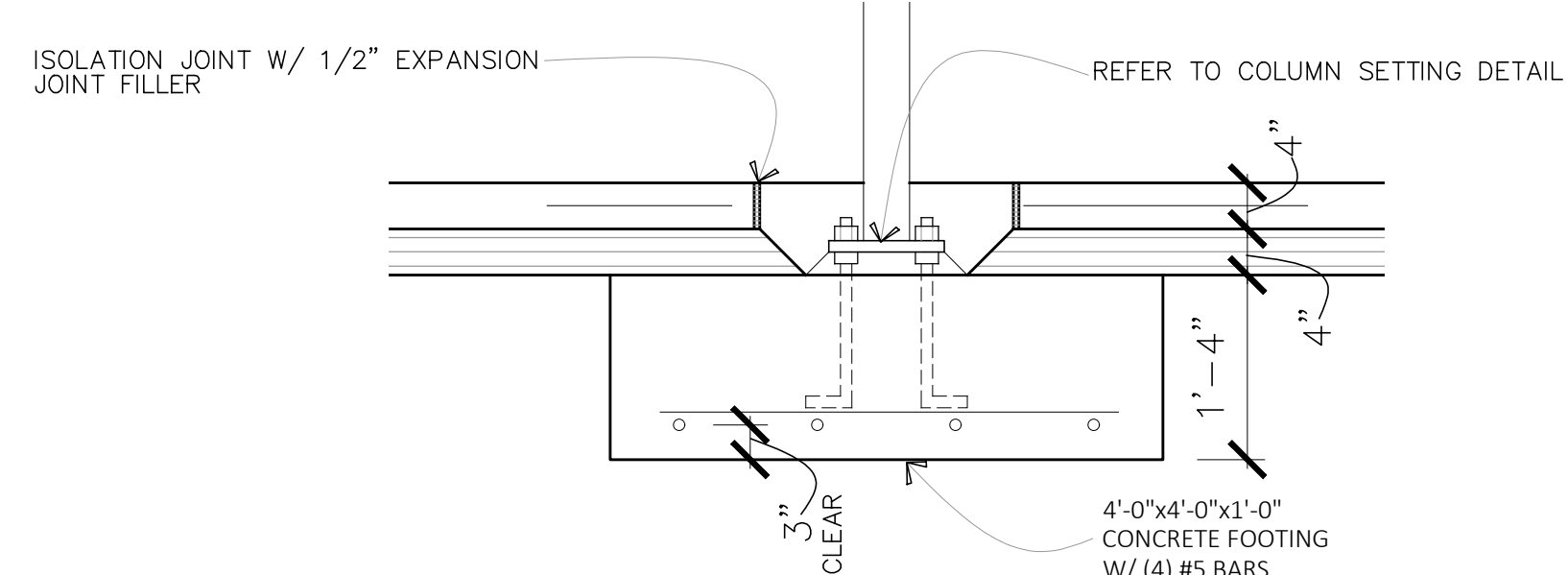
COLUMN BASE DETAIL
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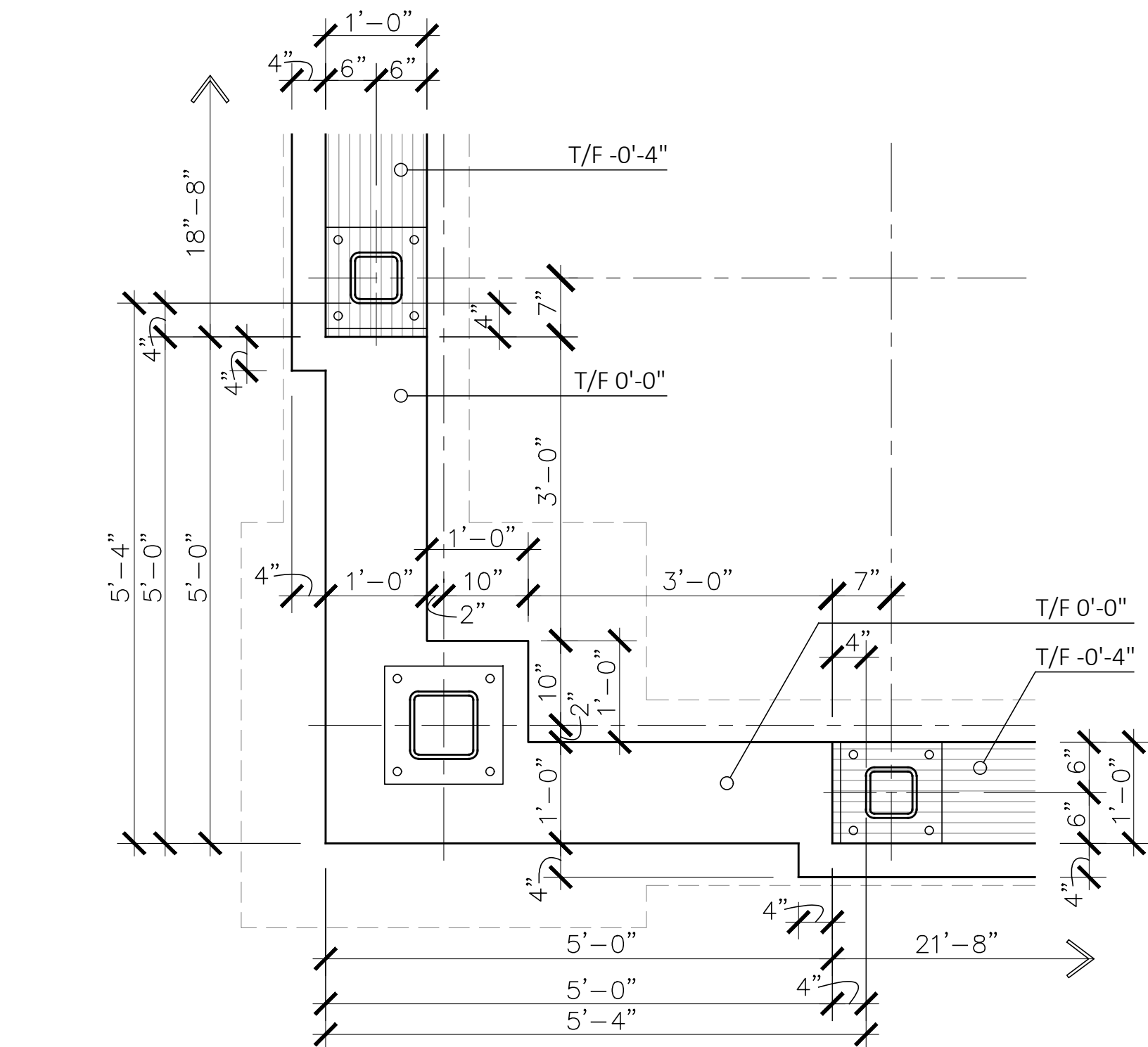
TYP. COLUMN ISOLATION JOINT DETAIL
SCALE: N.T.S.



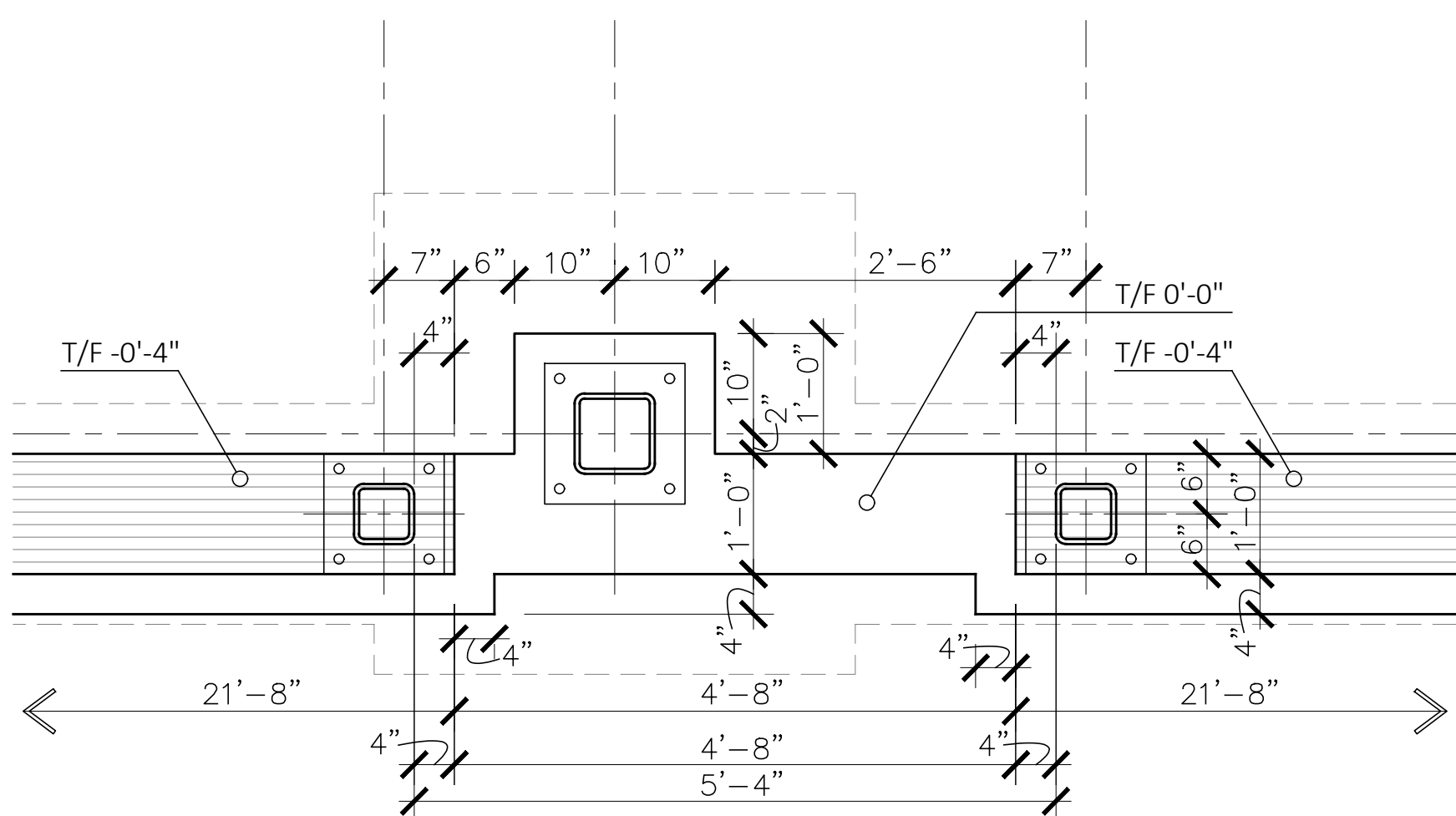
COLUMN BASE DETAIL
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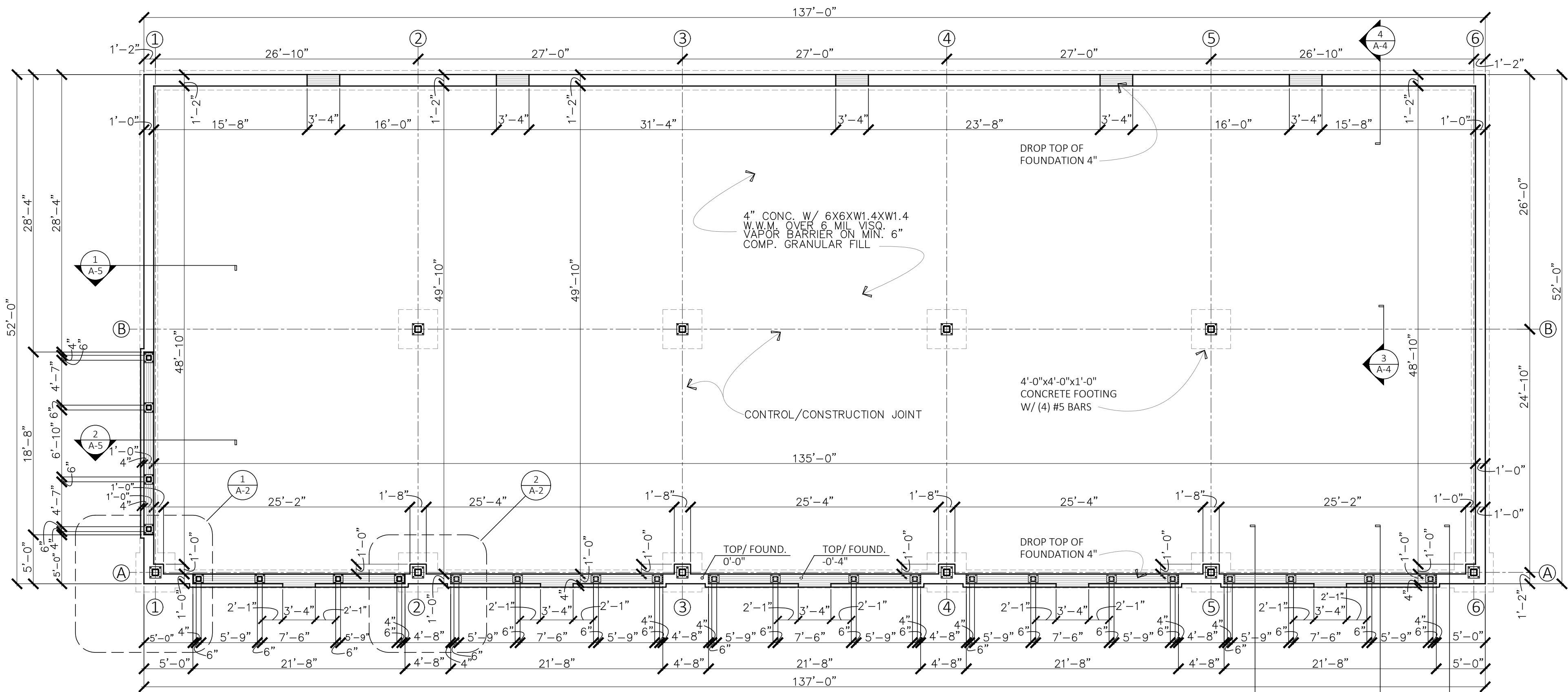
INTERIOR COLUMN FOOTING
SCALE: N.T.S.



1 FOUNDATION DETAIL
A-2 SCALE: 3/4"=1'-0"



2 FOUNDATION DETAIL
A-2 SCALE: 3/4"=1'-0"



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

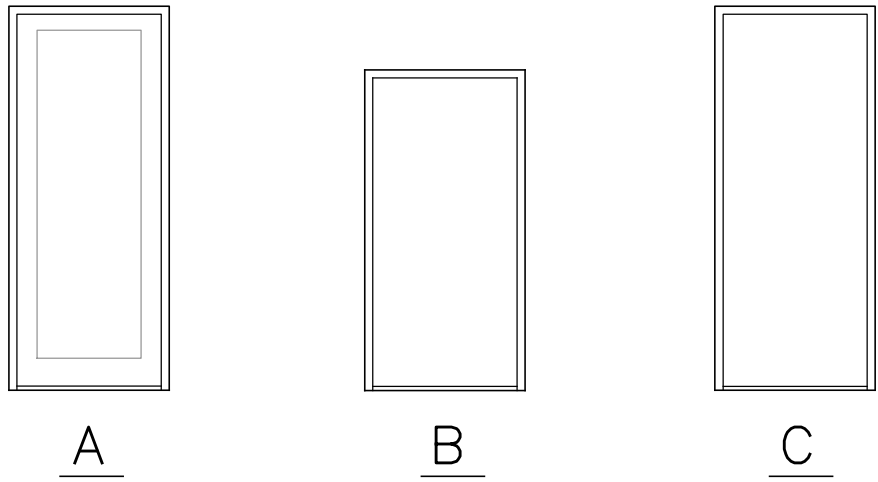
REVISIONS	DATE

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DRAWN N.G.
PROJECT MAPLE LEAF OUT-BUILDING
DATE 07/18/23
SCALE AS NOTED
JOB NO. C1-23
SHEET A-2 OF 10 SHEETS

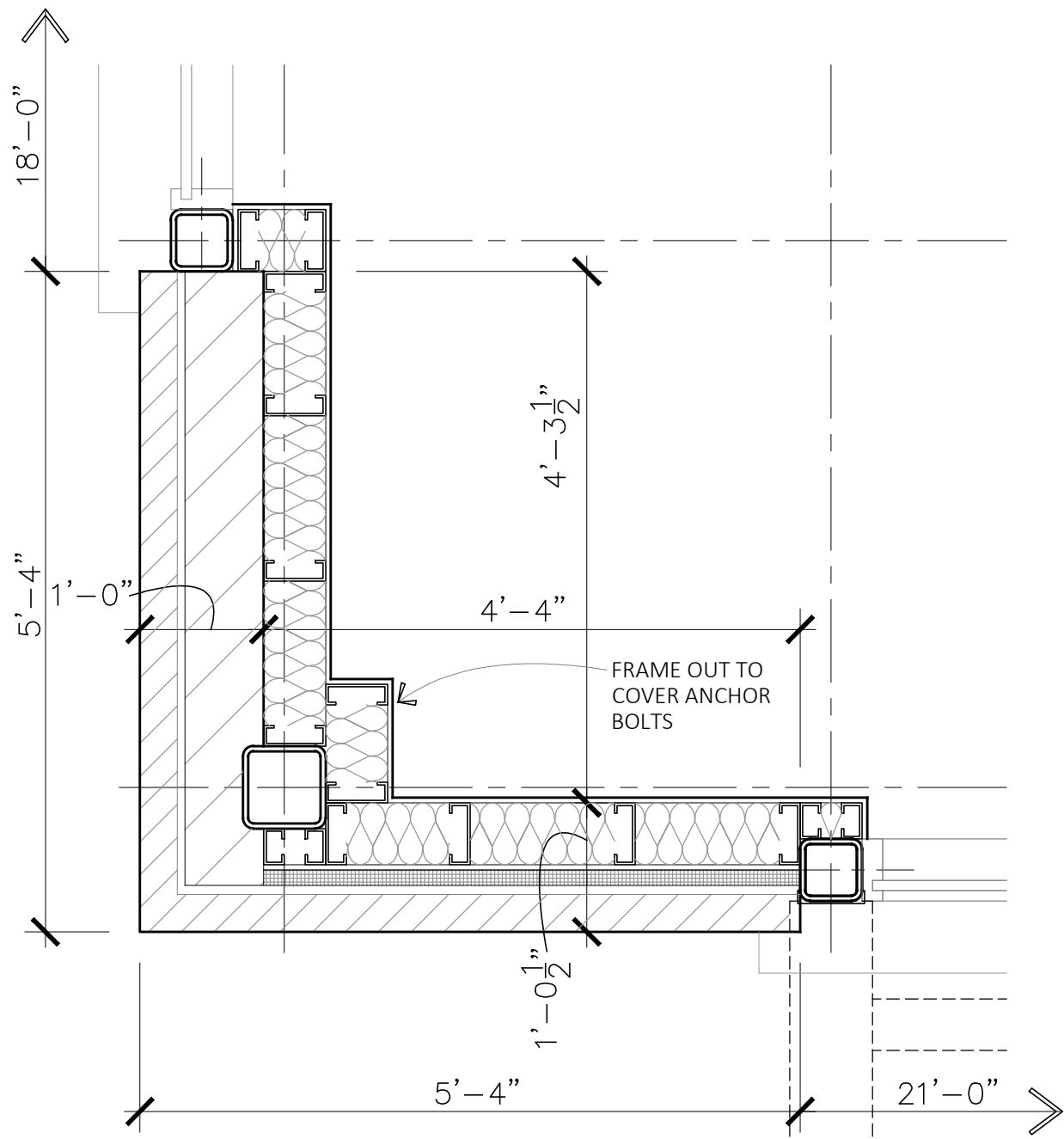
DOOR SCHEDULE					
DOOR	ELEV.	SIZE	MAT'L	CLOSER	REMARKS
1	A	3'-0" X 8'-0"	A.S.F.	Y	
2	B	3'-0" X 6'-8"	S.C. WOOD	Y	PRE-HUNG
3	C	3'-0" X 7'-0"	H.M.	N	INSUL. DOOR & FRAME, PEEP HOLE 4" FRAME HEAD

A.S.F. - ALUMINUM STOREFRONT DOOR
H.M. - HOLLOW METAL - FOAM FILLED, INSULATED
S.C. - SOLID CORE WOOD

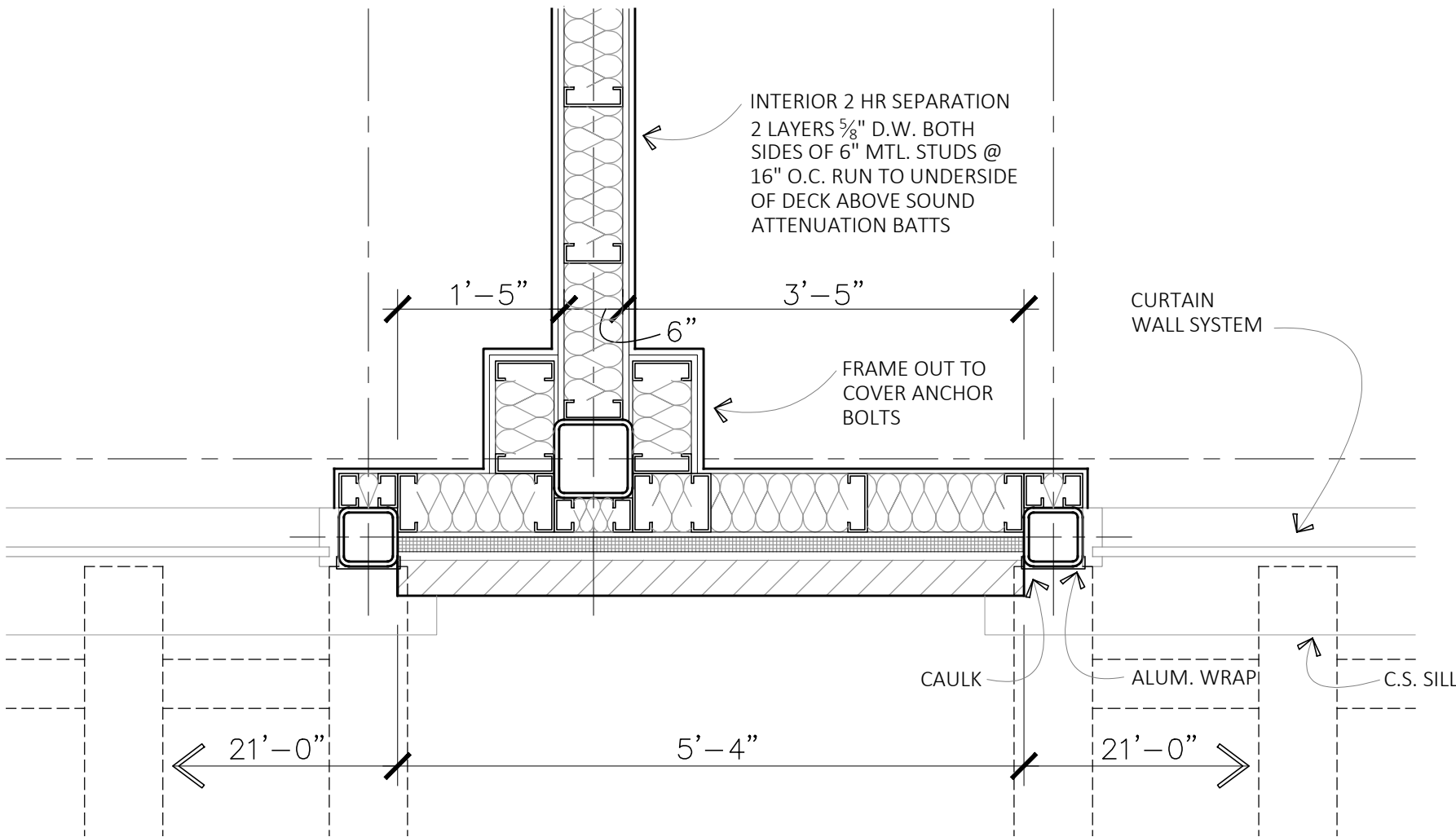


DOOR ELEVATION

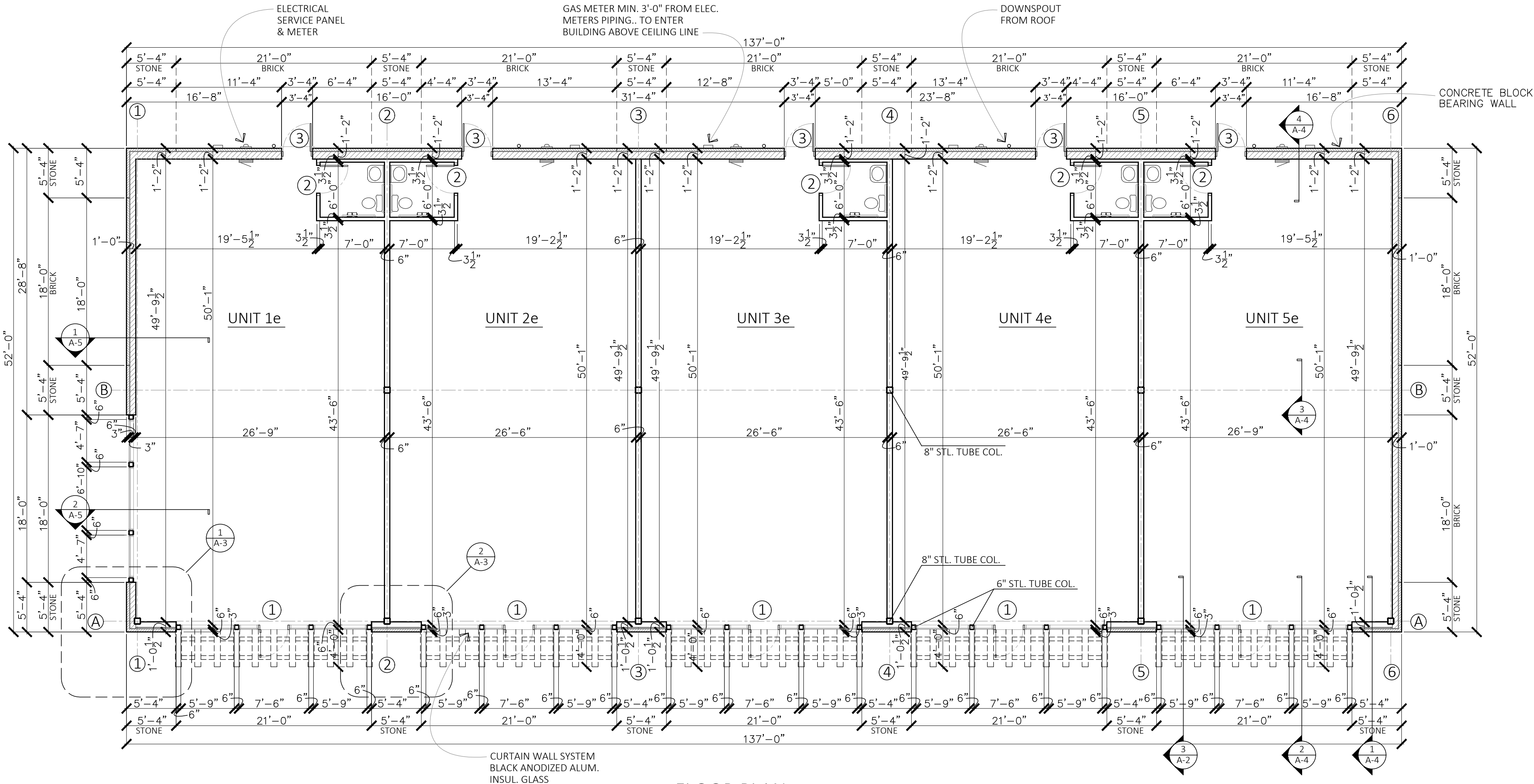
SCALE: 1/4" = 1'-0"



1 FLOOR PLAN DETAIL
A-3 SCALE: 3/4"=1'-0"



2 FLOOR PLAN DETAIL
A-3 SCALE: 3/4"=1'-0"



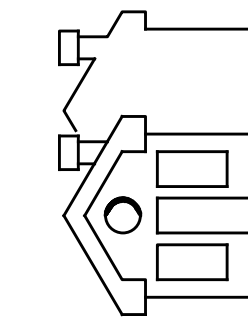
FLOOR PLAN

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

7098 SQ. FT.

GENERAL REQUIREMENTS

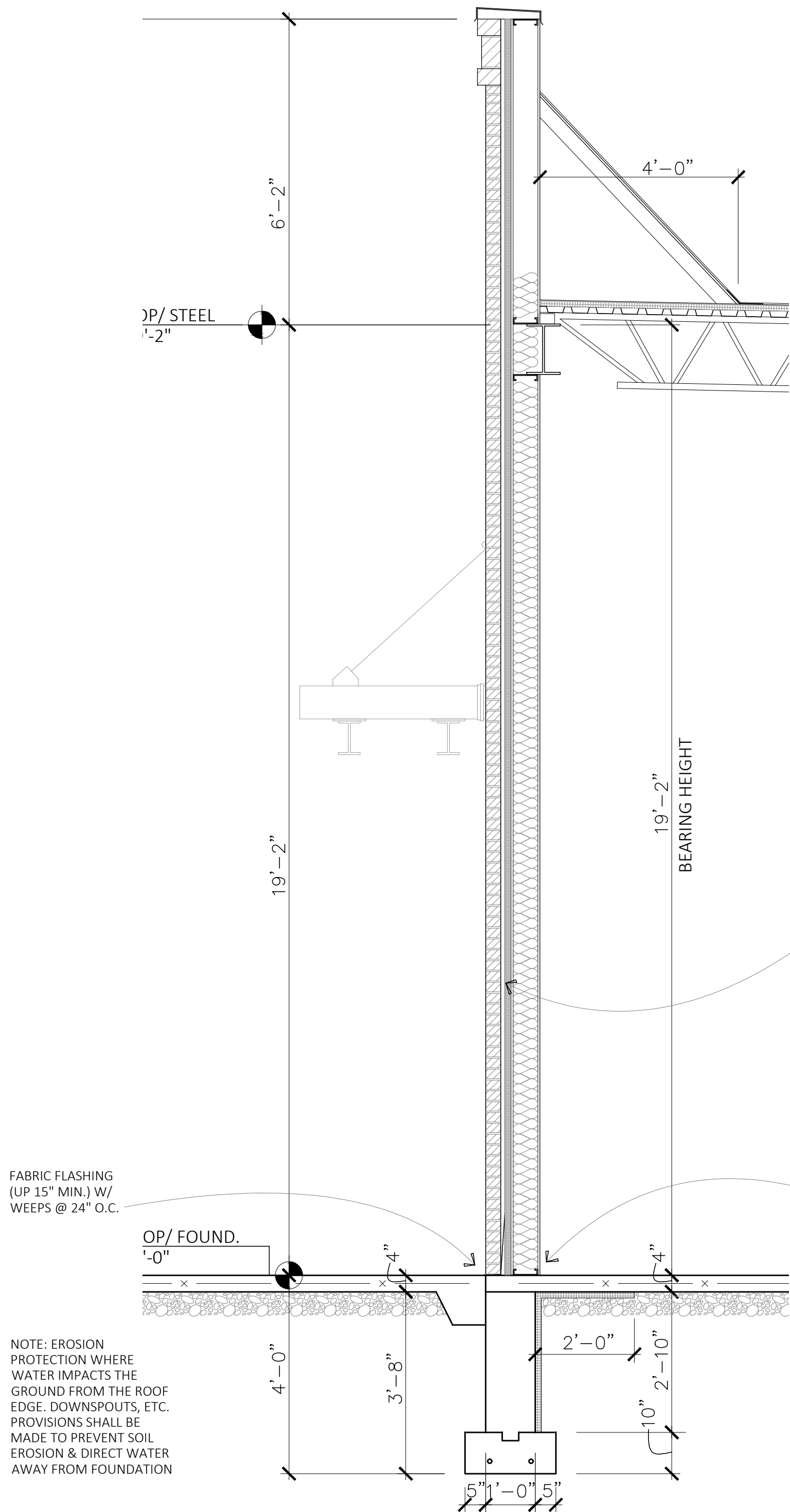
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES AND ALL AUTHORITIES HAVING JURISDICTION.
- ALL PARTITION DIMENSIONS ON PLAN SHEETS ARE TO FACE OF STUDS INTERIOR AND FACE OF SHEATHING EXTERIOR. NON-BEARING PARTITIONS ARE TO BE LAID OUT SO THAT STOCK COMPONENTS WILL FIT EXACTLY WITHIN INDICATED DIMENSIONS. FINISHED DIMENSIONS AT CRITICAL AREAS SUCH AS KITCHENS, CLOSETS, BATHTUBS, ETC. MUST BE HELD.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (DO NOT SCALE DRAWINGS, FIGURED DIMENSIONS SHALL TAKE PRECEDENCE) AND CONDITIONS BEFORE PROCEEDING WITH THE WORK AND NOTIFY SUPERINTENDANT AT ONCE OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- PLUMBING SCHEMATIC DRAWINGS, HVAC DRAWINGS, SEWER MAINS, ELECTRICAL OUTLETS, SWITCHES, LIGHT LOCATIONS FOR ROUTING ALL PLUMBING, MECHANICAL AND ELECTRICAL WORK IS TO BE COORDINATED BETWEEN THE TRADES AFFECTED BY THE WORK AS PART OF THEIR INSTALLATION LAYOUT. NO PLUMBING, MECHANICAL, OR ELECTRICAL INFORMATION IS TO BE SCALED FROM THE DRAWING.
- ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR.
- SPOT SURVEY MUST BE SUBMITTED TO TOWN FOR REVIEW AND APPROVAL PRIOR TO FRAMING WALLS.
- THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAM IN CONNECTION WITH THIS WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES RELATED TO THEIR WORK.
- GENERAL CONTRACTOR SHALL PRESENT THE OWNER WITH AN "AS-BUILT" DRAWING INDICATING LOCATIONS OF ALL UNDERGROUND UTILITIES ON SITE (ELECTRIC, GAS, WATER, SEWER, TELEPHONE, ECT.). BY THE FIREPLACE MANUFACTURER SHALL BE PLACED AT
- RECOMMENDATION... PROVIDE "KNOX BOX" NEAR THE FRONT ENTRANCE AS DICTATED BY THE LOCAL FIRE DEPARTMENT.
- PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10 AND LOCATED AS DIRECTED BY THE LOCAL FIRE DEPARTMENT.
- ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER PER INDUSTRY HIGH QUALITY STANDARDS AND THE SPECIFICATIONS CONTAINED IN THE BID DOCUMENTS.
- EACH CONTRACTOR SHALL INCLUDE LABOR, MATERIALS, TOOLS, EQUIPMENT, ECT., FOR THE COMPLETE CONSTRUCTION OF WORK INDICATED AND SPECIFIED BY THE DRAWINGS AND SPECIFICATIONS.
- EACH CONTRACTOR SHALL ESTABLISH A SYSTEM OF TESTING AND INSPECTING THEIR WORK IN THE ROUGH AND FINISHED STATE, TO INSURE QUALITY AND PERFORMANCE OF THE FINAL WORK PRODUCT.
- MATERIALS AS SPECIFIED ON THE DRAWING SHALL BE USED. SUBSTITUTIONS OF THE MATERIALS WILL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE OWNER.
- EACH SUBCONTRACTOR SHALL AMEND AND MAKE GOOD, AT HIS OWN COST, ANY DEFECTS OR OTHER DEFECTS IN HIS WORKMANSHIP AND/OR MATERIAL, OR DAMAGE HE MAY CAUSE TO ANOTHER'S WORK.
- EACH CONTRACTOR IS TO CLEAN UP DEBRIS INSIDE AND OUTSIDE THE BUILDING WHICH IS CAUSED BY HIS WORK.
- THE CONTRACTOR SHALL SUBMIT TO THE OWNER FOR APPROVAL A LIST OF MATERIALS, FIXTURES, AND EQUIPMENT, INCLUDING TYPE AND QUALITY TO BE USED.
- ANY DETAILS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL NOT BE EXECUTED WITHOUT OWNERS APPROVAL.
- ALL WORK MUST MEET OWNERS APPROVAL BEFORE FINAL PAYMENT IS MADE.
- ALL WORK SHALL BE GUARANTEED FOR NOT LESS THAN ONE YEAR.
- ALL MATERIAL TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS. THESE RECOMMENDATIONS SHALL TAKE PRECEDENCE OVER CONFLICTING DETAILS FOUND HEREIN.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUAL CLEAN-UP OF SITE AT THE TIME OF MOVE IN. A FINAL CLEAN-UP WILL BE GIVEN TO PREMISES INCLUDING, BUT NOT LIMITED TO: FLOORS, WALLS, WINDOWS, CABINETS, ETC.
- ALL EXTERIOR STEEL SHALL BE PRIMED AND PAINTED.
- ALL FIRESTOPPING AS PER STATE AND LOCAL CODES.
- ALL WINDOWS, DOORS, AND TRIM SHALL BE AS VERIFIED BY OWNER.
- THERMAL AND SOUND INSULATING MATERIALS IN EXPOSED OR CONCEALED INSTALLATIONS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 450 OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM-384.
- THERMAL EAVE BAFFLES BY INSULATION CONTRACTOR.
- ATTIC SPACES SHALL BE VENTILATED WITH A MINIMUM NET OPENING OF 1/300 OF THE AREA OF THE SPACE TO BE VENTILATED WITH AT LEAST 50% OF THE REQUIRED VENTILATING AREA PROVIDED BY RIDGE VENTS.
- CONTRACTOR TO PROVIDE MANUFACTURER'S INSTALLATION GUIDE & CUT SHEETS FOR ALL APPLIANCES, ELECTRICAL HARDWARE & DEVICES, PLUMBING MATERIALS, & THE EQUIPMENT FOR HEATING, COOLING & VENTILATING.
- ALL FOAM PLASTIC CORES OF MANUFACTURED ASSEMBLES SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 75 AND SHALL HAVE A SMOKE DEVELOPED RATING OF NOT MORE THAN 450 WHEN TESTED IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM-E83.
- ALL CONTRACTORS TO BE REGISTERED, LICENSED, INSURED, & BONDED.



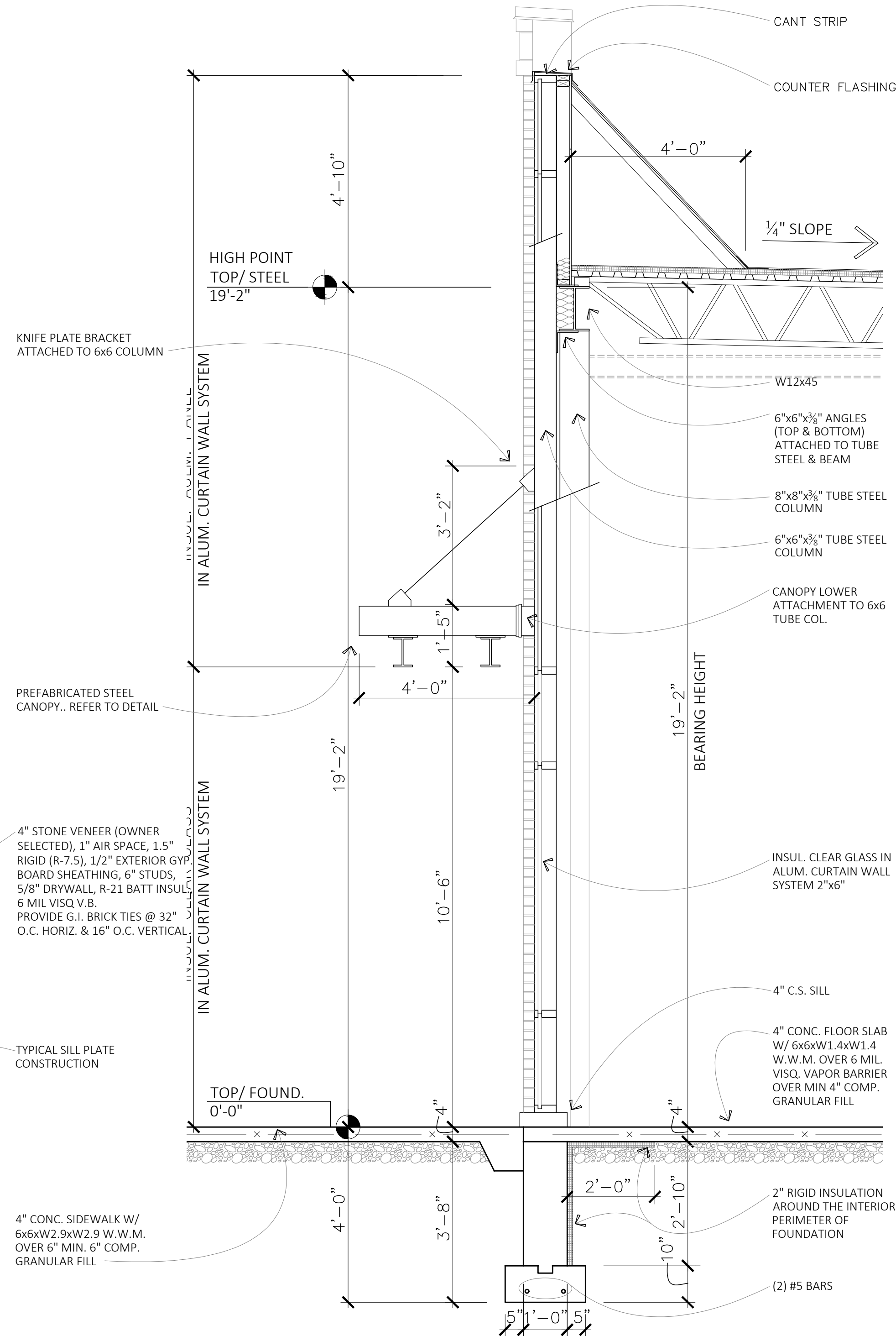
MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN
N.G.
PROJECT
MAPLE LEAF
OUT-BUILDING LOT 5
DATE
07/18/23
SCALE
AS NOTED
JOB NO.
C1-23
SHEET

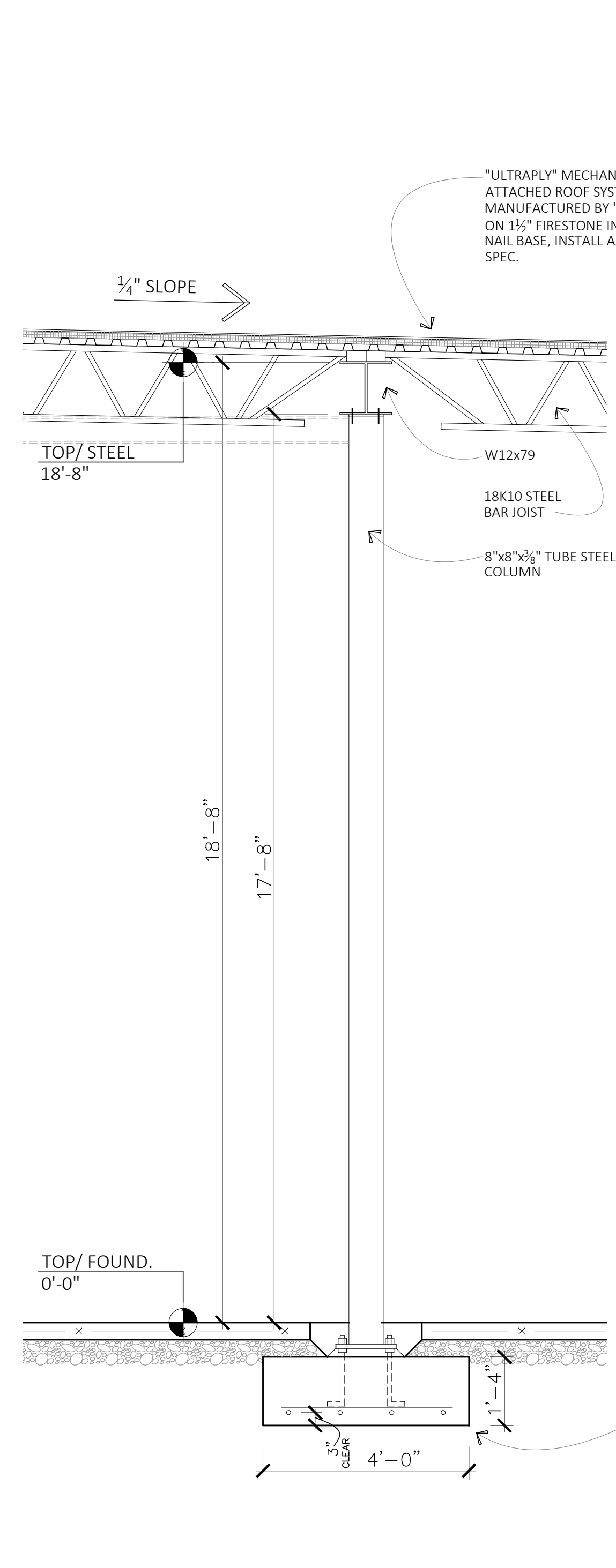
A-3
OF 10 SHEETS



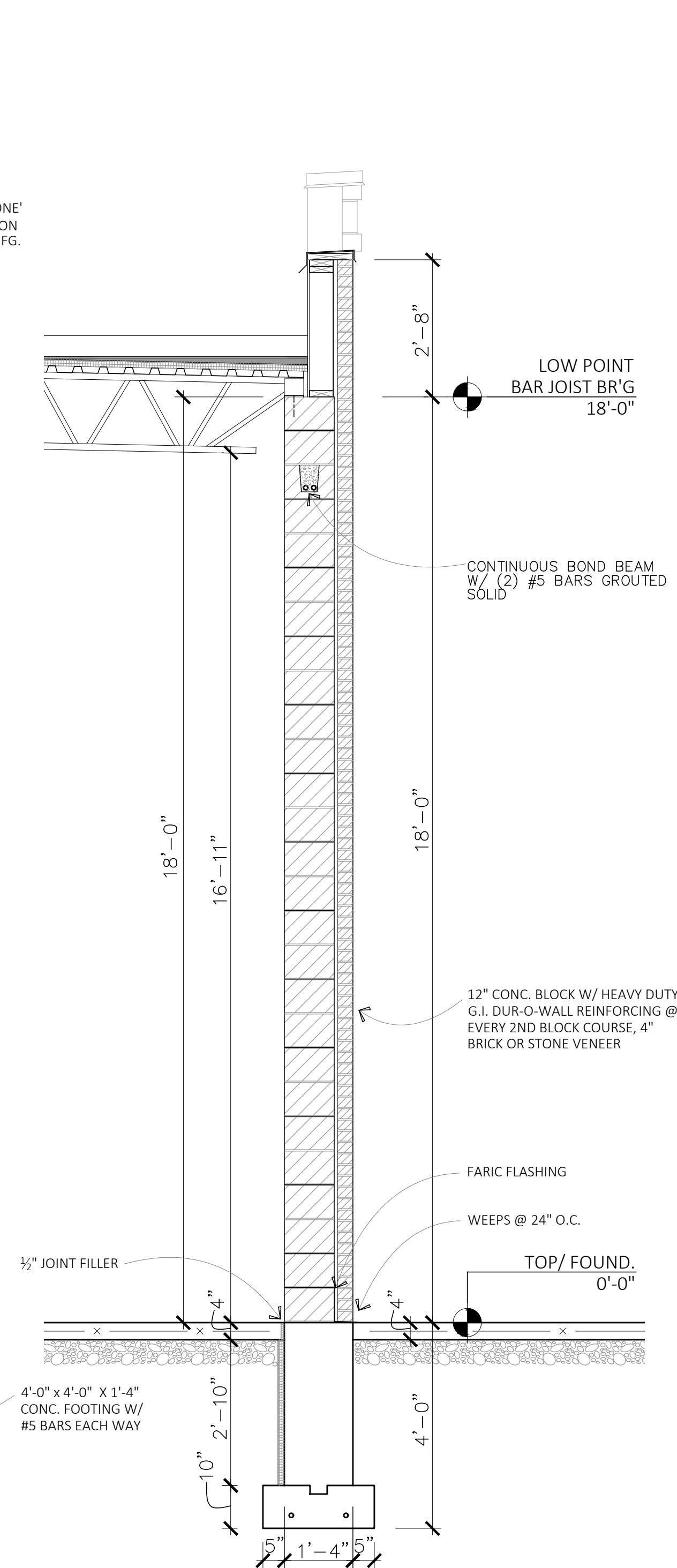
1 WALL SECTION
A-4 SCALE: 1/2"=1'-0"



2 WALL SECTION
A-4 SCALE: 1/2"=1'-0"



3 WALL SECTION
A-4 SCALE: 1/2"=1'-0"

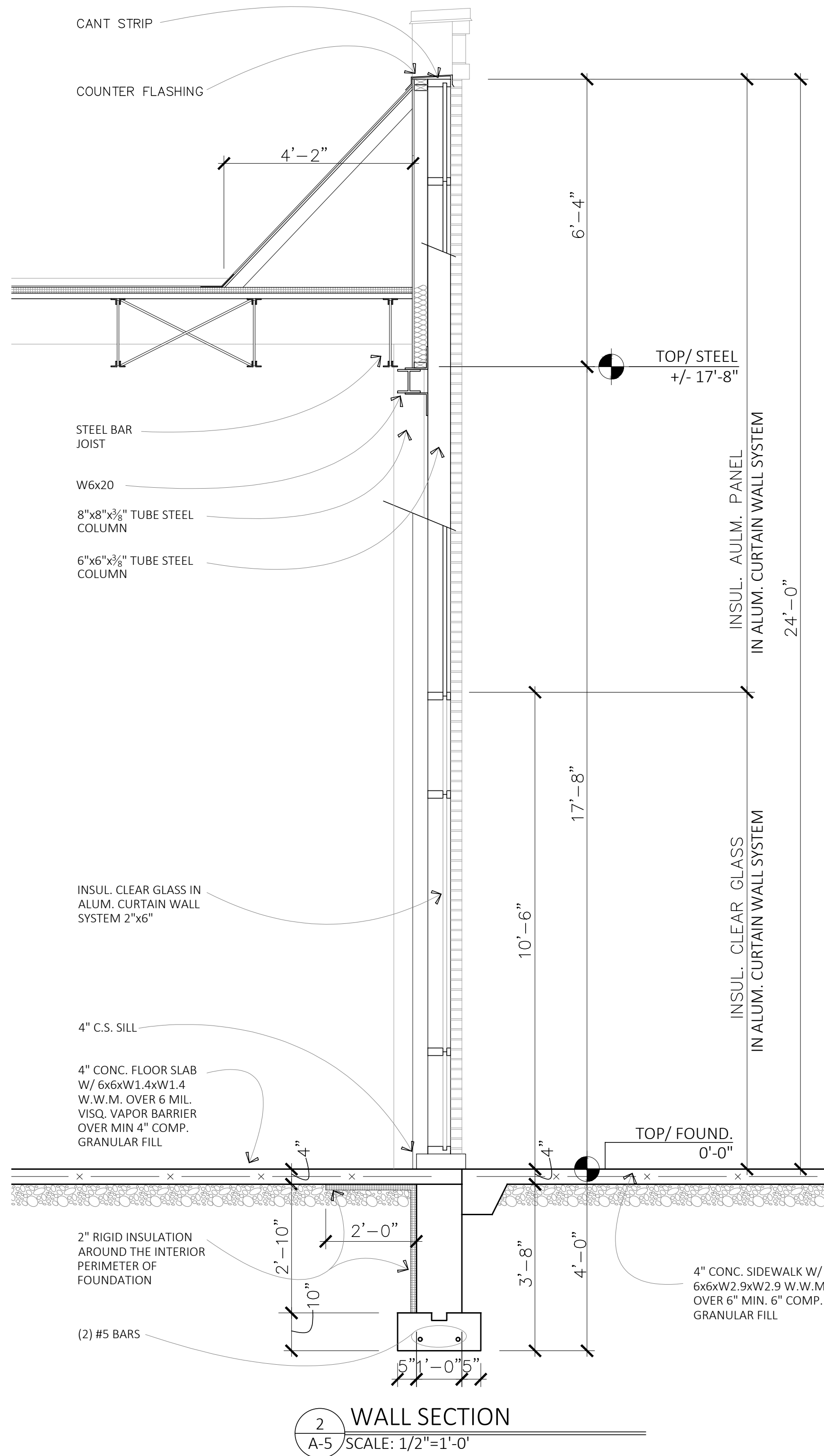
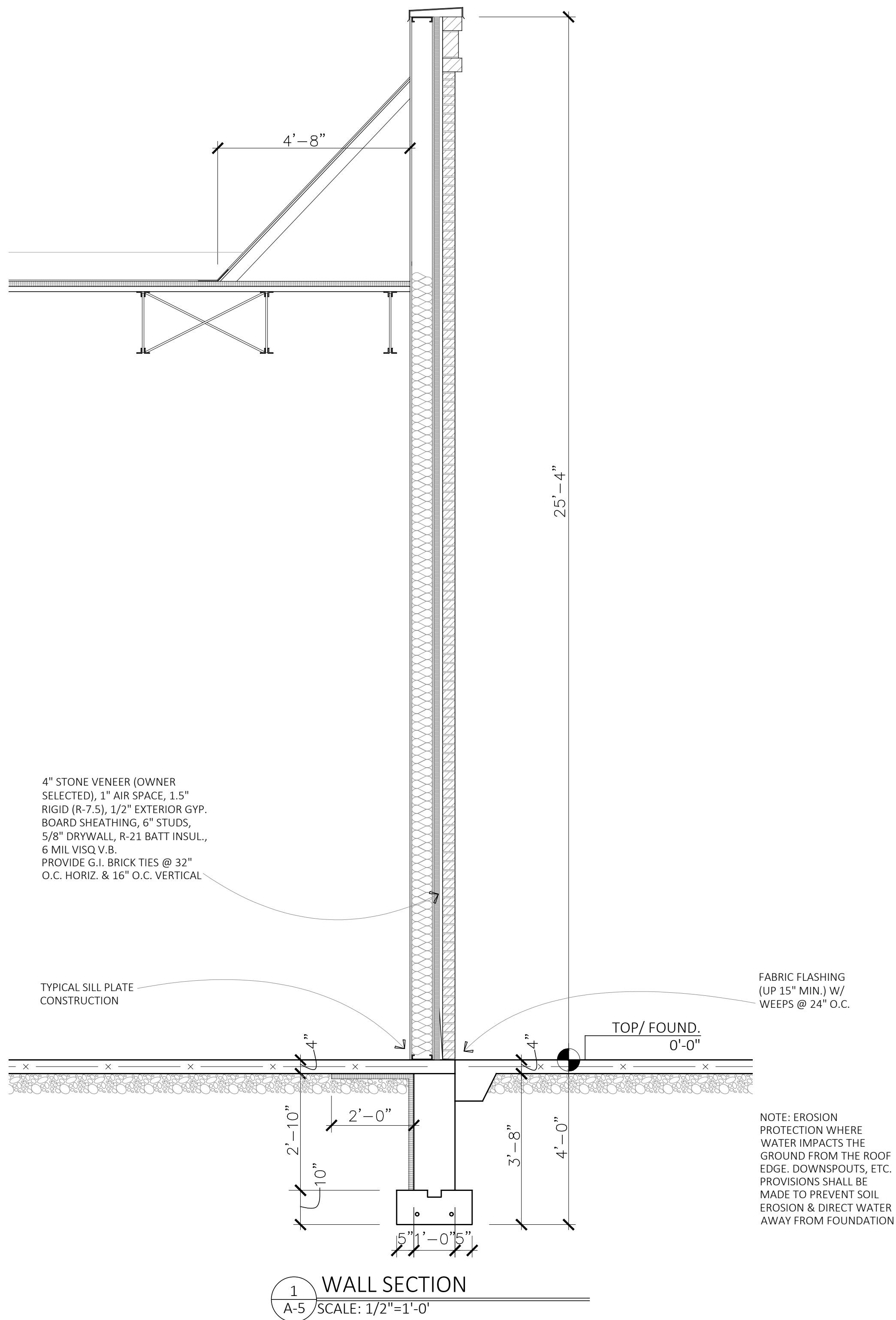


4 WALL SECTION
A-4 SCALE: 1/2"=1'-0"

REVISIONS	DATE

MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MIES.ARCH@SBCGLOBAL.NET

DRAWN
N.G.
PROJECT
MAPLE LEAF
OUT-BUILDING
DATE
07/18/23
SCALE
AS NOTED
JOB NO.
C1-23
SHEET
A-4
10 OF 10 SHEETS



REVISIONS	DATE



MICHAEL E. STANULA
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PROJECT
MAPLE LEAF
OUT-BUILDING

DATE
07/18/23

SCALE
AS NOTED

JOB NO.
C1-23

SHEET
A-5

OF 10 SHEETS

EXHAUST FAN SCHEDULE													
TAG	MFR. *	CFM	E.S.P.	RPM	WATTS	ELECTRICAL						REMARKS	
						VOLT	PH	Hz	FLA	MCA	MOCp		
RTU-1	BROAN	75	0.3"	1,280	40	120	1	60	.9	2	10	1, 2 WIRE TO OCC. SENSOR, WALL CAP & DAMPER	

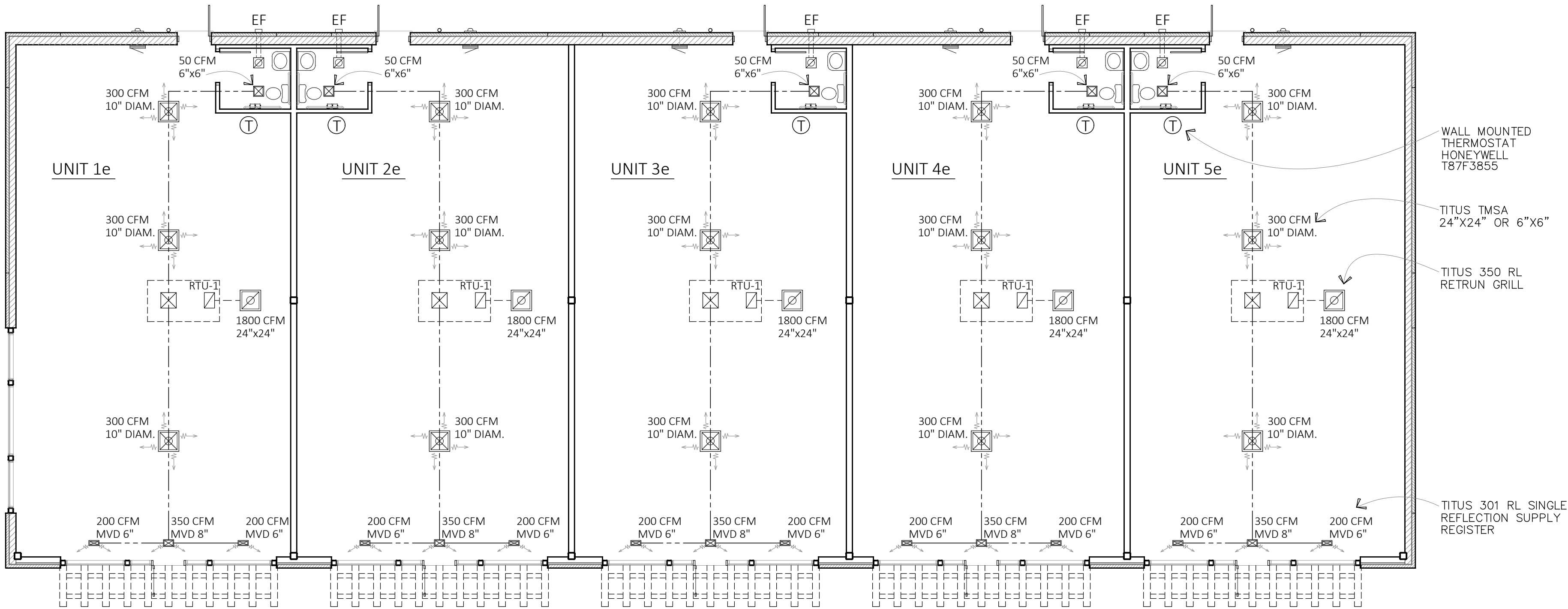
1. DISCONNECT SWITCH & BACKDRAFT DAMPER
2. RAIN CAP
* OR EQUAL

NOTE. EXHAUSTS FOR TOILET ROOMS SHALL CONNECT TO THE EXTERIOR OF THE BUILDING
AT A POINT WHERE IT WILL NOT CAUSE A NUISSANCE AND AT LEAST 3- FEET FROM
ANY OPENING INTO THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES.

FURNACE/AIR HANDLER SCHEDULE																	
TAG	MFR. *	SA CFM (HEAT)	SA CFM (COOL)	HEATING			VOLT	HP	Ph	FLA	Hz	AFUE%	MCA	HEAT ESP	COOL ESP	F.A.I. ① CFM	REMARKS
				TYPE	INPUT (BTU/HR)	OUTPUT (BTU/HR)											
RTU-1	LG	1600	--		--	--	208/230	1	1	7.6	60	92	10	--	.4	0	HIGH EFFICIENCY. HORIZ. FLOW

* OR EQUAL

1. INTAKE TO HAVE AUTOMATIC DAMPER LINKED TO SYSTEM.
DAMPER TO BE CLOSED WHEN FURNACE NOT IN USE.



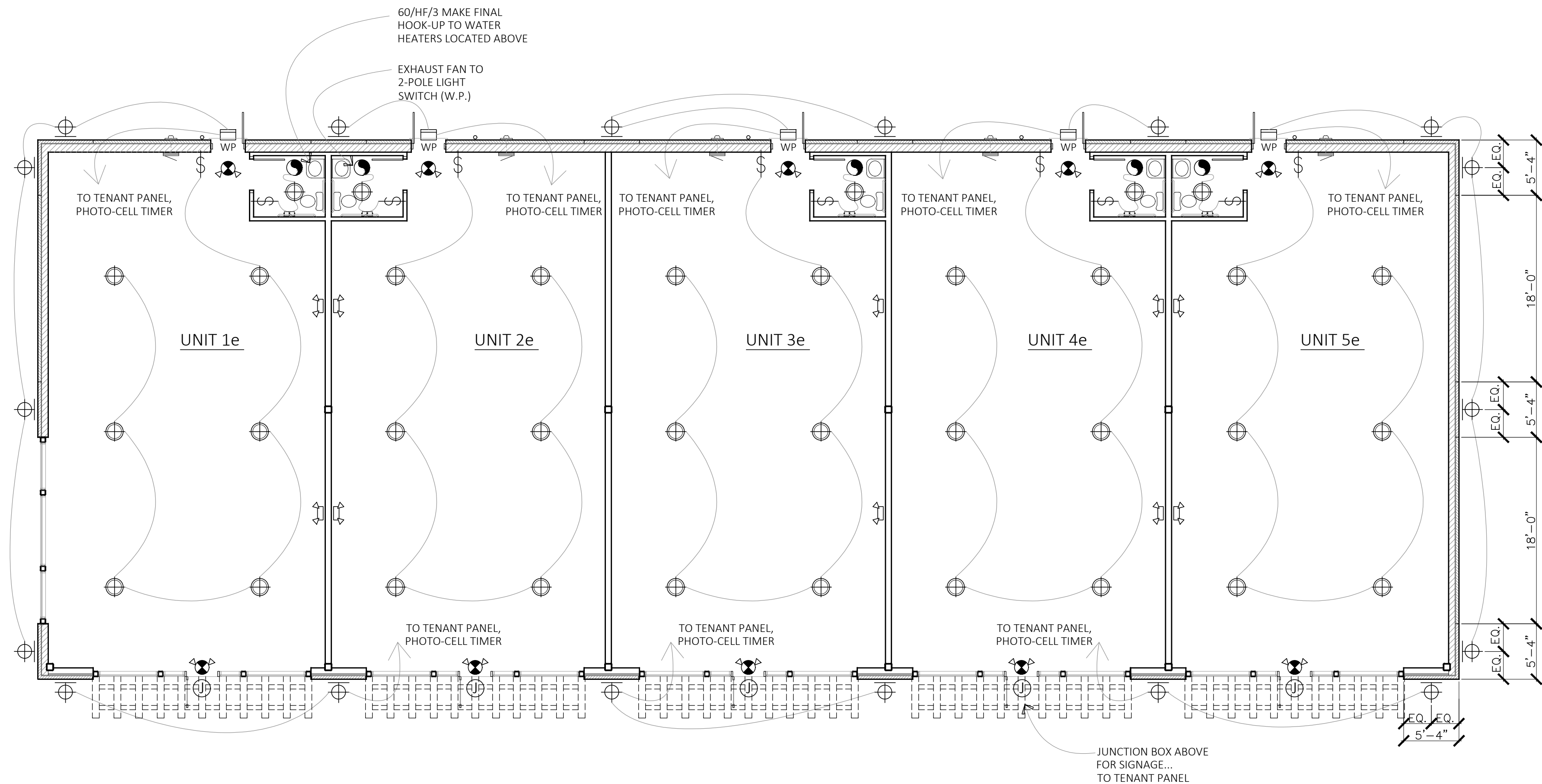
----- SUPPLY DUCT
----- RETURN DUCT

MECHANICAL PLAN
SCALE: 3/8"=1'-0"

MECHANICAL LAYOUT PLANS ARE GUIDELINES ONLY.
HVAC CONTRACTOR TO VERIFY EQUIPMENT SIZE &
LOCATIONS IN FIELD.

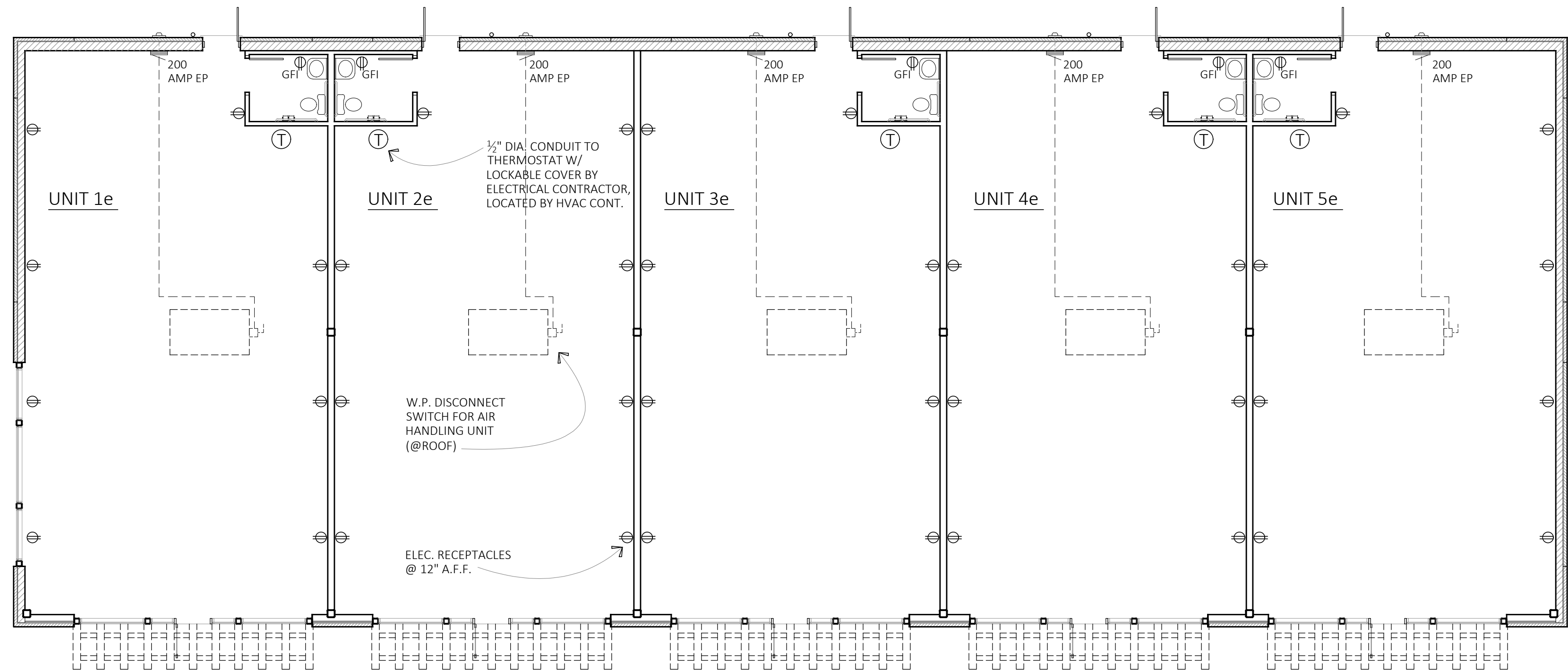
MICHAEL E. STANULA
31800 S. State Line Rd.
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MES.ARCH@SBCGLOBAL.NET
architect

DRAWN
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PROJECT
MAPLE LEAF
OUT-BUILDING
DATE
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SCALE
AS NOTED
JOB NO.
C1-23
SHEET
M-1
10 OF 10 SHEETS



LIGHTING PLAN

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



POWER PLAN

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

ADDITIONAL ELECTRICAL NOTES

- EXIT AND EMERGENCY LIGHTS SHALL BE LOCAL CODE APPROVED PRIOR TO PURCHASE AND INSTALLATION.
- ALL EXIT LAMPS SHALL BE ENERGY SAVING TYPE AND HAVE TEST SWITCH.
- MEANS OF EGRESS LIGHTING MINIMUM INTENSITY OF 1-FOOT CANDLE.
- SET-UP MEETING IN FIELD WITH OWNER BEFORE STARTING WIRING WORKS. REVIEW ALL SWITCH, OUTLET, AND FIXTURE LOCATIONS. MARK EXACT LOCATIONS. DO NOT INSTALL BY SCALING LOCATIONS OFF OF THE PLANS. THE OWNER MAY MAKE REASONABLE ADJUSTMENTS IN LOCATION BEFORE START OF WIRING FROM THAT SHOWN ON THE PLANS WITHOUT ADDITIONAL EXPENSE.
- VERIFY WITH OWNER ALL COMPUTER REQUIREMENTS I.E. DEDICATED CIRCUITS, ADDITIONAL TELEPHONE LINES, CONDUIT RUNS, ETC. (IF ANY). PROVIDE WIRE MANAGEMENT GROMMETS AT LOCATIONS IN COUNTER TOPS AS DIRECTED BY OWNER/INTERIOR DESIGNER.
- EMERGENCY LIGHTING AND EXIT SIGNAGE SHALL RECEIVE THEIR PRIMARY POWER FROM GENERAL LIGHTING BRANCH CIRCUITS.
- EXACT LOCATION OF PANEL BOARDS SHALL BE AS DIRECTED BY OWNER

EMERGENCY LIGHT AND EXIT LIGHT REQUIREMENTS (ORD. 1023.1-4)

PROVIDE DUAL VOLTAGE EXIT SIGNS WITH AN ALTERNATIVE POWER SOURCE. FACE LETTERING SHALL BE RED. VERIFICATION FOR PROPER COVERAGE WILL TAKE PLACE ON SITE.

PROVIDE EMERGENCY LIGHT COVERAGE AT EACH EXIT, AND IN STAIRWELLS. VERIFICATION FOR PROPER COVERAGE WILL TAKE PLACE ON SITE.

BREAKER LOCKS ARE REQUIRED ON EXIT, EMERGENCY LIGHTS, FIRE ALARM, AND FIRE ALARM BELL CIRCUITS.

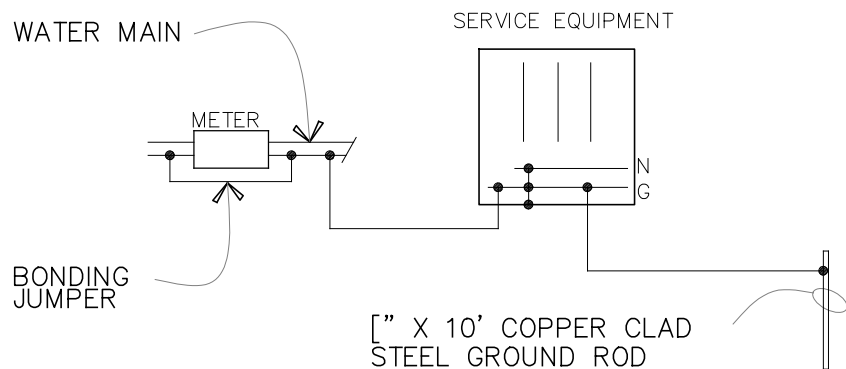
- NOTES:
- AREAS TO ACHIEVE 50% LIGHT REDUCTION THROUGH DUAL SWITCHES UNLESS THE AREA HAS AN OCCUPANCY SENSOR, HAS ONLY ONE LIGHT SWITCH OR IS A CORRIDOR, TOILET ROOM, OR STORAGE ROOM.
 - FLUORESCENT FIXTURES SHALL HAVE ALTERNATE BALLASTS CONNECTED FOR TWO-LEVEL LIGHTING WHERE TWO SWITCHES ARE INDICATED.
 - MOUNTING HT. OF LIGHT FIXTURES TO BE 10'-0" A.F.F. VERIFY.

ELECTRICAL SYMBOLS LIST

- DUPLEX RECEPTACLE OUTLET
- GROUND FAULT INTERRUPT OUTLET
- TOGGLE SWITCH
- CEILING MOUNTED DECORATIVE FIXTURE
- WALL MOUNTED FIXTURE
- EXHAUST FAN
- SMOKE DETECTOR- DUAL VOLT IN SERIES
- JUNCTION BOX
- LITHONIA #TWS LED PI 50K 120 PE BZ WALL PACK LED LIGHT, 25W, LED LAMP, 1476 LUMENS, 5000K 120V, MTD. @ 9'-0" ABOVE GRADE
- LITHONIA #ECC G MC LED GREEN EXIT SIGN W/ DUAL EMERGENCY HEADS, 120-277V, UNIVERSAL 90 MIN. BATTERY BACK-UP, SURFACE MOUNTED 1" ABOVE DOOR 1.1W
- LITHONIA #E2L M12 DUAL HEAD EMERGENCY LIGHT UNIT, LED HEADS, 120-277V, UNIVERSAL 90 MIN. BATTERY BACK-UP, SURFACE MOUNTED .33W

GENERAL NOTES

- ALL METERED SERVICE ENTRANCES, BOTH UNDERGROUND AND OVERHEAD, MUST BE IN RIGID METAL CONDUIT OR INTERMEDIATE METALLIC CONDUIT.
- FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED IN EXPOSED LOCATIONS, IN LENGTHS OVER 3 FEET, OR IN LOCATIONS PROHIBITED BY 'NEC ARTICLE 348.12'
- ALUMINUM CONDUCTOR MATERIAL IS PROHIBITED.
- NON-METALLIC CONDUIT IS PERMITTED ONLY IN THE FOLLOWING LOCATIONS:
 - IN LOCATIONS SUBJECT TO SEVERE CORROSIVE INFLUENCES AS COVERED BY 'NEC ARTICLE 300.6'
 - IN WET LOCATIONS WHERE WALLS ARE WASHED FREQUENTLY.
 - IN DRY AND DAMP LOCATIONS NOT PROHIBITED BY 'NEC ARTICLE 352.12'.
 - UNDERGROUND INSTALLATIONS (HORIZONTAL ONLY)
- LIQUDTIGHT FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED FOR DIRECT BURIAL IN ADDITION TO USES NOT PERMITTED IN 'NEC ARTICLE 350.12.'



GROUNDING DIAGRAM

- ALL GROUNDING AND BONDING MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE, NEC ARTICLE 250 AND/OR LOCAL ORDINANCES.
- REFER TO NEC TABLE 250-66 AND ARTICLE 250-66 (a) TO SIZE BONDING CONDUCTORS/JUMPERS. BONDING JUMPERS MUST BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 250-64.
- BOND GROUND ROD, WATER MAIN (THERMAL WELD CONNECTION MUST BE MADE WITHIN (5) FEET OF POINT OF ENTRANCE OF PIPE AND AHEAD OF WATER METER FITTINGS

REVISIONS	DATE



MICHAEL E. STANULA
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architect

DRAWN N.G.
PROJECT MAPLE LEAF OUT-BUILDING
DATE 07/18/23
SCALE AS NOTED
JOB NO. C1-23
SHEET E-1
10 OF SHEETS

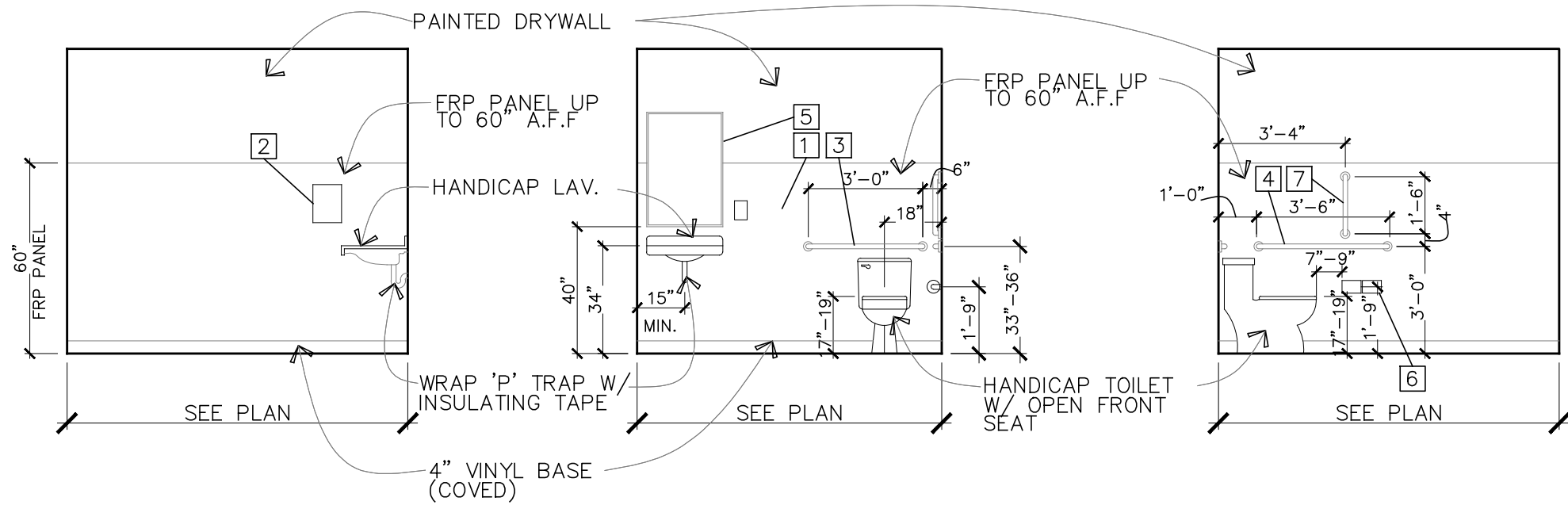
TOILET ACCESSORY SCHEDULE	
ITEM No.	DESCRIPTION
1	SOAP DISPENSER SURFACE MOUNTED
2	PAPER TOWEL DISPENSER SURFACE MOUNTED
3	1-1/2" DIA. STAINLESS STEEL GRAB BAR 36" LONG
4	1-1/2" DIA. STAINLESS STEEL GRAB BAR 42" LONG
5	WALL MIRROR W/ STAINLESS STEEL FRAME 24"x36"
6	TOILET TISSUE PAPER HOLDER, SURFACE MOUNTED
7	1-1/2" DIA. STAINLESS STEEL GRAB BAR 18" LONG

— ALL LAVATORY & HAND SINK FAUCETS SHALL BE PROVIDED WITH AN AUTOMATIC SAFETY WATER-MIXING DEVICE. THE DEVICE SHALL BE EITHER A THERMOSTATIC PRESSURE BALANCE OR COMBINATION CONTROLS WHICH SHALL BE ADJUSTED TO A MAXIMUM SETTING OF 100 DEGREES AT THE TIME OF INSTALLATION.

TOILETS MAY BE WALL-HUNG OR PEDESTAL STYLE. THE HEIGHT MUST BE BETWEEN 17" & 19" MEASURED FROM THE FLOOR TO THE TOP OF THE TOILET SEAT.

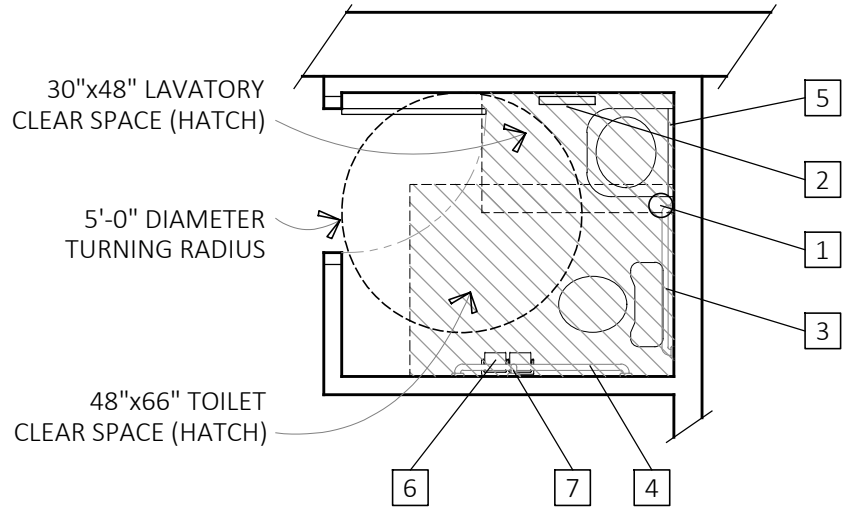
- NOTES:
- 1/2" WATER RESISTANT D.W. @ TOILET WALLS
 - PROVIDE 3/4" PLYWOOD BEHIND ALL GRAB BARS & TOILET ACCESSORIES

PLUMBING FIXTURE SCHEDULE OR EQUAL	
LAV	— LAVATORY ADA AMERICAN STANDARD SINK "LUCERNE" HDOP. HDOP. HT. *31" - 34" HERITAGE INS. TAIL PIPE W/ SENSOR OPERATED AUTOMATIC FAUCET ELECTRONICS PACKAGE BY MOEN OR EQUAL
WC	— WATER CLOSET ADA WATER CLOSET, AMERICAN STANDARD HDOP. W/ ELONGATED WHITE SEAT, OPEN FRONT SENSOR OPERATED AUTOMATIC FLUSH.
LT	— 24" LAUNDRY TUB SEE EQUIPMENT SPECS FROM OWNER
W.H.	— WATER HEATER 6 GAL. ELECTRICAL WATER HEATER
FD	— FLOOR DRAIN ZURN 4" W/ BRASS STRAINER ADJUSTABLE STRAINER
WCO	— WALL CLEAN OUT CHROME COVER WALL MOUNT
FCO	— FLOOR CLEAN OUT ZURN BRONZE ROUND FRAME & FLUSH COVER.



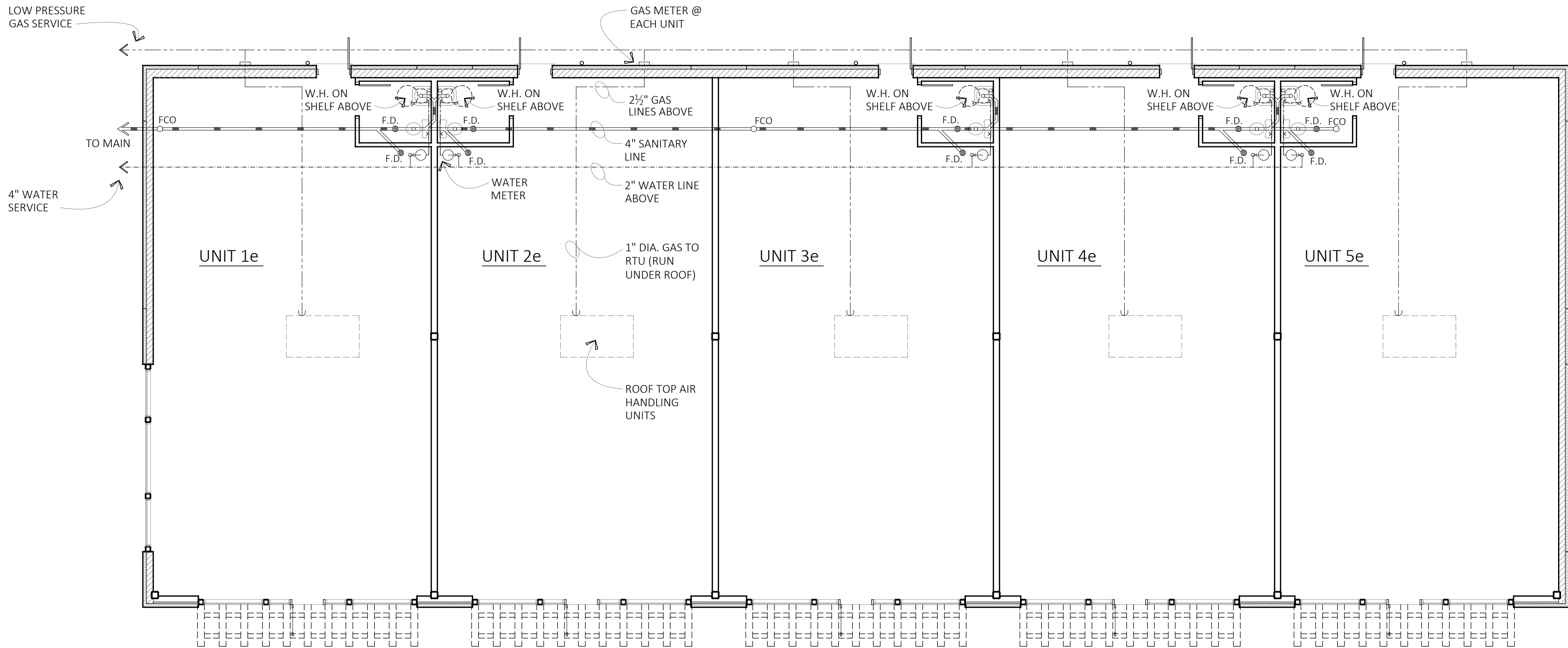
TOILET ROOM
ELEVATIONS

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



PARTIAL FLOOR PLAN:
RESTROOM

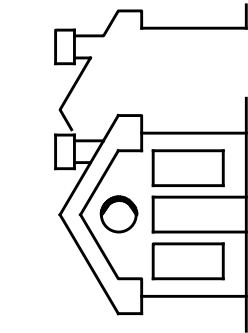
SCALE: 1/4"=1'-0"



- SANITARY LINE
— COLD WATER LINE
— HOT WATER LINE

PLUMBING PLAN

SCALE: 3/8"=1'-0"



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architect

DRAWN N.G.
PROJECT MAPLE LEAF OUT-BUILDING
DATE 07/18/23
SCALE AS NOTED
JOB NO. C1-23
SHEET

P-1
10 OF 10 SHEETS

Z:\2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001-(2).dwg 6/12/2023 1:22:54 PM CDT

MAPLE LEAF CROSSING

A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE COUNTY, INDIANA

INDEX	
PAGE	DESCRIPTION
COVER	TITLE PAGE
C-1.0	EXISTING TOPOGRAPHY & UTILITIES
C-1.1	DEMOLITION PLAN
C-2.0	SITE PLAN
C-2.1	SIGNAGE PLAN
C-3.0	SANITARY SEWERS & WATERMAIN PLAN
C-4.0	STORM SEWERS & GRADING PLAN
C-5.0 TO C-5.3	DETAILS & SPECIFICATIONS
C-6.0	STORM WATER POLLUTION PREVENTION PLAN
C-7.0 TO C-7.1	STORM WATER POLLUTION PREVENTION PLAN DETAILS & SPECIFICATIONS
1 OF 1	FINAL PLAT

Legal Descriptions:

PARCEL 1

Lot 1 in Munster Business Complex, a Planned Unit Development, in the Town of Munster, as per plat thereof, recorded in Plat Book 110, page 02 in the Office of the Recorder, Lake County, Indiana.

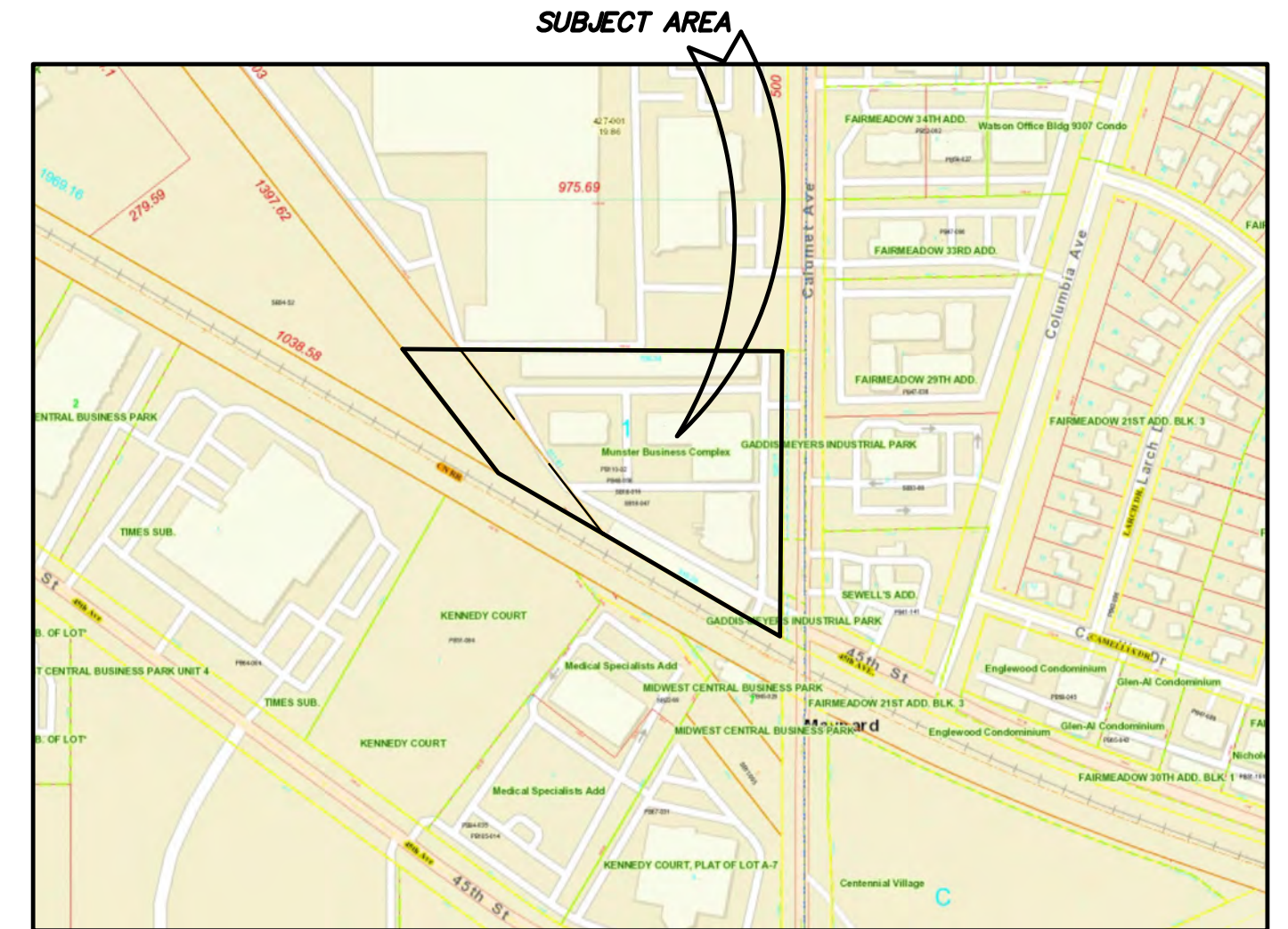
PARCEL 2

Part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying West of Lot 1 in Munster Business Complex, a Planned Unit Development, in the Town of Munster, as per plat thereof, recorded in Plat Book 110, page 02 in the Office of the Recorder, Lake County, Indiana, and North of Canadian National Railroad right-of-way, being more particularly described as follows: Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 756.34 feet to the Northwest corner of said Lot 1 and also being point of beginning; thence South 37° 47' 07" East, along the West line of said Lot 1, a distance of 511.81 feet to the Southwest corner of said Lot 1; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way (100 feet wide), a distance of 265.99 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 127.01 feet to the point of beginning, containing 0.982 acres, more or less, all in the Town of Munster, Lake County, Indiana.

Legal Description:

Being a resubdivision of Lot 1 in Munster Business Complex, a Planned Unit Development, to the Town of Munster, as per Plat thereof, recorded in Plat Book 110, page 2, in the Office of the Recorder of Lake County, Indiana, and part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying North of Canadian National Railroad right-of-way (100 feet wide) and West of Calumet Avenue (90 feet wide); being more particularly described as follows:

Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 50.00 feet to the Northeast corner of said Lot 1 and also being point of beginning; thence South 00° 26' 30" West, along the East line of said Lot 1 and also being the West right-of-way line of Calumet Avenue, a distance of 625.17 feet to a point on a curve, said point also being the North line of the Canadian National Railroad right-of-way; thence Northwest along a curve concave to the Northeast, along the Northerly line of said Canadian National Railroad right-of-way and having a radius of 6,561.12 feet (the chord of which bears North 60° 21' 21" West, a chord distance of 111.74 feet), an arc distance of 111.74 feet; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way, a distance of 602.23 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 833.34 feet to the point of beginning, containing 7.049 acres, more or less, all in the Town of Munster, Lake County, Indiana.



VICINITY MAP
NOT TO SCALE



NOTES:

- TOTAL SITE AREA = 7.049± (ACRES) 307,066± (S.F.)
- THIS PROPERTY IS LOCATED IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0117E, EFFECTIVE DATE JANUARY 18, 2012.

TBM #2 - MAG. NAIL SET LOCATED ALONG THE EAST SIDE OF CALUMET AVENUE AT CONCRETE SIDEWALK, 120 FEET SOUTH OF THE NORTH LINE OF LOT 1 IN MUNSTER BUSINESS COMPLEX, ELEVATION 616.73.
- BENCHMARK(S):
TBM #1 - FIRE HYDRANT LOCATED ALONG THE WEST SIDE OF CALUMET AVENUE, 85.65 FEET SOUTH OF THE NORTHWEST CORNER OF LOT 1 IN MUNSTER BUSINESS COMPLEX, SOUTH SOUTHEAST BOLT ELEVATION 618.87.

TBM #2 - MAG. NAIL SET LOCATED ALONG THE EAST SIDE OF CALUMET AVENUE AT CONCRETE SIDEWALK, 120 FEET SOUTH OF THE NORTH LINE OF LOT 1 IN MUNSTER BUSINESS COMPLEX, ELEVATION 616.73.
- DEVELOPER:
First Metropolitan Builders
400 Fisher Avenue
Munster, IN 46321
- EXISTING TOPOGRAPHY AND UTILITIES DATA ARE PROVIDED AND TAKEN FROM TORRENGA SURVEYING, LLC, JOB NO.: 2019-0676 DATED 03-25-2020
- ALL VERTICAL DATUM IS BASED ON NAVD88.
- HYDROLOGIC UNIT CODES: 07120003030030- HART DITCH (PLUM CREEK)-DYER DITCH
- LOCATION:
LATITUDE - 41°32'35" N
LONGITUDE - 87°30'36" W
- CURRENT ZONING: CD-4A WITH NO GROUND FLOOR RESIDENTIAL USES PERMIT



Know what's below.
Call before you dig.

"IT'S THE LAW"

CALL 2 WORKING DAYS BEFORE YOU DIG

811 or 1-800-382-5544

CALL TOLL FREE

PER INDIANA STATE LAW IC8-1-26.

IT IS AGAINST THE LAW TO EXCAVATE

WITHOUT NOTIFYING THE UNDERGROUND

LOCATION SERVICE TWO (2) WORKING

DAYS BEFORE COMMENCING WORK.

County: Lake

SE Qtr., Sec. 25, T. 36 N. R. 10 W.

Township: MUNSTER

DATE AND REVISIONS:

NO.	DATE	DESCRIPTION	BY
8	06-29-2023	SITE PLAN REVISION	DT/EM
7	06-17-2021	HOTEL CANOPY REVISIONS	DT/EM
6	12-14-2020	METES AND BOUNDS LEGAL DESCRIPTION	DT/EM
5	11-30-2020	STORM SEWERS REVISIONS	DT/EM
4	11-17-2020	SWPPP REVISIONS	DT/RT
3	06-26-2020	RE-SUBMITTAL TO MUNSTER	DT/RT
2	06-05-2020	RE-SUBMITTAL TO MUNSTER	DT/EM/MH
1	05-11-2020	PRIMARY SUBMITTAL	DT/EM/MH

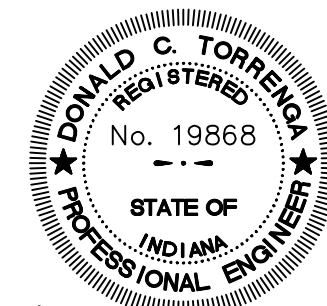
CLIENT/OWNER:

Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, IN 46321

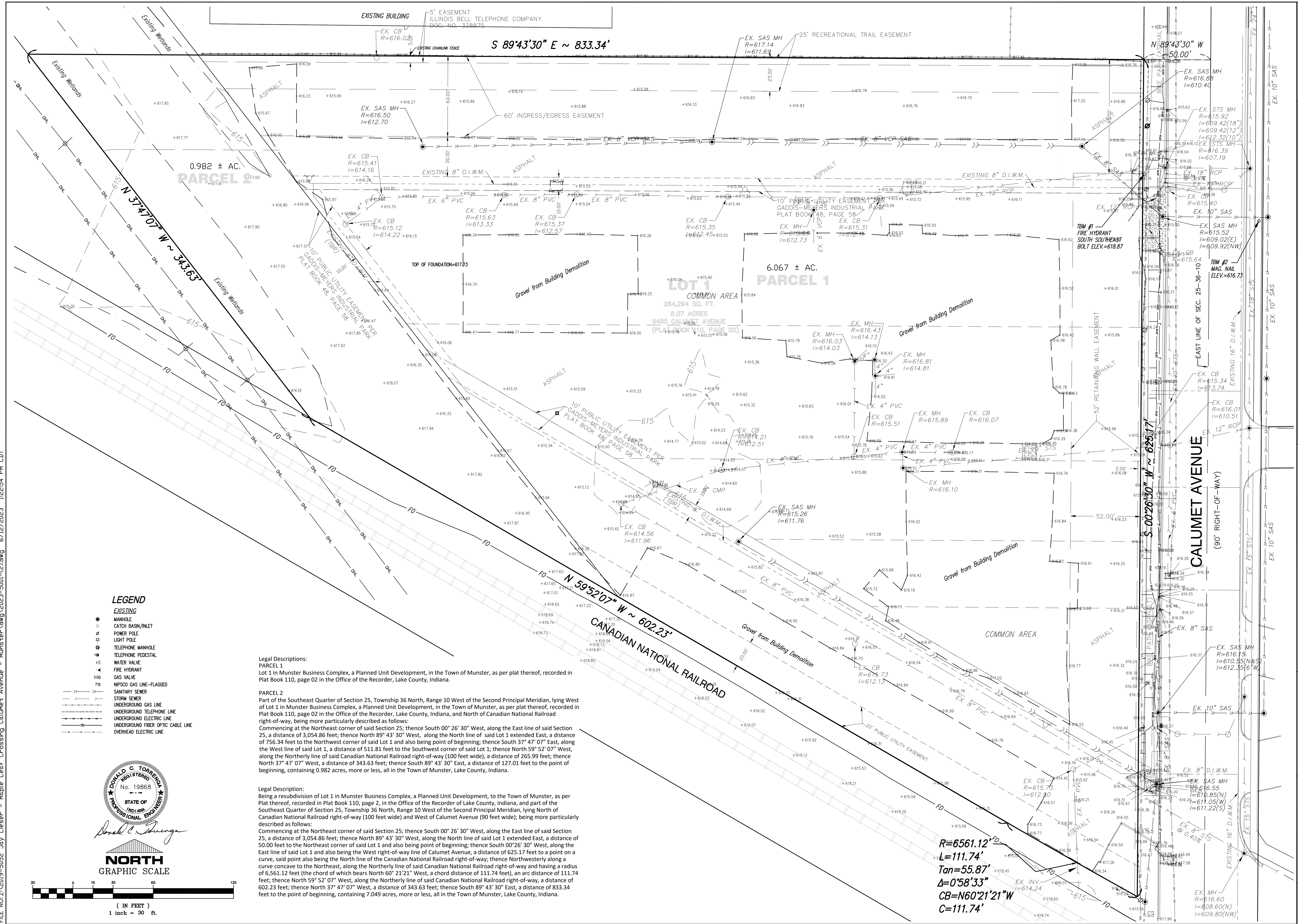
PREPARED BY:

Torrenge Engineering, Inc.
907 Ridge Road
Munster, Indiana 46321
(219)836-8918

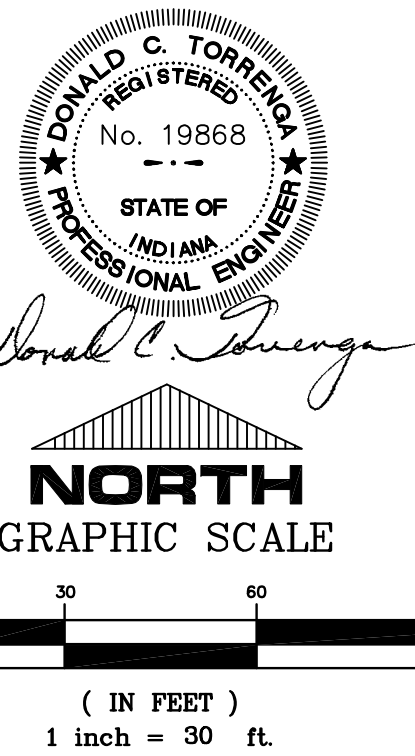
CERTIFIED BY: DONALD C. TORRENGA
P.E. # 19868



Donald C. Torrenge



LEGEND



Legal Descriptions:

PARCEL 2

Legal Description:

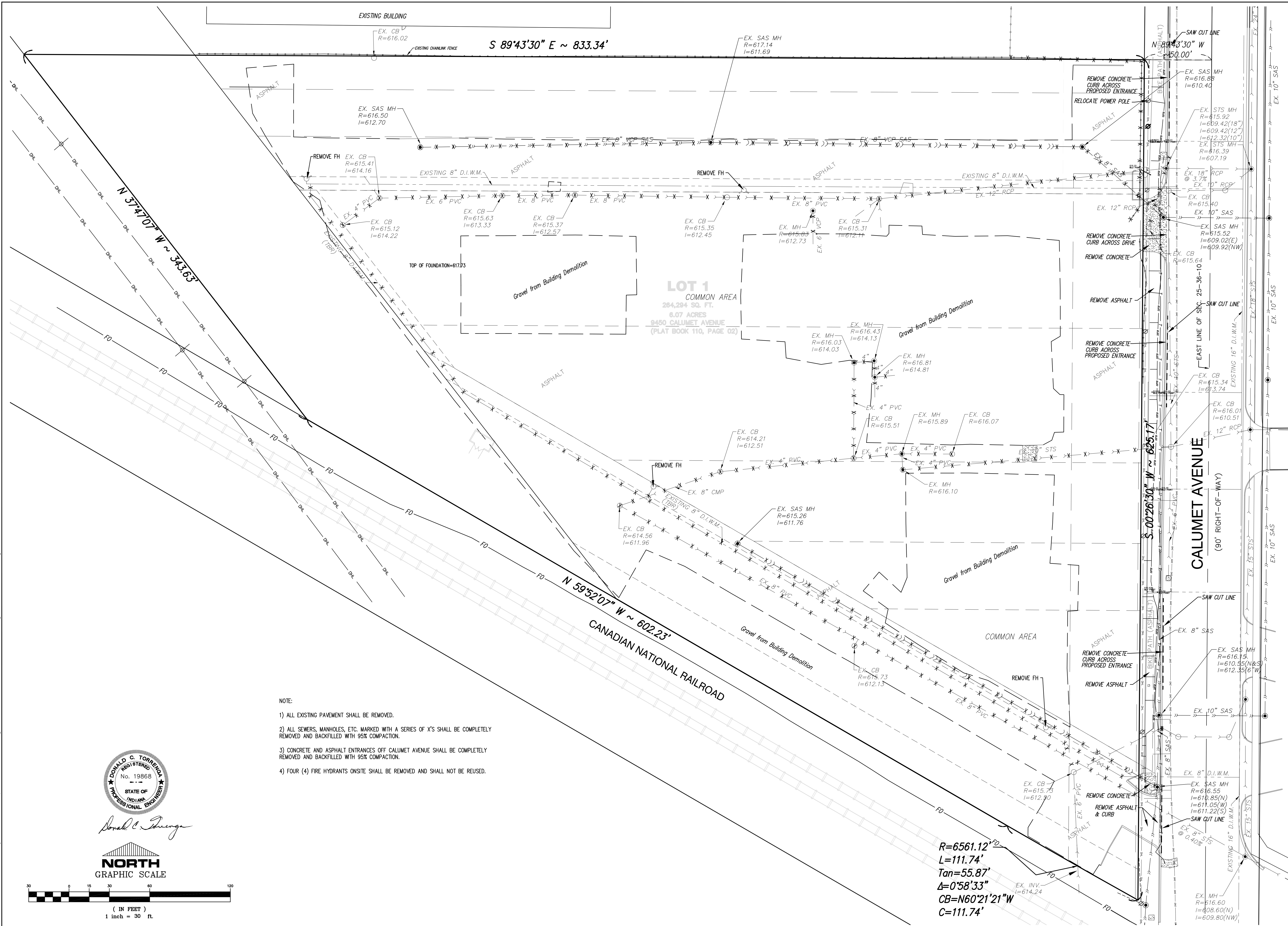
Tel. No.: (219) 836-8918

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
EXISTING TOPOGRAPHY & UTILITIES

REVISIONS:

SCALE: 1" = 30'

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321



MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
DEMOLITION PLAN

CLIENT: Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052

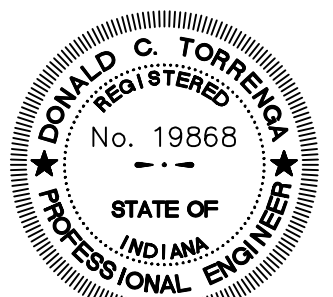
SCALE: 1" = 30'

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-6918
website: www.torrennga.com

Tel. No.: (219) 836-8918

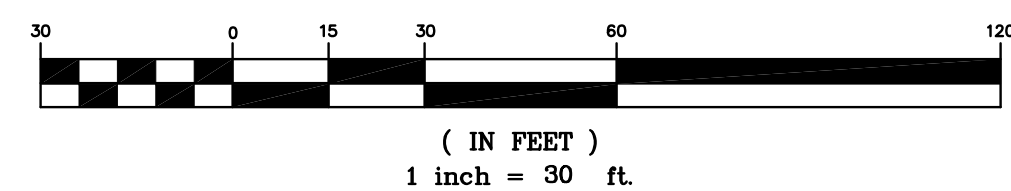
website: www.torrena.com

FILE NO: 2019-5052 Joy Lieser - Maple Leaf Crossing Calumet Avenue - Munster.dwg 2023-5001-(2).dwg 6/12/2023 12:25:54 PM CDT



Donald C. Torrenge

NORTH
GRAPHIC SCALE



LEGEND
PROPOSED

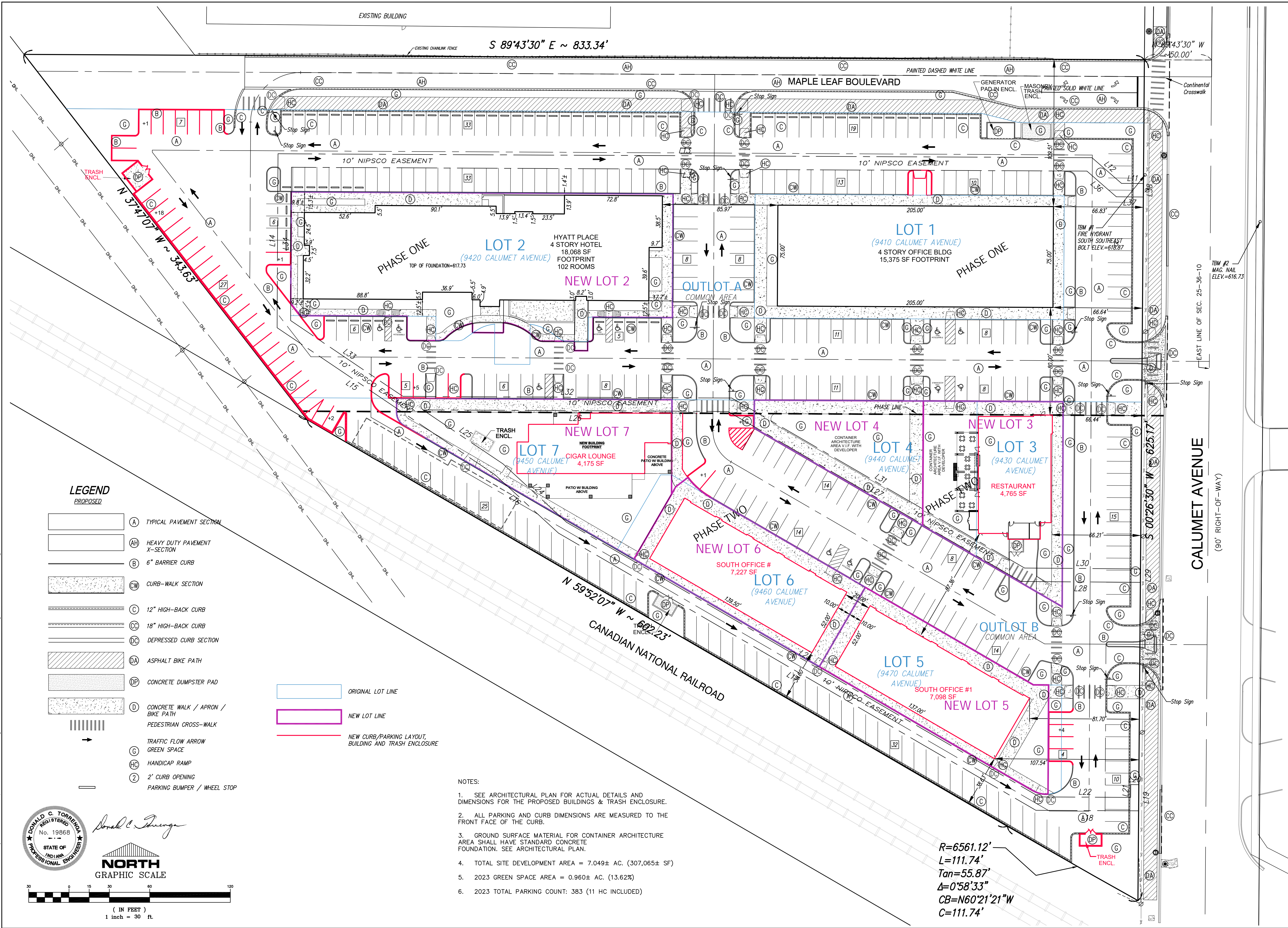
- (A) TYPICAL PAVEMENT SECTION
- (AH) HEAVY DUTY PAVEMENT X-SECTION
- (B) 6" BARRIER CURB
- (CW) CURB-WALK SECTION
- (C) 12" HIGH-BACK CURB
- (CC) 18" HIGH-BACK CURB
- (DC) DEPRESSED CURB SECTION
- (DA) ASPHALT BIKE PATH
- (DP) CONCRETE DUMPSTER PAD
- (D) CONCRETE WALK / APRON / BIKE PATH
- PEDESTRIAN CROSS-WALK
- TRAFFIC FLOW ARROW
- GREEN SPACE
- (HC) HANDICAP RAMP
- (2) 2' CURB OPENING
- PARKING BUMPER / WHEEL STOP

- ORIGINAL LOT LINE
- NEW LOT LINE
- NEW CURB/PARKING LAYOUT, BUILDING AND TRASH ENCLOSURE

NOTES:

- SEE ARCHITECTURAL PLAN FOR ACTUAL DETAILS AND DIMENSIONS FOR THE PROPOSED BUILDINGS & TRASH ENCLOSURE.
- ALL PARKING AND CURB DIMENSIONS ARE MEASURED TO THE FRONT FACE OF THE CURB.
- GROUND SURFACE MATERIAL FOR CONTAINER ARCHITECTURE AREA SHALL HAVE STANDARD CONCRETE FOUNDATION. SEE ARCHITECTURAL PLAN.
- TOTAL SITE DEVELOPMENT AREA = 7.049± AC. (307,065± SF)
- 2023 GREEN SPACE AREA = 0.960± AC. (13,62%)
- 2023 TOTAL PARKING COUNT: 383 (11 HC INCLUDED)

$R=6561.12'$
 $L=111.74'$
 $Tan=55.87'$
 $\Delta=0^{\circ}58'33''$
 $CB=N60^{\circ}21'21''W$
 $C=111.74'$



MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SITE PLAN

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

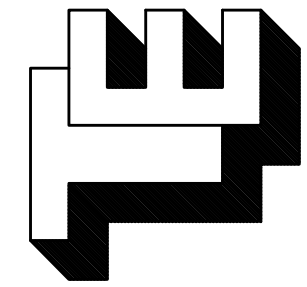
REVISIONS:
05-04-2023
04-20-2023
03-30-2023
03-01-2023
05-28-2020
06-26-2020
06-05-2020

DATE: 05-11-2020

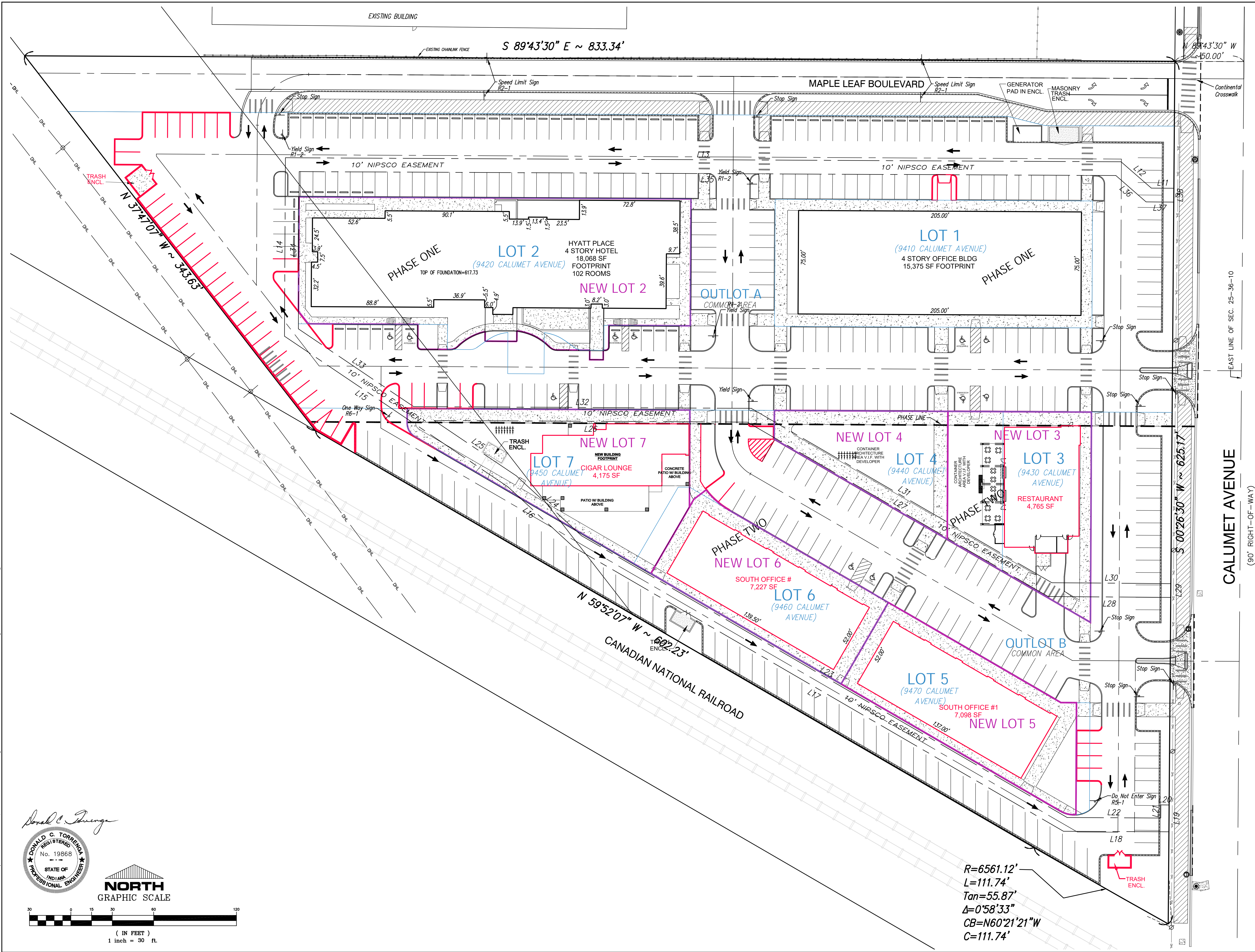
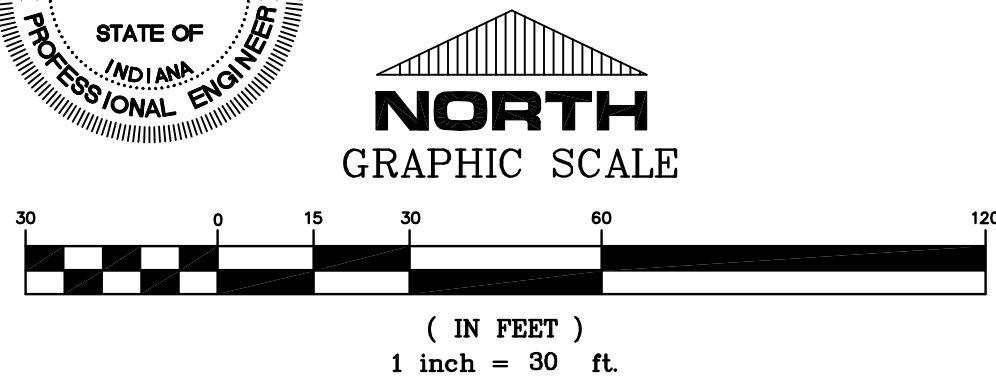
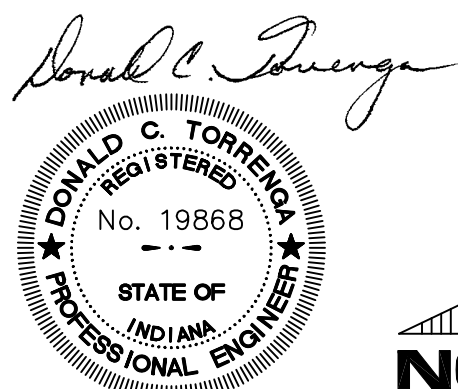
JOB NO: 2019-5052
SCALE: 1" = 30'

SHEET
C-2.0

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenge.com



FILE NO: Z\2019-5052 Joy Lieser - Maple Leaf Crossing Calumet Avenue - Munster.dwg\2023-5001-(2).dwg 6/12/2023 12:25:4 PM CDT



$R=6561.12'$
 $L=111.74'$
 $Tan=55.87'$
 $\Delta=0^{\circ}58'33''$
 $CB=N60^{\circ}21'21''W$
 $C=111.74'$

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: 1" = 30'

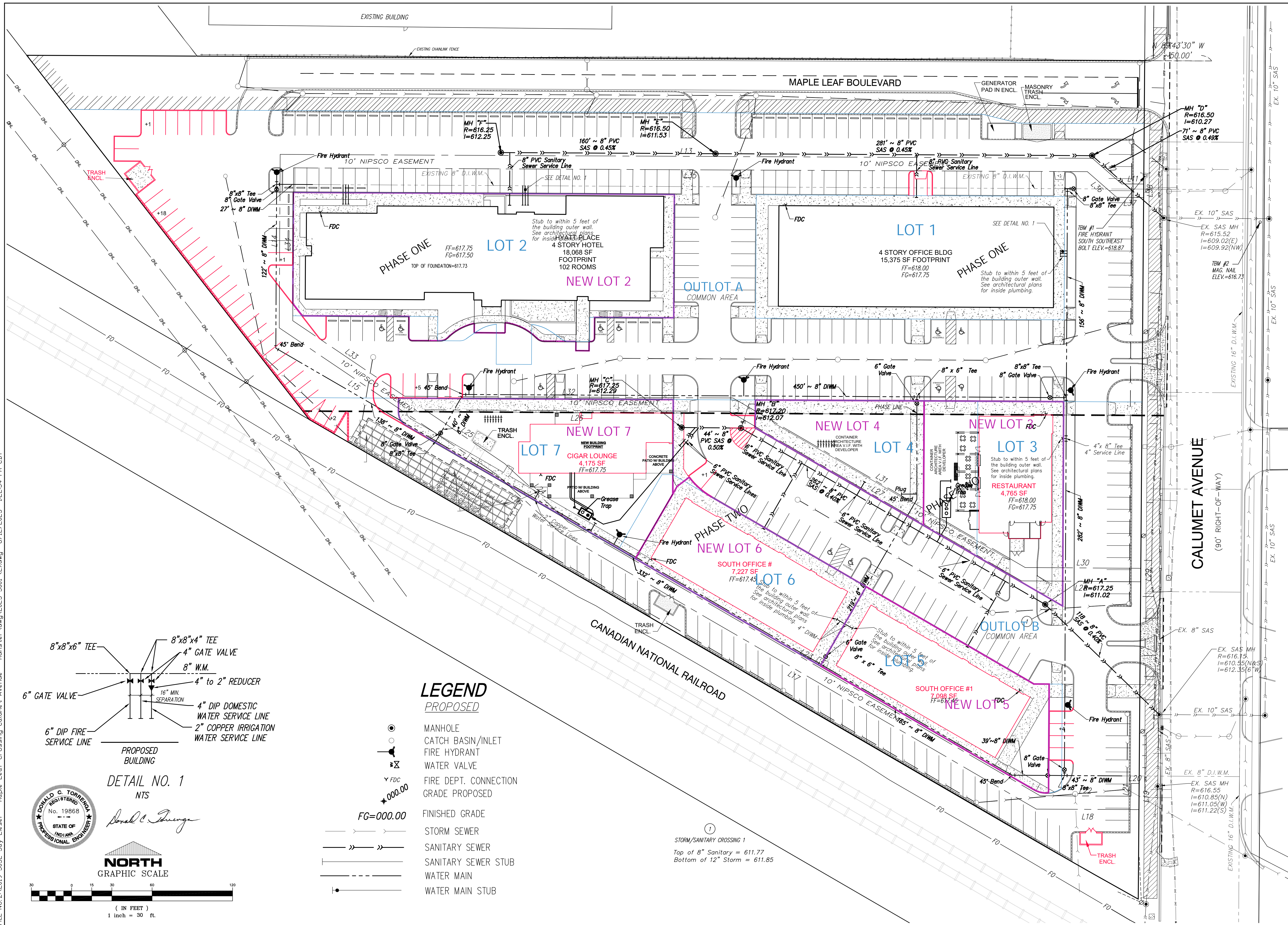
SHEET
C-2.1

REVISIONS:
07-08-2020
06-26-2020
06-05-2020
DATE: 05-11-2020

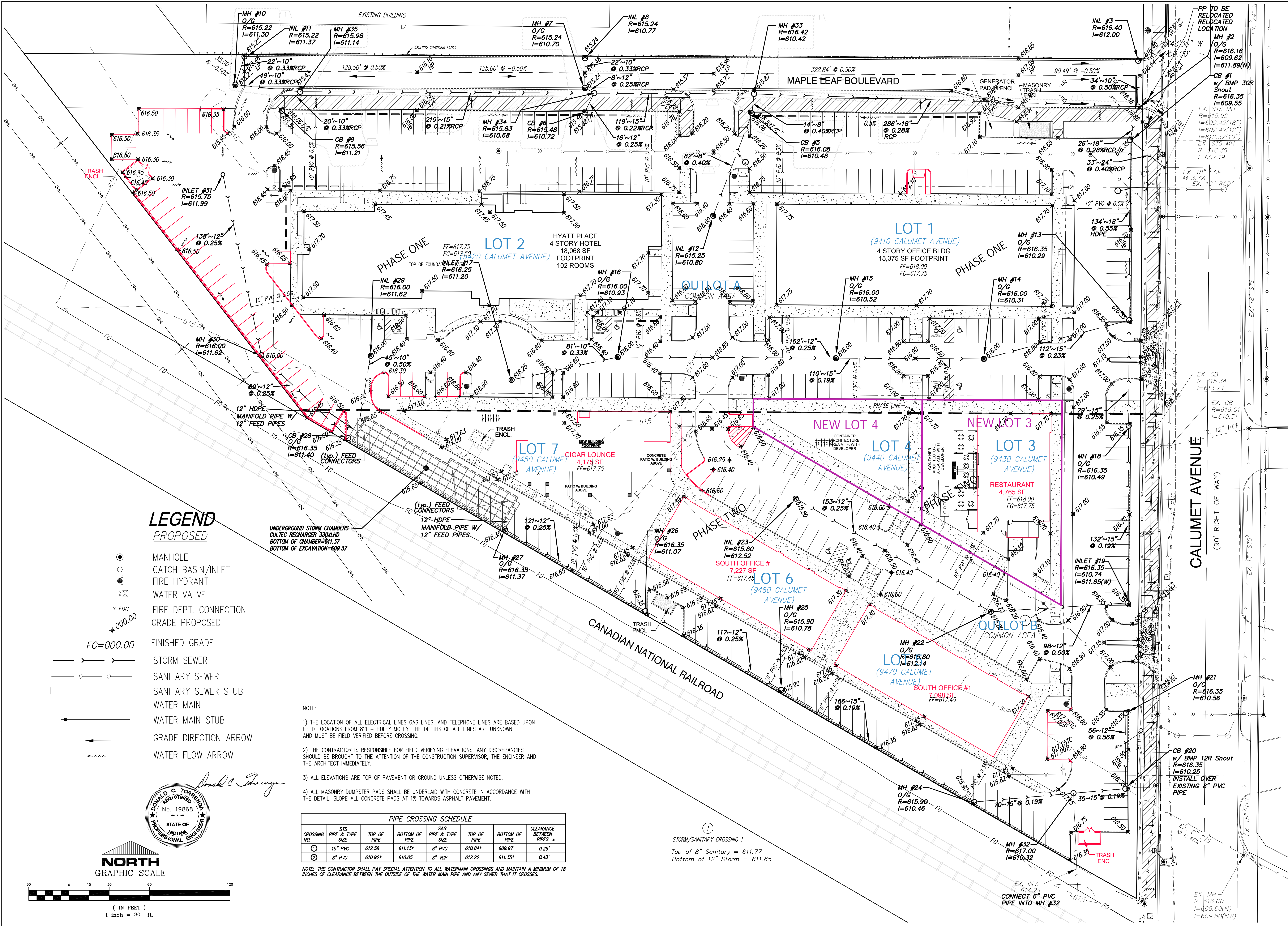
MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SIGNAGE PLAN

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrengea.com

TE



FILE NO: 2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster.dwg 2023-5001-(2).dwg 6/12/2023 12:25:4 PM CDT



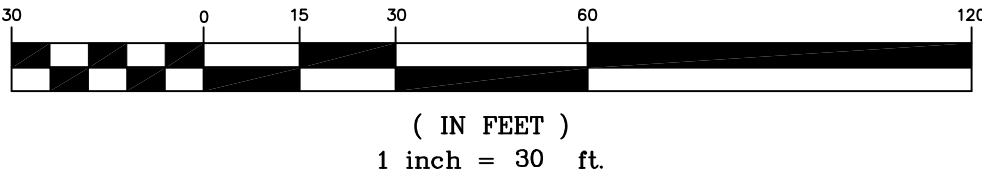
LEGEND
PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- FIRE DEPT. CONNECTION
- GRADE PROPOSED
- FINISHED GRADE
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER STUB
- WATER MAIN
- WATER MAIN STUB
- GRADE DIRECTION ARROW
- WATER FLOW ARROW

Donald C. Torrence



NORTH
GRAPHIC SCALE



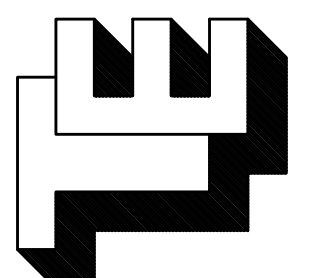
NOTE:

- 1) THE LOCATION OF ALL ELECTRICAL LINES GAS LINES, AND TELEPHONE LINES ARE BASED UPON FIELD LOCATIONS FROM 811 - HOLEY MOLEY. THE DEPTHS OF ALL LINES ARE UNKNOWN AND MUST BE FIELD VERIFIED BEFORE CROSSING.
- 2) THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ELEVATIONS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION SUPERVISOR, THE ENGINEER AND THE ARCHITECT IMMEDIATELY.
- 3) ALL ELEVATIONS ARE TOP OF PAVEMENT OR GROUND UNLESS OTHERWISE NOTED.
- 4) ALL MASONRY DUMPSTER PADS SHALL BE UNDERLAID WITH CONCRETE IN ACCORDANCE WITH THE DETAIL. SLOPE ALL CONCRETE PADS AT 1% TOWARDS ASPHALT PAVEMENT.

PIPE CROSSING SCHEDULE							
CROSSING NO.	PIPE & TYPE SIZE	TOP OF PIPE	BOTTOM OF PIPE	SAS PIPE & TYPE SIZE	TOP OF PIPE	BOTTOM OF PIPE	CLEARANCE BETWEEN PIPES *
1	15" PVC	612.58	611.13*	8" PVC	610.84*	609.97	0.29'
2	8" PVC	610.92*	610.05	8" VCP	612.22	611.35*	0.43'

NOTE: THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL WATERMAIN CROSSINGS AND MAINTAIN A MINIMUM OF 18 INCHES OF CLEARANCE BETWEEN THE OUTSIDE OF THE WATER MAIN PIPE AND ANY SEWER THAT IT CROSSES.

1
STORM/SANITARY CROSSING 1
Top of 8" Sanitary = 611.77
Bottom of 12" Storm = 611.85



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MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
STORM SEWERS & GRADING PLAN

05-19-2023
05-04-2023
03-01-2022
06-17-2021
11-30-2020
06-26-2020
06-05-2020

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
REVISIONS:
DATE: 05-11-2020

SHEET
C-4.0

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT

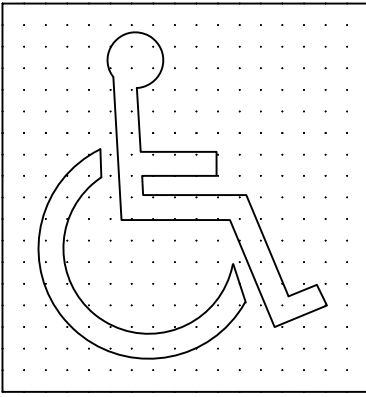


Figure 43a

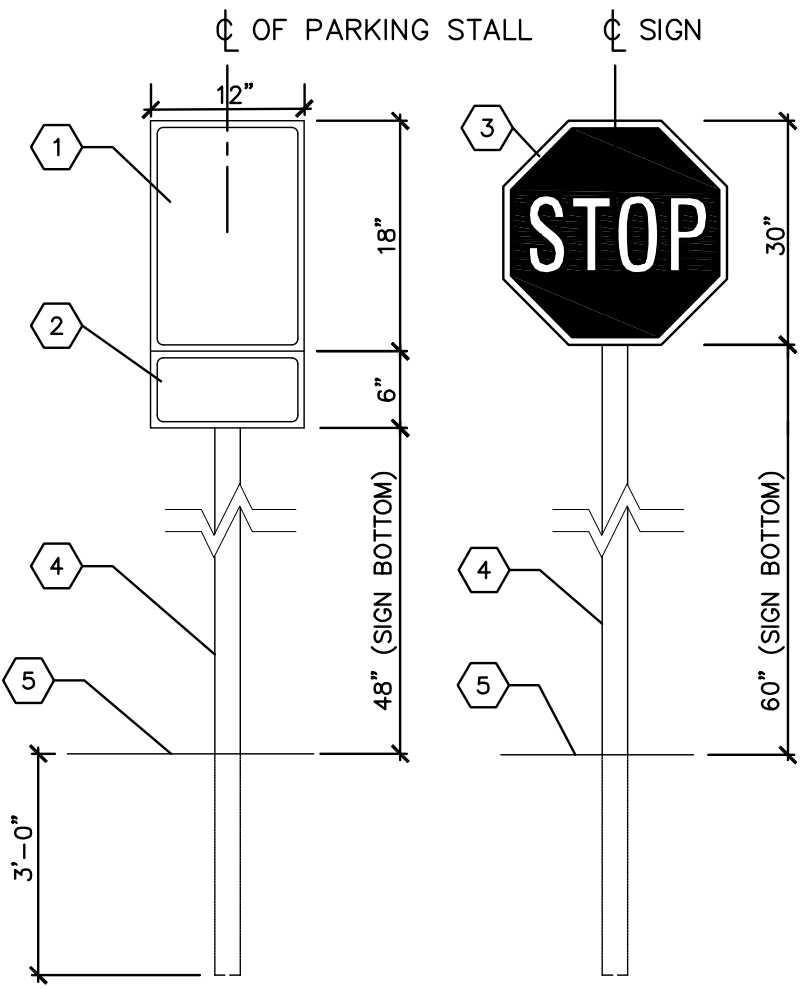
INTERNATIONAL SYMBOL OF ACCESSIBILITY PROPORTIONS

NOT TO SCALE



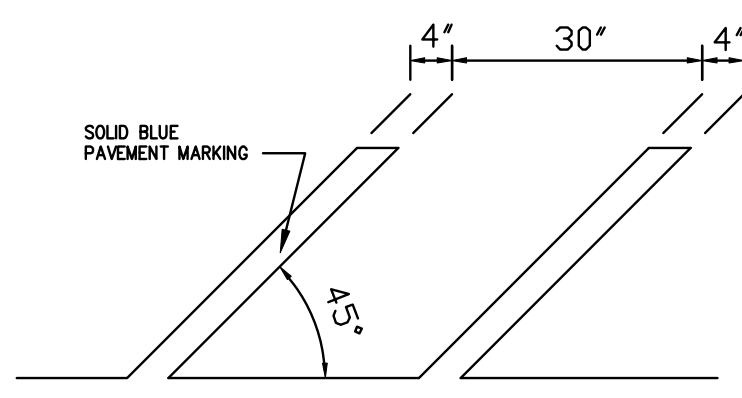
ACCESSIBILITY SIGNAGE

NOT TO SCALE



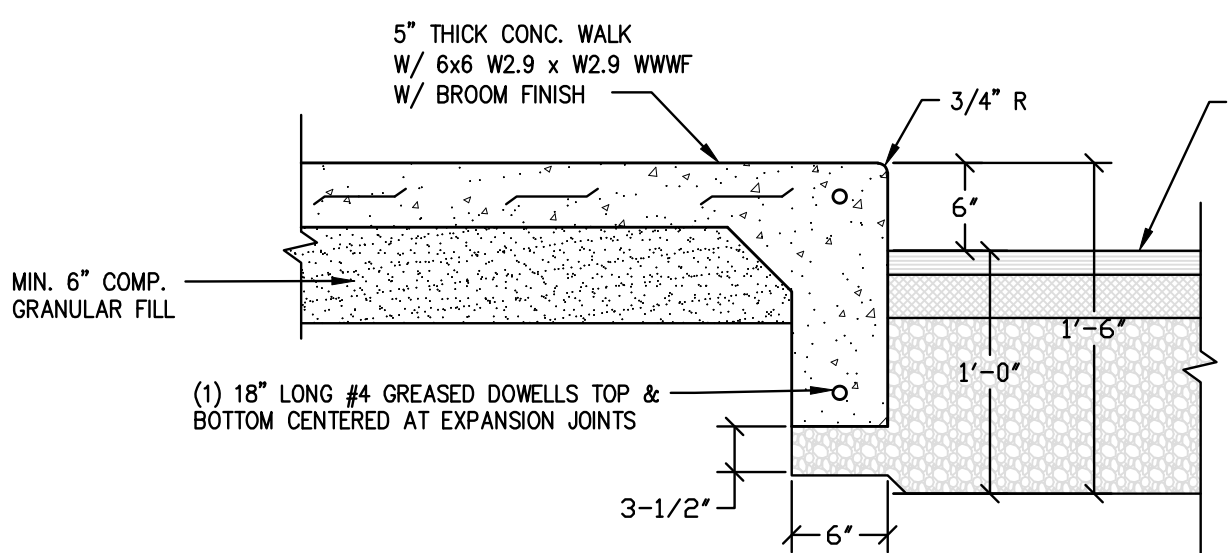
SIGN AND POST (FREE STANDING)

NOT TO SCALE



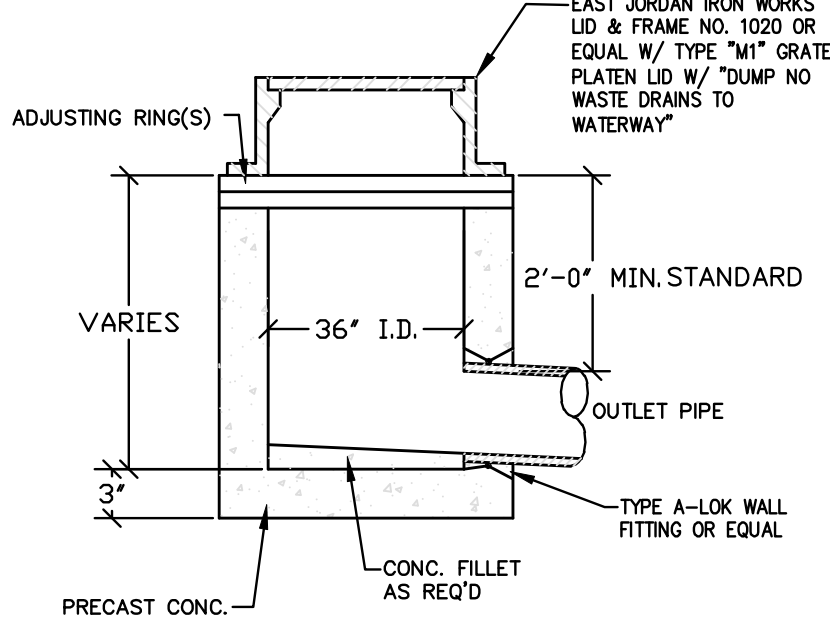
ACCESSIBILITY AND PARKING STRIPING DETAIL

NOT TO SCALE



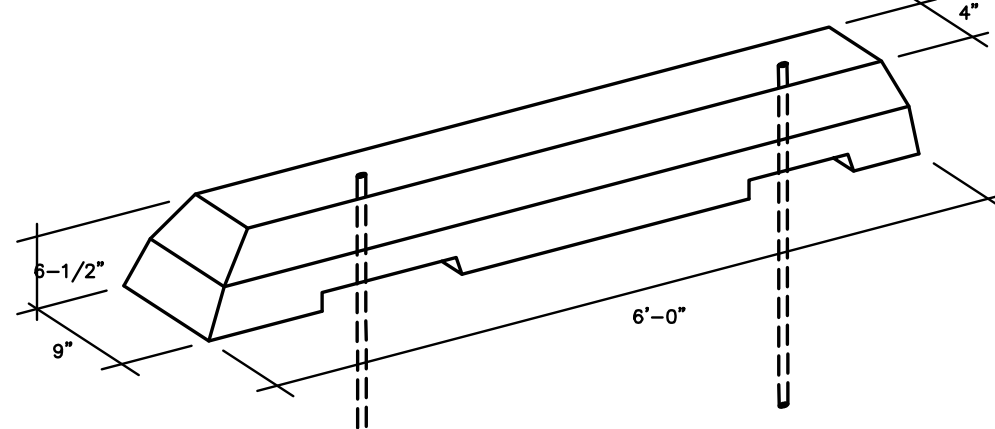
CURB-WALK SECTION

NOT TO SCALE



STANDARD INLET

NOT TO SCALE



PRECAST CONCRETE PARKING CHOCKS/WHEEL STOPS

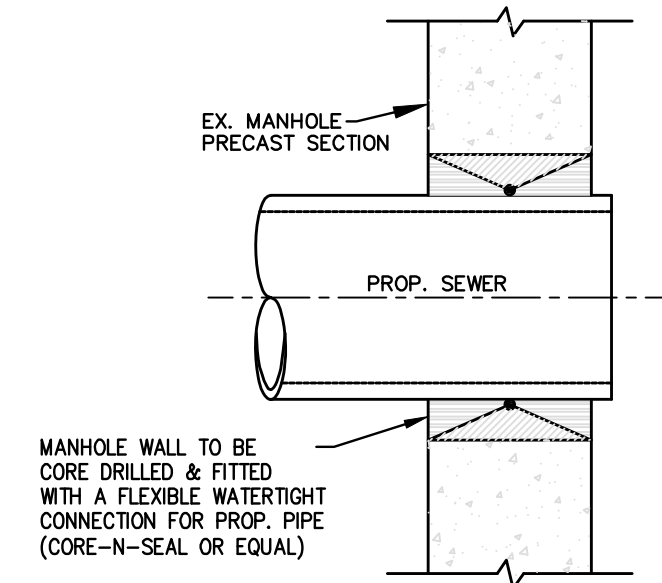
NOT TO SCALE

ALL PARKING STOPS SHALL BE PINNED TO THE ASPHALT WITH #4 REBAR ANCHORED 18" INTO THE GROUND. PARKING STOPS PLACED OVER THE PAVERS SHALL BE UNPINNED.



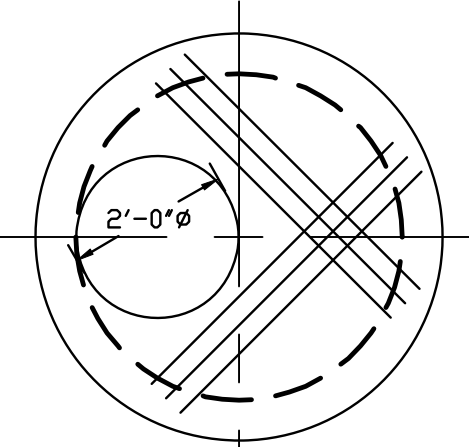
R7 SIGN

- KEYED NOTES**
- STANDARD USDOT R7 SIGN (BOTH SIDES-WHERE APPLICABLE).
 - SUPPLEMENTAL SIGNS, \$-FINE AS APPLICABLE.
 - STANDARD USDOT R1-1 STOP SIGN.
 - 2"x2" STEEL TUBE EXTENDED INTO GROUND, 3'-0".
 - FINISH GRADE.



PIPE CONNECTION DETAIL TO EXISTING MANHOLE

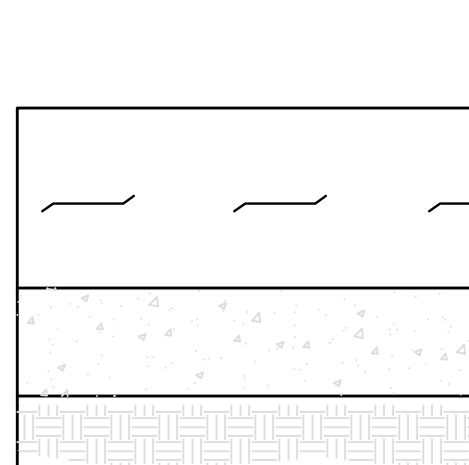
NOT TO SCALE



TYPE "C" (FLAT TOP) MANHOLE

NOT TO SCALE

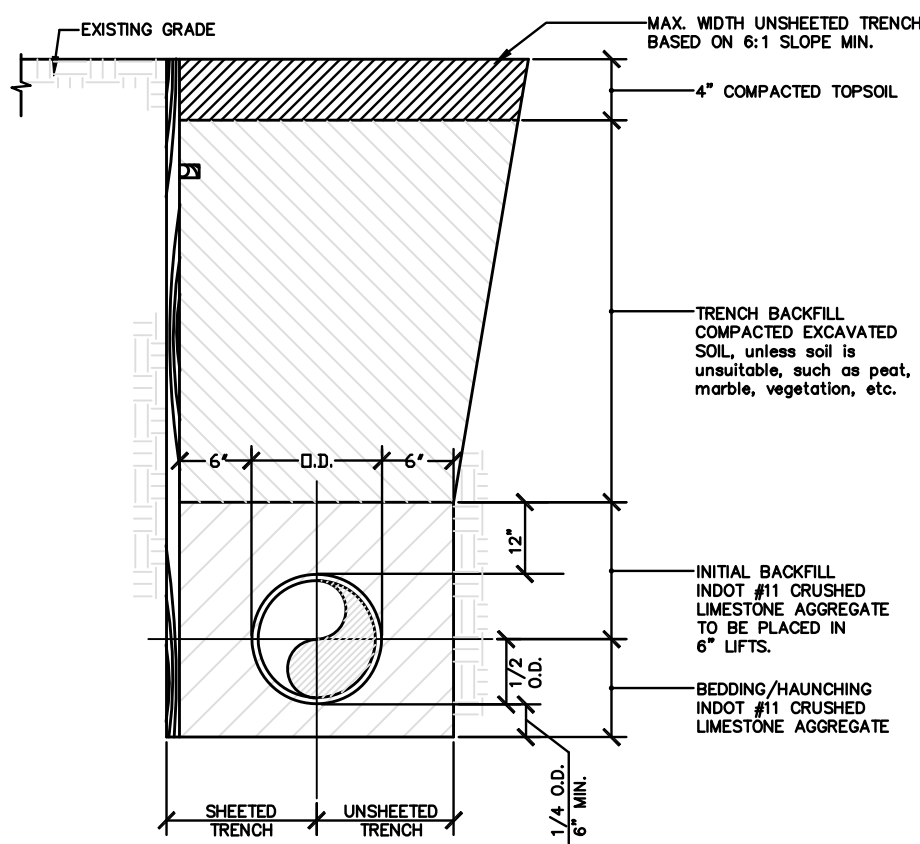
USED WHERE RESTRICTED HEAD ROOM WILL NOT ALLOW FOR TAPERED WALLS



DUMPSTER PAD

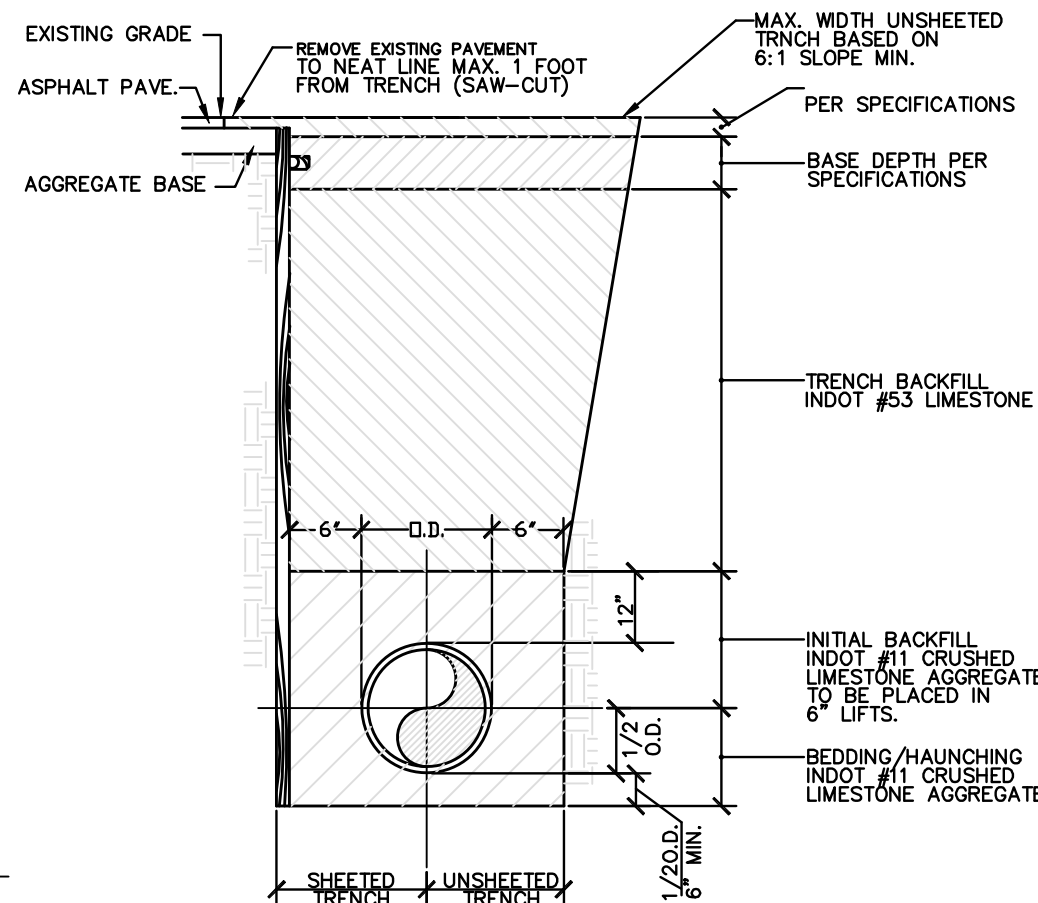
SECTION VIEW

NOT TO SCALE



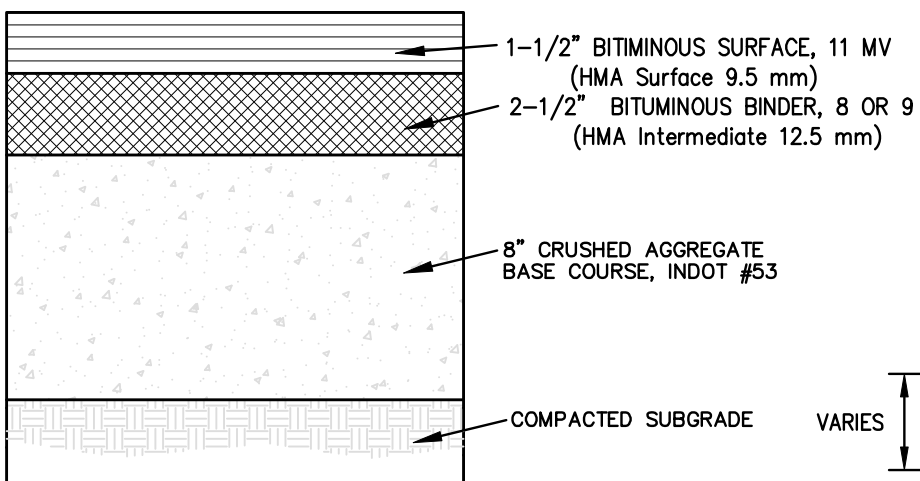
PIPE BEDDING DETAIL FOR TRENCH IN GRASS AREAS

NOT TO SCALE



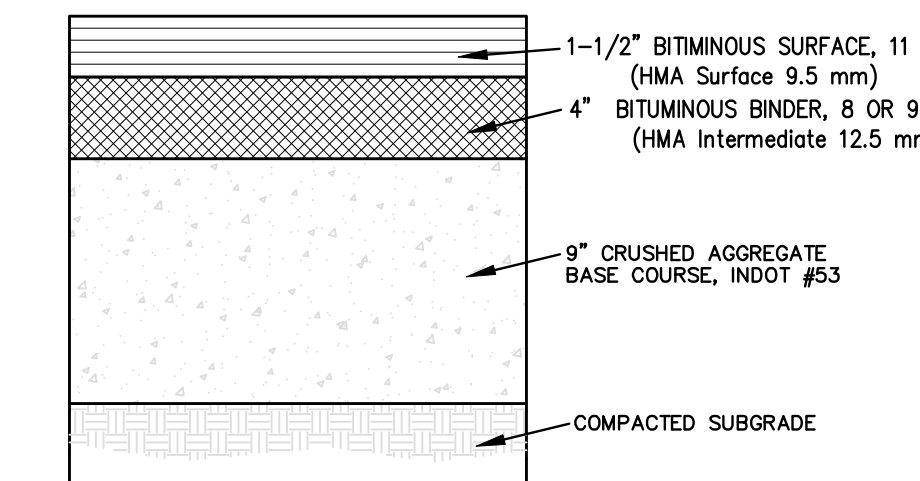
PIPE BEDDING DETAIL FOR TRENCH IN PAVED AREAS

NOT TO SCALE



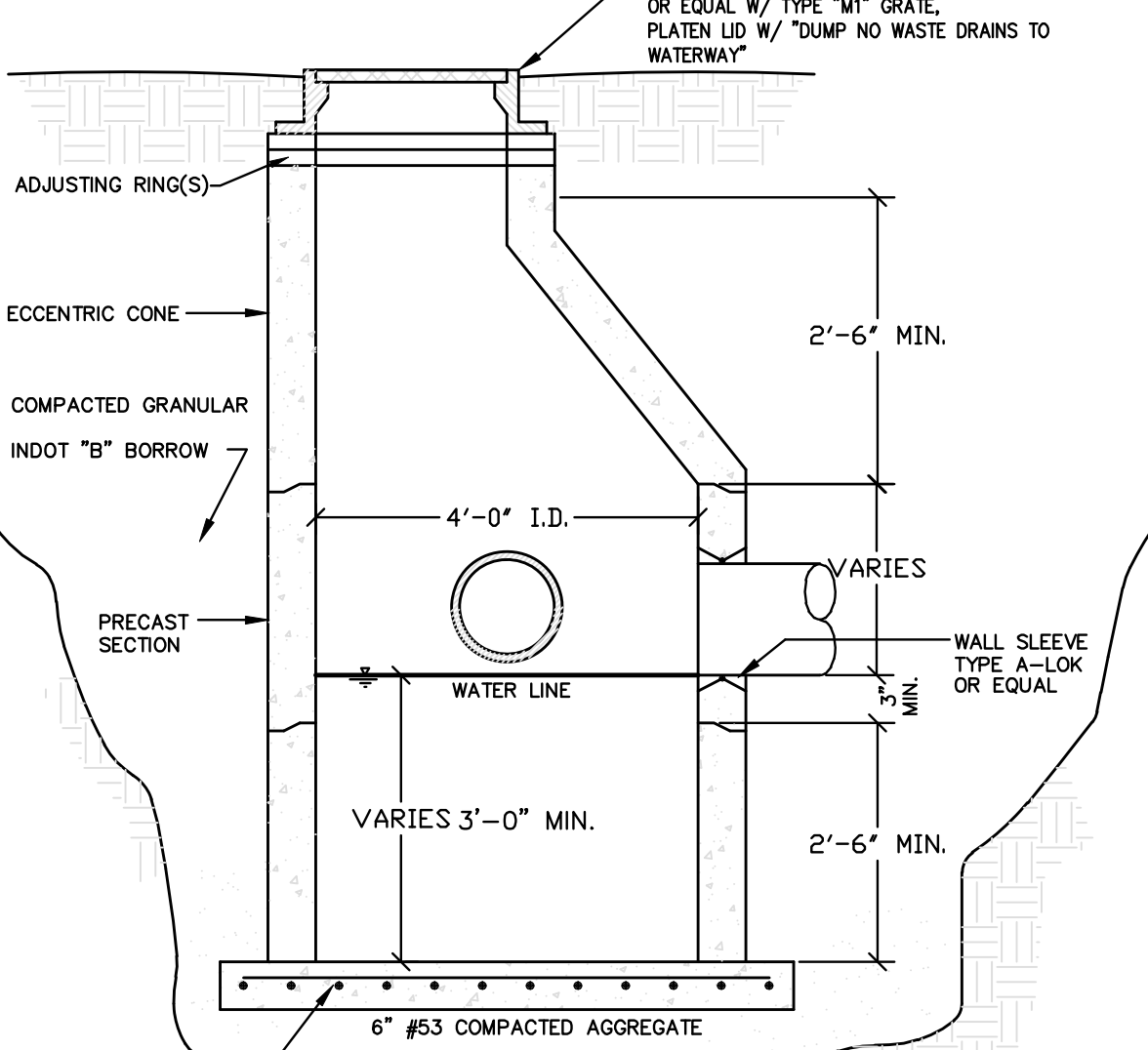
TYPICAL PAVEMENT SECTION

NOT TO SCALE



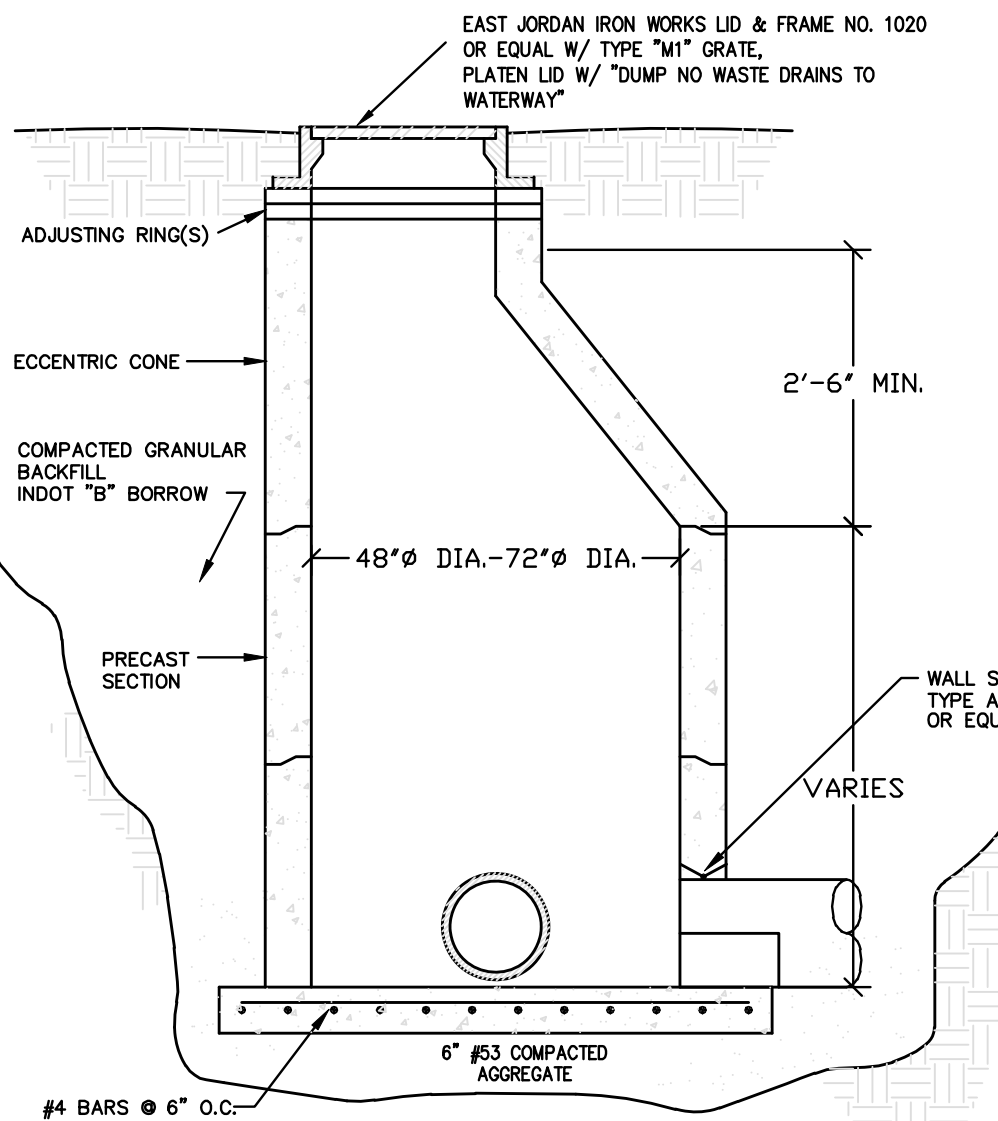
HEAVY DUTY PAVEMENT X-SECTION

NOT TO SCALE



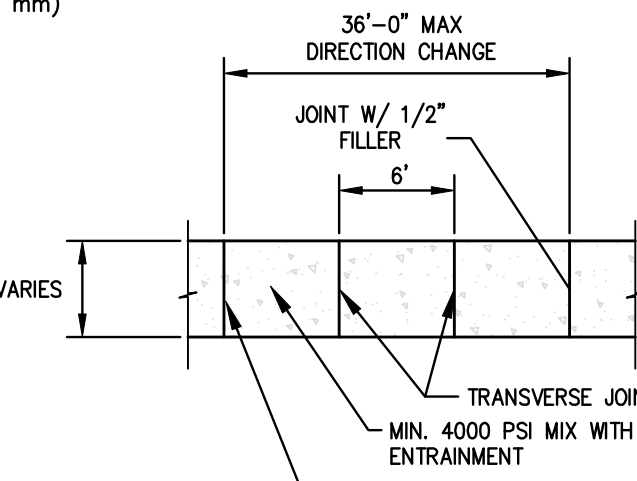
TYPE "A" CATCH BASIN

NOT TO SCALE

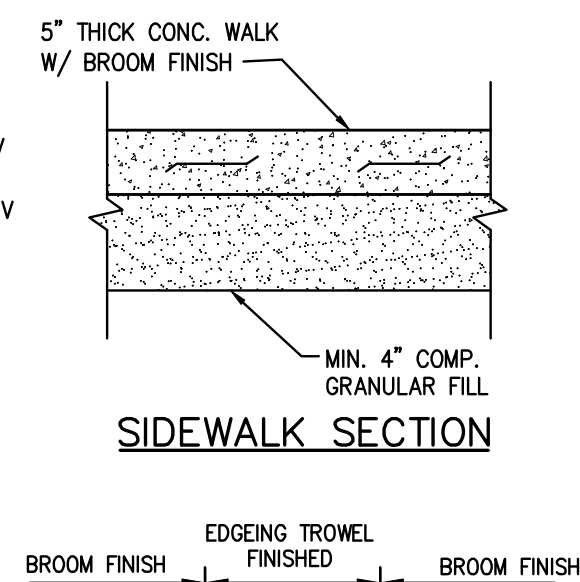


STORM TYPE MANHOLE

NOT TO SCALE



SIDEWALK PLAN



TYPICAL SIDEWALK DETAIL

NOT TO SCALE

GENERAL SPECIFICATIONS FOR STORM SEWERS

- All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, Indiana.
- All storm sewer pipe, branches and fittings shall conform to either of the following: (A) Poly-vinyl chloride SDR 35 or SDR 26 (ASTM D-3034) with push on rubber gasket joints (ASTM C-312) for pipe 15" in diameter or under or; (B) High Density Polyethylene corrugated pipe with an integrally formed smooth interior (ASTM D-1248) for pipe 18" or over or; (C) Reinforced concrete pipe (ASTM C-76) with bell and spigot or tongue and groove push-on mastic joints. Class V reinforced concrete pipe shall be used for lines 15" diameter or under and Class III shall be used for lines 18" and over.
- Gasketed joints shall be used on all storm sewers.
- Storm sewers 18" to 27" with less than 3' cover shall be Class IV pipe.
- All storm sewer manholes shall be standard precast concrete units (ASTM C-478) conforming with the standard details sheet of these plans.
- All improvements installed across paved or future paved areas shall be backfilled with sand or graded stone aggregate to the subgrade line.
- All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.
- The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of final acceptance.
- No storm sewer manhole, catch basin and inlet shall be within eight (8) feet of a water main as measured from the outside edge of the storm sewer manhole, catch basin and inlet to the outside edge of the water main.

CURB NOTE:

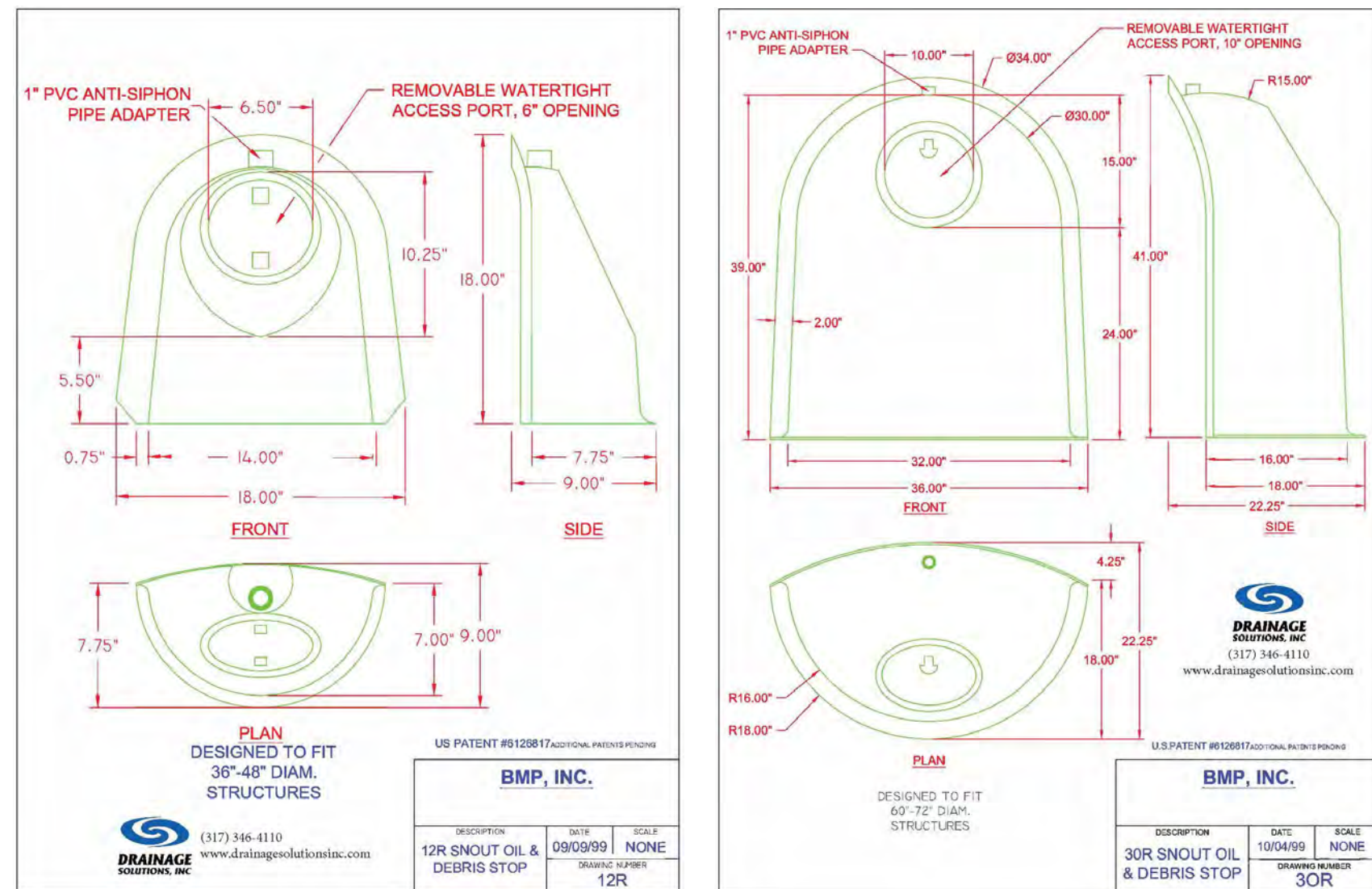
- Concrete Curb and Gutter shall be constructed in accordance with the state specifications except as herein modified.

a) Expansion joints shall be 3/4" in thickness, using premolded joint filler material and two 3/4" diameter smooth round dowel bars 30" long fully greased, placed in pairs at the ends of all radii, at roadway intersections, at the junction of new and existing curb, at all cold joints, at a minimum 40' interval between said radii locations.

b) Said dowel shall be placed so that half their length is in either side of the joint. On the same end of each bar, there shall be placed a plastic, premolded expansion tip, which will allow lateral and expansion movement. The dowel bars shall be placed such that they shall be encased in concrete, a minimum of 3" in any direction.

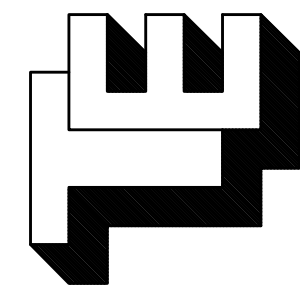
INFRASTRUCTURE NOTE:

- All infrastructure being constructed shall be in accordance with the Town of Munster Proposed Infrastructure Specifications. Any difference Munster's Specification and these engineering drawings shall be brought to the attention of the Engineer immediately for review.



2' CURB CUT

NOT TO SCALE



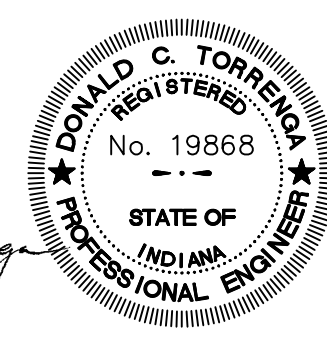
TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
DETAILS & SPECIFICATIONS

CLIENT: First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321
JOB NO: 2019-5052
SCALE: NTS
REVISIONS:
DATE: 05-11-2020

06-26-2020
06-05-2020

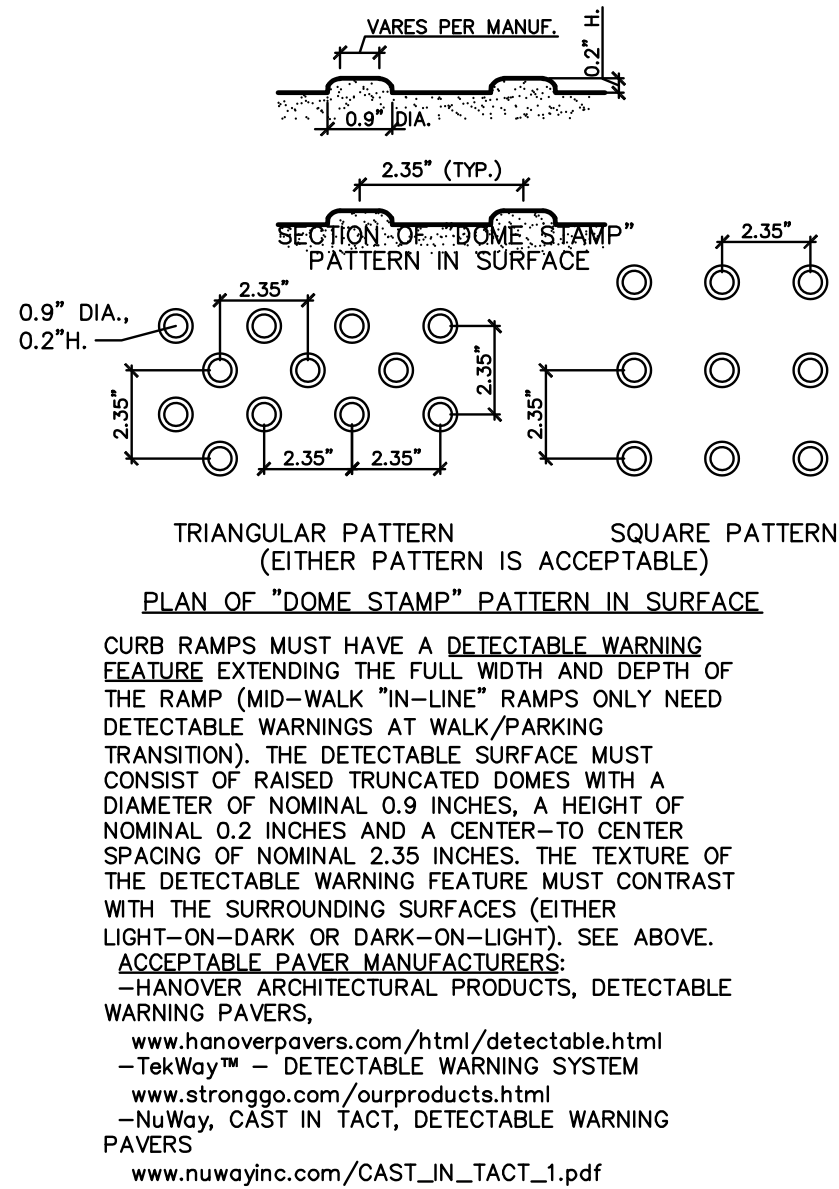
SHEET
C-5.0



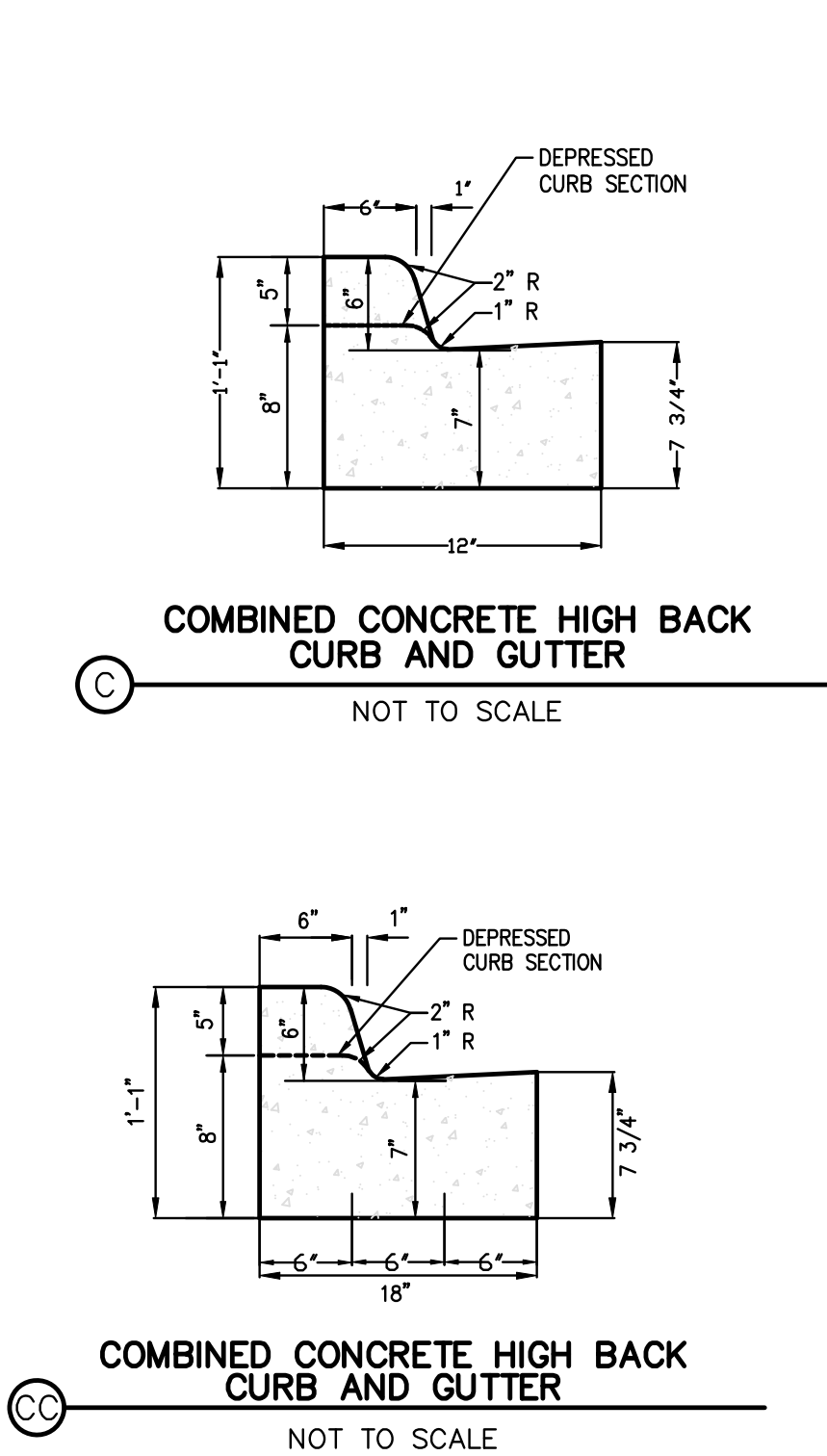
FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT

GENERAL SPECIFICATIONS FOR SANITARY SEWER

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, and the State of Indiana.
2. All sanitary sewer pipe, branches and fittings shall conform to one of the following: (a) Extra strength vitrified clay pipe (ASTM C-700) with push on rubber gasket joints (ASTM C-425). (b) Poly-vinyl chloride (PVC), SDR 26 (ASTM D-3034), with push-on rubber gasket joints (ASTM C-3212). Six inch service pipes shall be in accordance with the infrastructure improvement codes of the Town of Munster.
3. All sanitary sewer manholes shall be standard 48" diameter precast concrete units (ASTM C-478) conforming with the Standard Detail sheet of these plans.
4. The sanitary manhole base shall be precast with a minimum of 2 foot section, trough, etc..
5. Sanitary manholes shall be provided with a watertight gasketed cover
6. All improvements installed across paved or future paved areas shall be backfilled with sand or graded stone aggregate to the subgrade.
7. The competed sanitary sewer system shall be air tested for infiltration and shall have a maximum infiltration of 100 GPD/inch/diameter/mile of sewer pipe. The completed sanitary sewer system shall be air pressure tested for infiltration/exfiltration with 4 lbs. of pressure for 4 minutes. The testing shall conform to the procedure described in ASTM C-838-86 for clay pipe, ASTM C 924 for concrete pipe, ASTM F-1417 for poly-vinyl chloride pipe, and for other materials test procedures approved by the regulatory agency. The Contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.
8. Deflection tests shall be performed on all flexible pipe materials placed. The contractor shall be responsible for supplying testing materials and appurtenances. The tests shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5 %. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95 % of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.
9. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The contractor shall provide special backfill material across driveways and sidewalks in the event that a sewer or main is installed underneath.
11. All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.
12. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.
13. Air pressure test shall be performed on all completed Sanitary Manholes in accordance with ASTM C 1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test. The tests shall be conducted prior to backfill to demonstrate the integrity of the installed materials. The manhole shall pass if the test time meets or exceeds the required minimum test times as specified in ASTM C 1244-93 for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury. If the manhole fails the initial test, necessary repairs shall be made, and the test shall be repeated. The contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the manholes (or portion thereof) are ready for testing.
14. No sanitary sewer manhole shall be within eight (8) feet of a water main as measured from the outside edge of the sanitary sewer manhole to the outside edge of the water main.



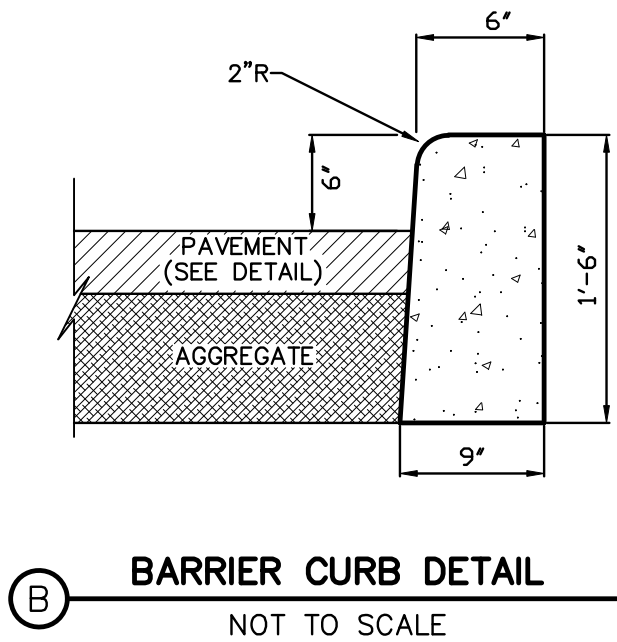
YELLOW COLOR ONLY
DETECTABLE WARNING SURFACE
NOT TO SCALE



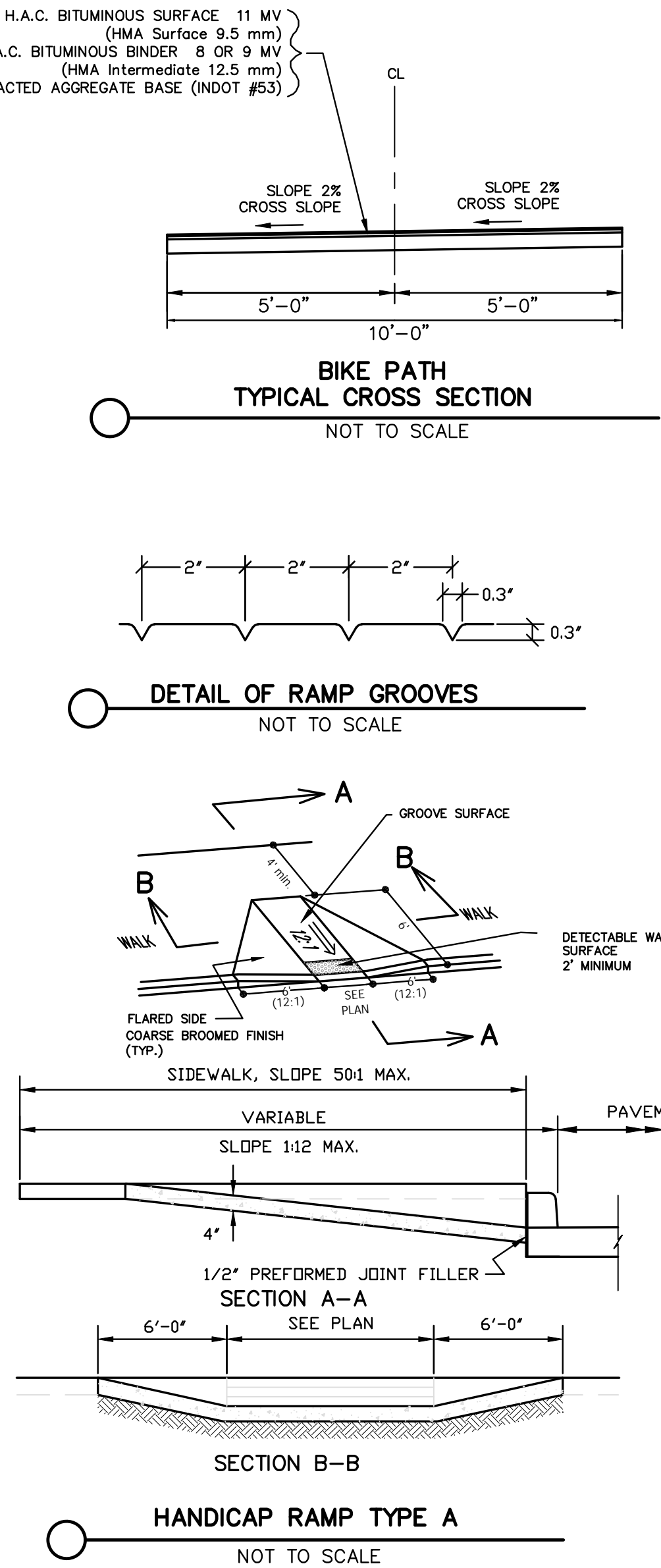
COMBINED CONCRETE HIGH BACK CURB AND GUTTER
NOT TO SCALE

GENERAL SPECIFICATIONS FOR WATER MAINS

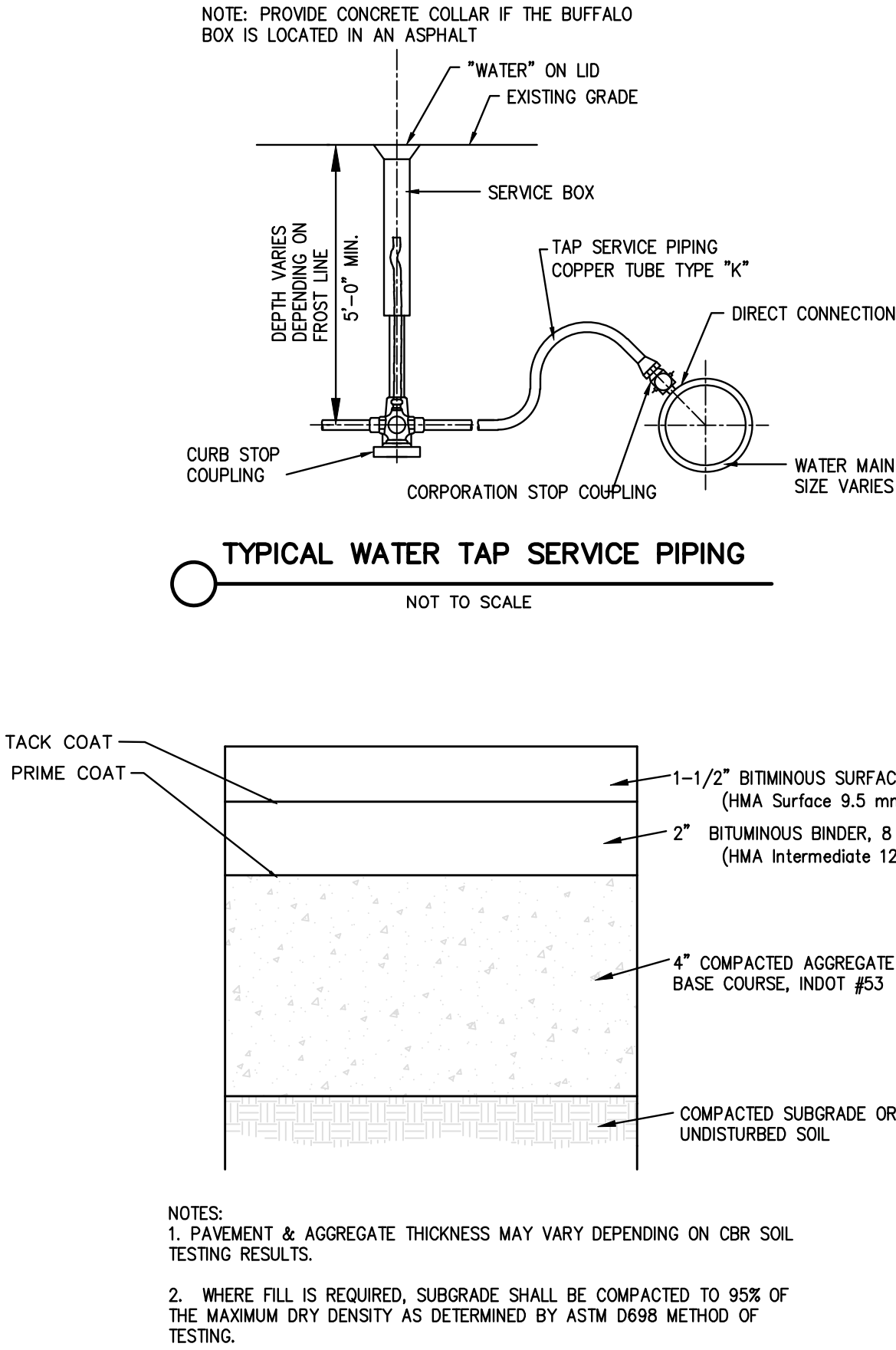
1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, and the State of Indiana.
2. All water main pipe shall be polywrapped Ductile Iron Pipe (AWWA C151 C-52) with bell and spigot push-on rubber gasket joints (AWWA C111). All water main pipe shall be installed with a minimum cover of 5.0 feet from top of curb to top of pipe. All fire hydrants, tees, bends and fittings shall be suitably harnessed or thrust blocked with concrete.
3. All improvements installed across paved or future paved areas shall be backfilled with sand or graded stone aggregate to the subgrade.
4. All water valves 12" or larger shall be placed in vaults.
5. On 12" water main bends, restrained joints shall be used, megalug or equal. At 90° bends, the water main shall be additionally restrained at 1 joint in each direction.
6. All fire hydrants shall be manufactured by Mueller Company, Super Centurion 250 model with 5/4" valve openings with a 5" Storz pumper connection and shall be backfilled with 3/4" stone for drainage purposes.
7. All water mains shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed sewer. The distance shall be measured from outside of pipe to outside of pipe. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.
8. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The Contractor shall provide special backfill material across driveways and sidewalks in the event that a water main is installed underneath.
9. The Buffalo Boxes shall be arch pattern box style and shall be located one foot behind sidewalks, if possible. No Buffalo Boxes shall be located in concrete areas, and they shall have AWWA approved shut offs and corporation valves.
10. All water main pipe shall be disinfected by the use of liquid chlorine. The Contractor shall notify the town of Munster when the water main system (or portion thereof) is ready for testing.
11. The Contractor is responsible for water quality tests done by a State Certified Laboratory. The Town of Munster Water Department staff shall be notified and be present while tests are being performed. The approved water system shall be turned on by the Water Department Staff, only after the water quality reports have been approved.
12. The newly installed water main (or portions thereof) shall be subjected to a pressure and leakage test, using hydrostatic testing. Test pressure shall not be less than 1.5 times the working pressure or exceed pipe design pressure. Pressure shall not vary by more than ± 5 PSI for a minimum of a 2 hour duration test. The exposed pipe and joints shall be examined carefully during the test and any damaged or defective pipe or joints shall be replaced, and the test shall be repeated. The allowable leakage shall not exceed 11.65 gpd/mi/in of nominal pipe diameter at a pressure of 150 PSI. All visible leaks are to be repaired regardless of the amount of leakage. The contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the water main (or portion thereof) is ready for testing.
13. The contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.
14. No water main shall be within eight (8) feet of a sanitary sewer manhole, a storm sewer manhole, or a drainage grate support structure as measured from the outside edge of the water main to the outside edge of the sanitary sewer manhole, storm sewer manhole, or drainage grate support structure.



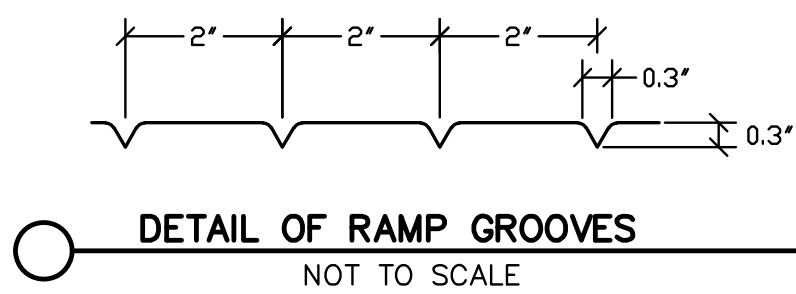
BARRIER CURB DETAIL
NOT TO SCALE



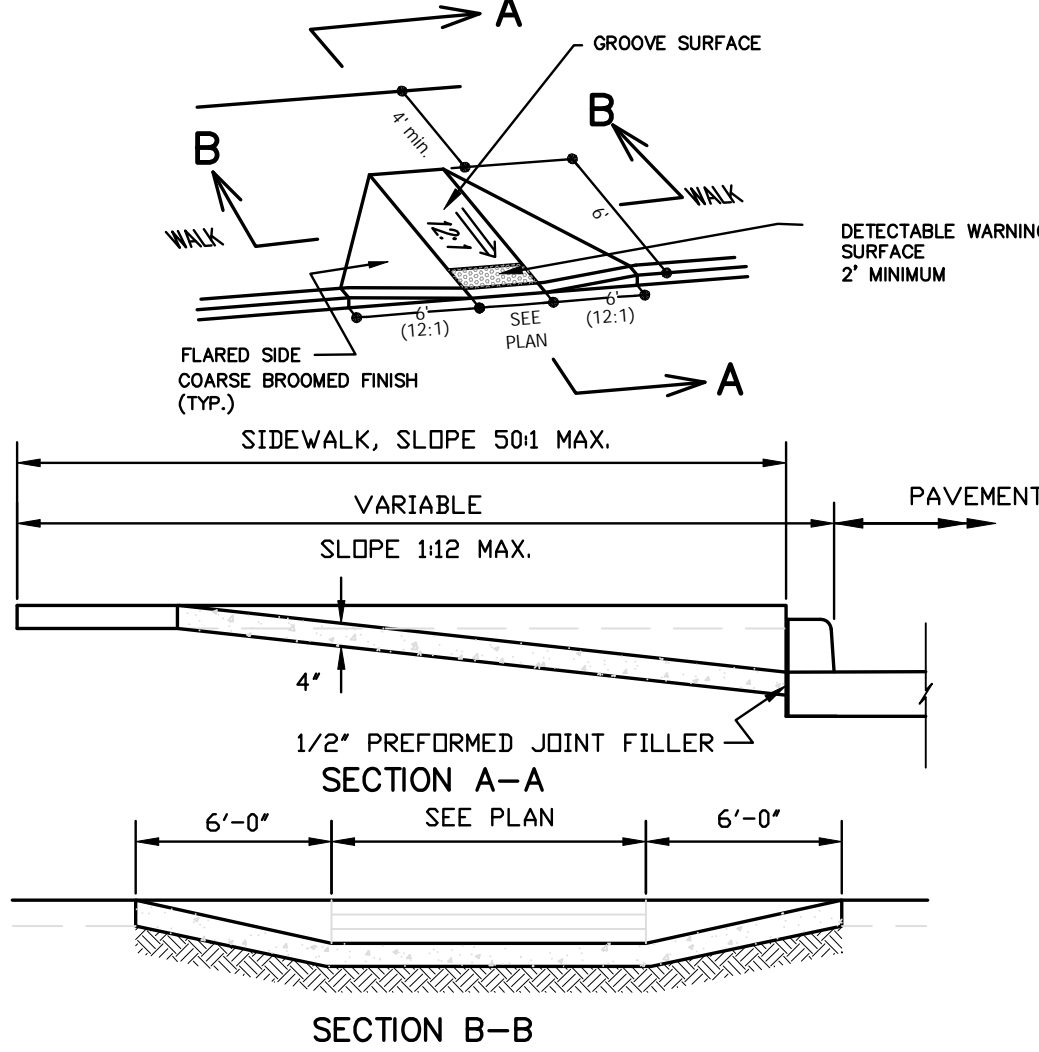
HANDICAP RAMP TYPE A
NOT TO SCALE



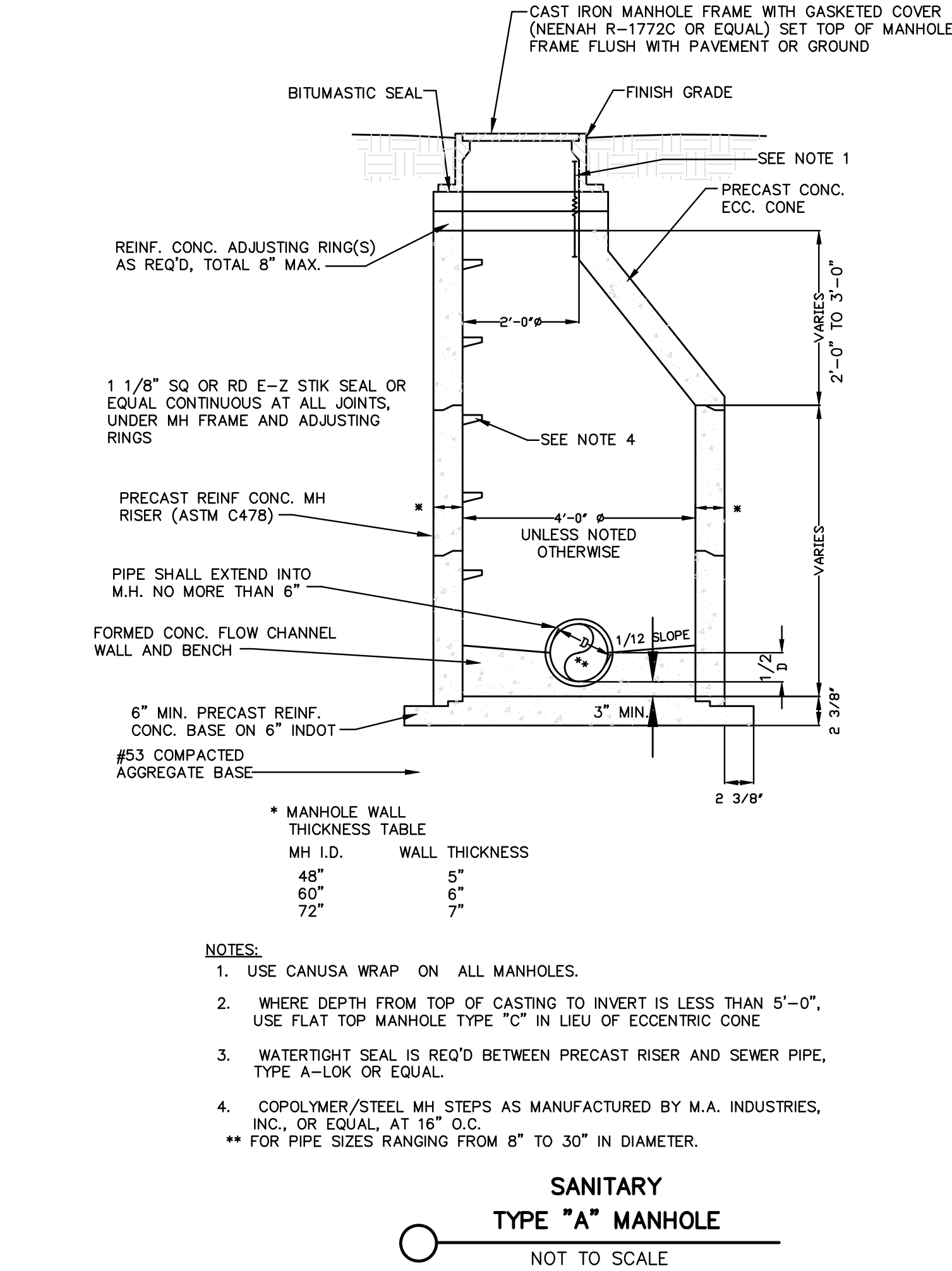
BIKE PATH
TYPICAL CROSS SECTION
NOT TO SCALE



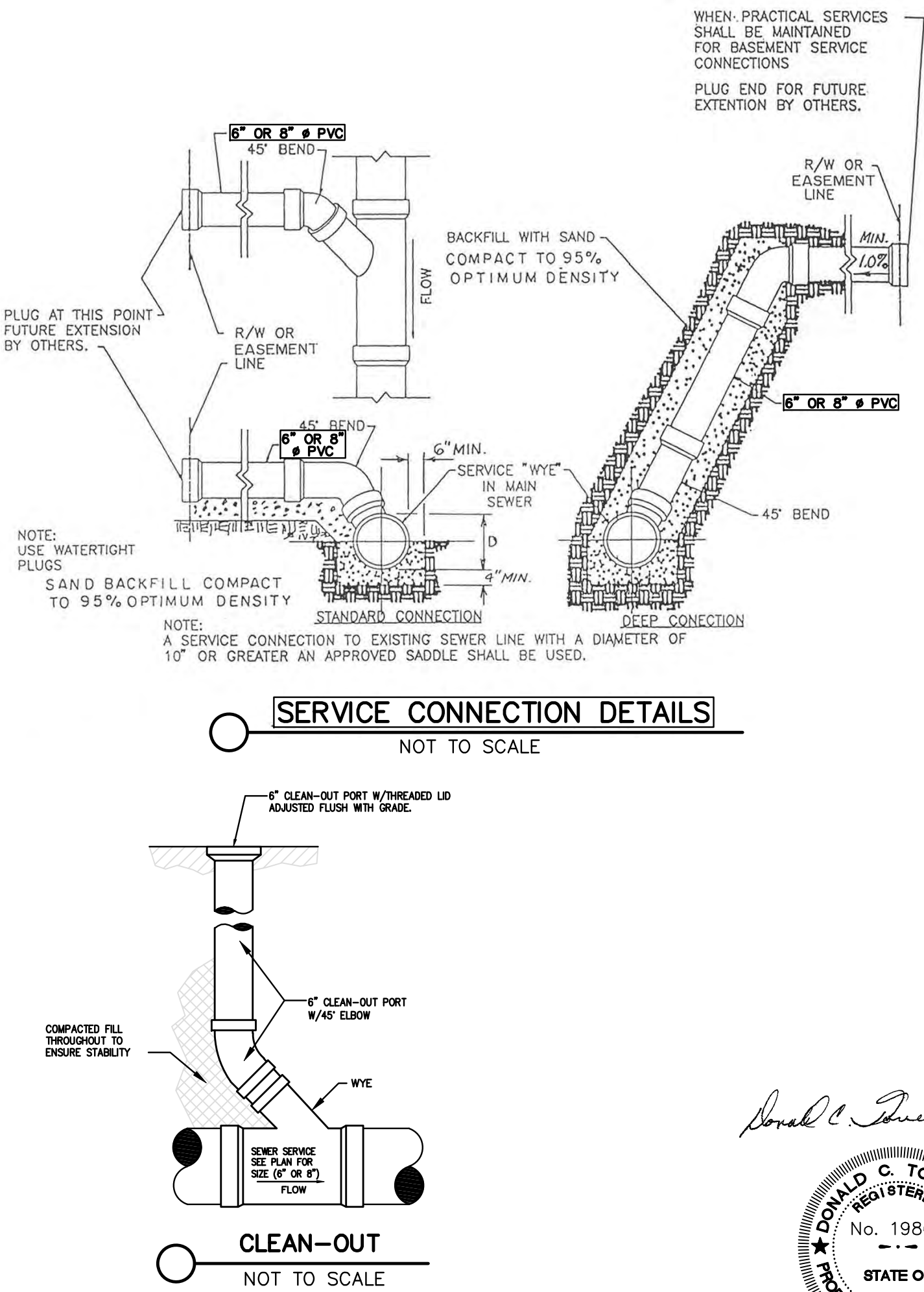
DETAIL OF RAMP GROOVES
NOT TO SCALE



SECTION B-B



SANITARY
TYPE "A" MANHOLE
NOT TO SCALE



CLEAN-OUT
NOT TO SCALE

TORRENGA ENGINEERING, INC.

CONSULTING ENGINEERS & LAND SURVEYORS

907 RIDGE ROAD, MUNSTER, INDIANA 46321

website: www.torrengea.com

Tel. No.: (219) 836-8918

MAPLE LEAF CROSSING

A PLANNED UNIT DEVELOPMENT TO THE

TOWN OF MUNSTER, LAKE CO., INDIANA

DETAILS & SPECIFICATIONS

CLIENT: First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052

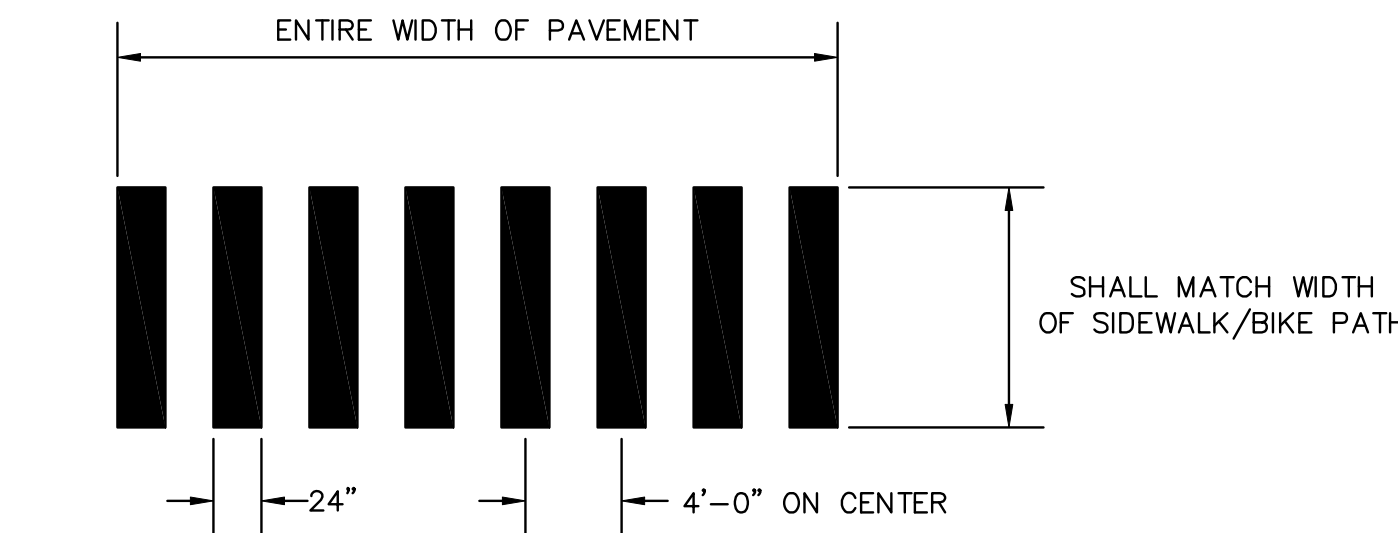
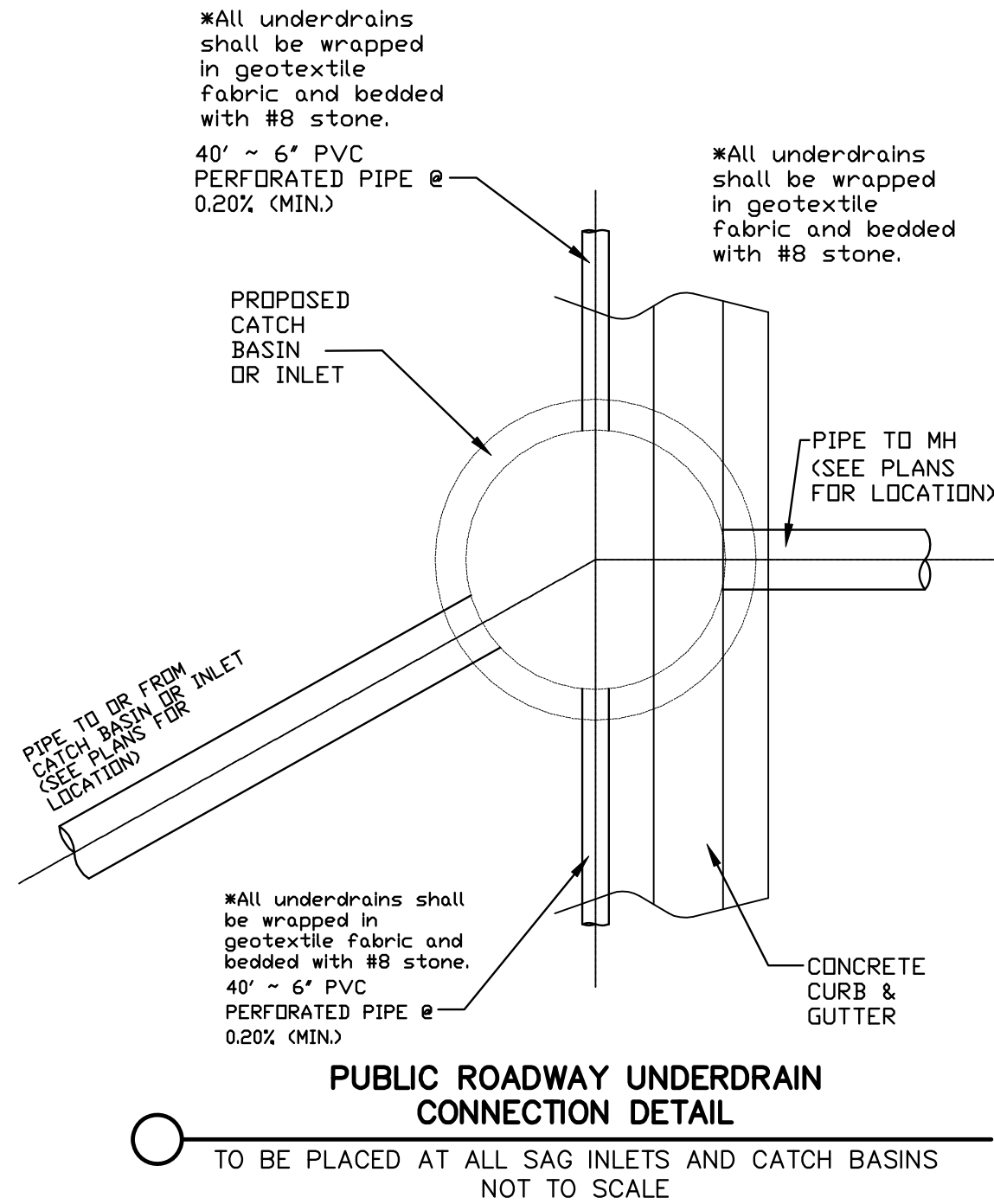
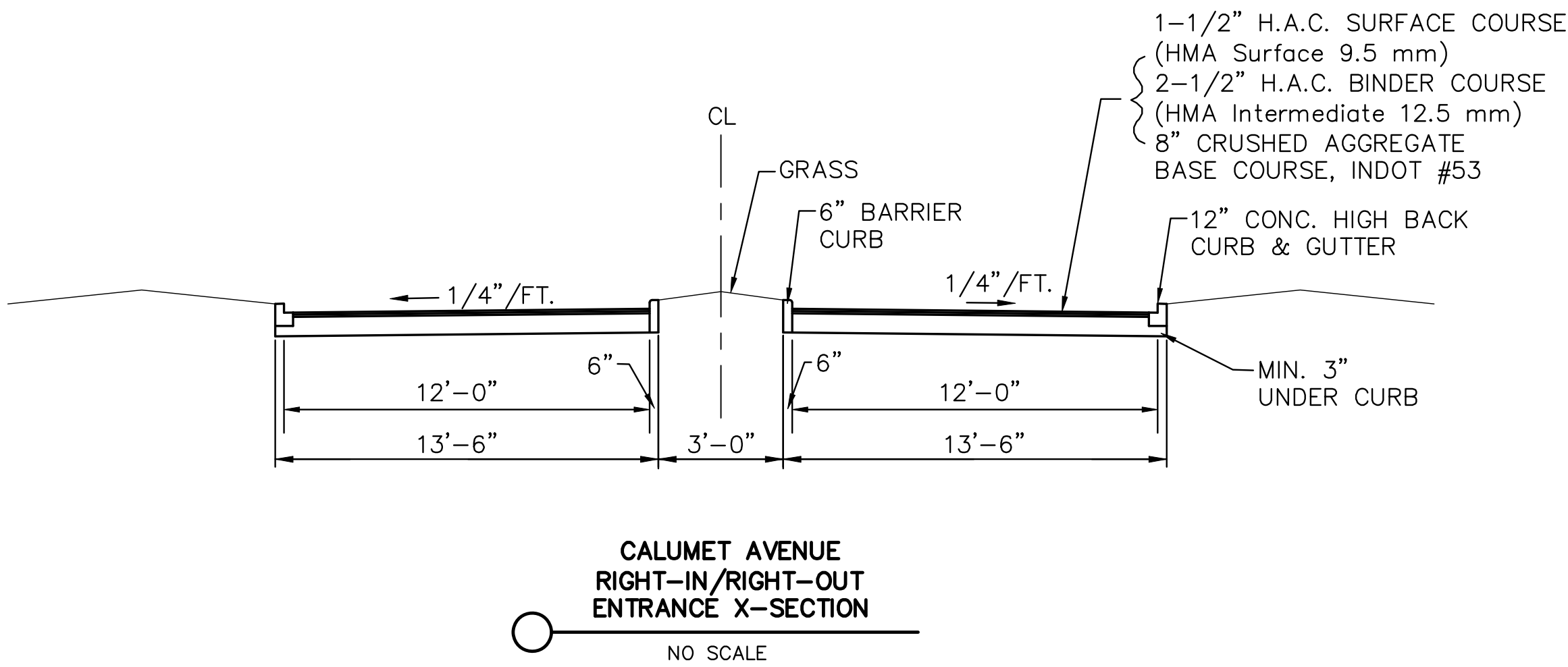
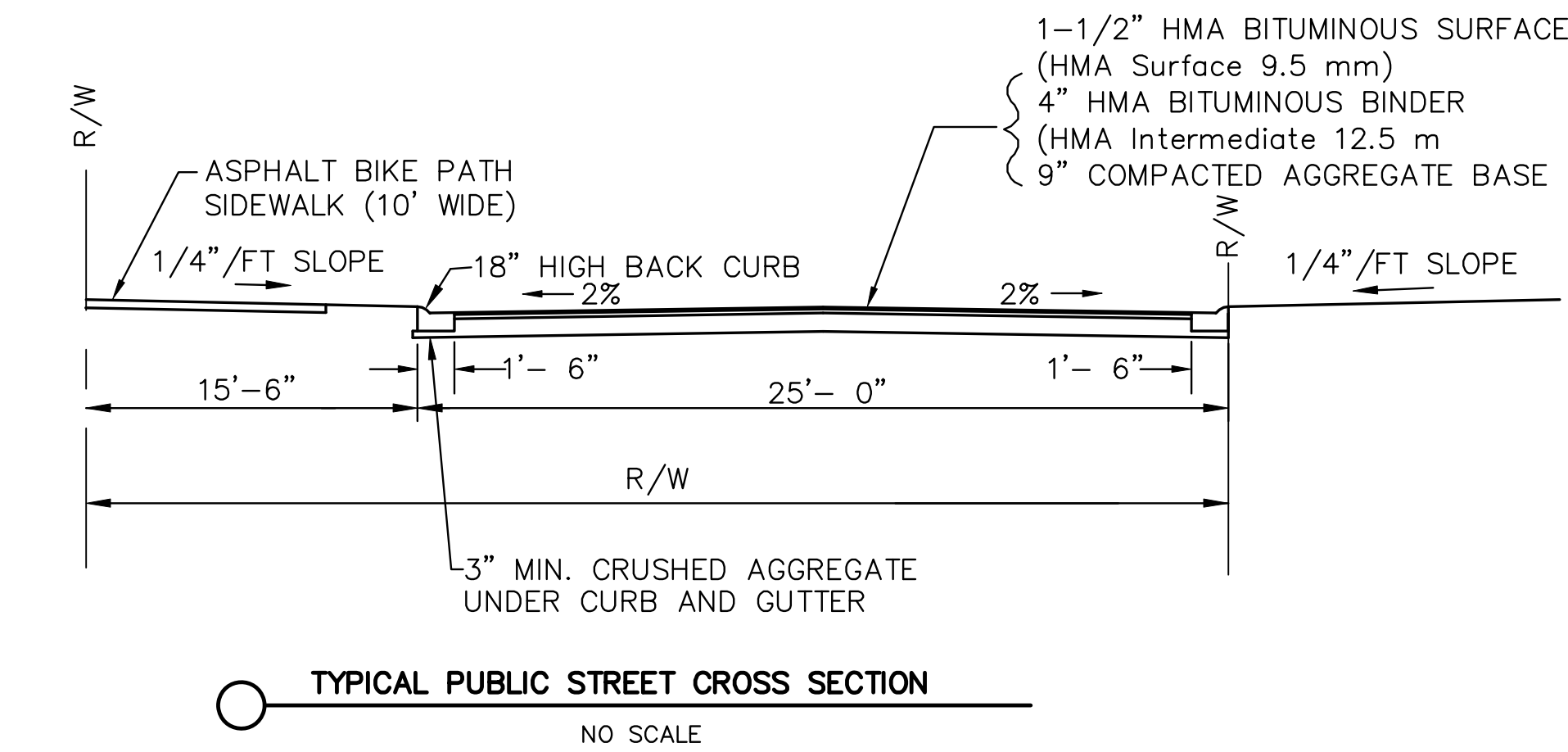
SCALE: NTS

REVISIONS:
06-26-2020
06-05-2020

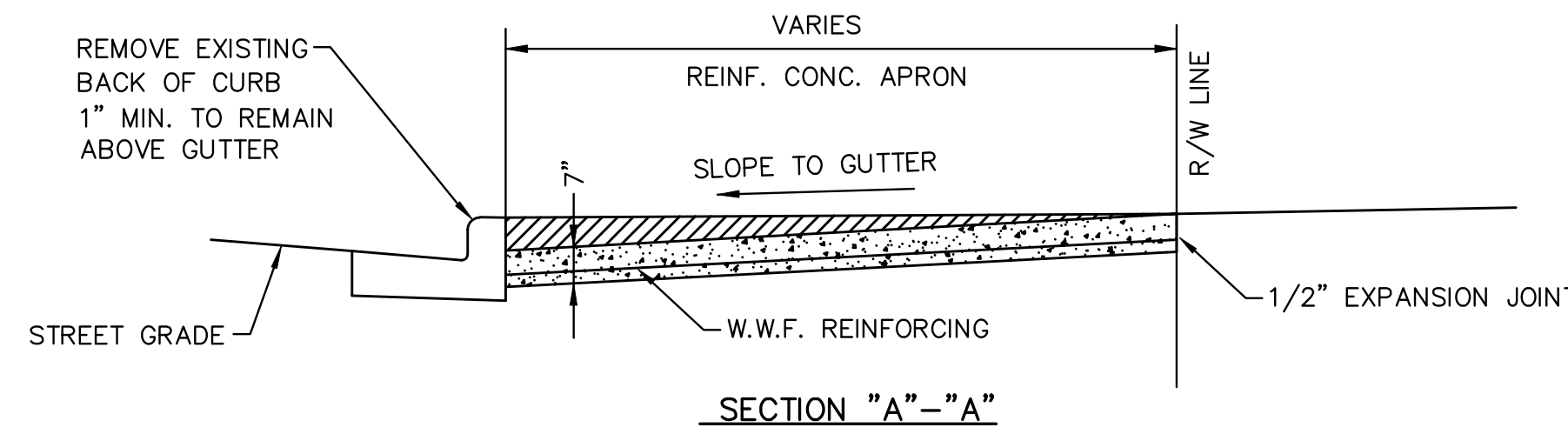
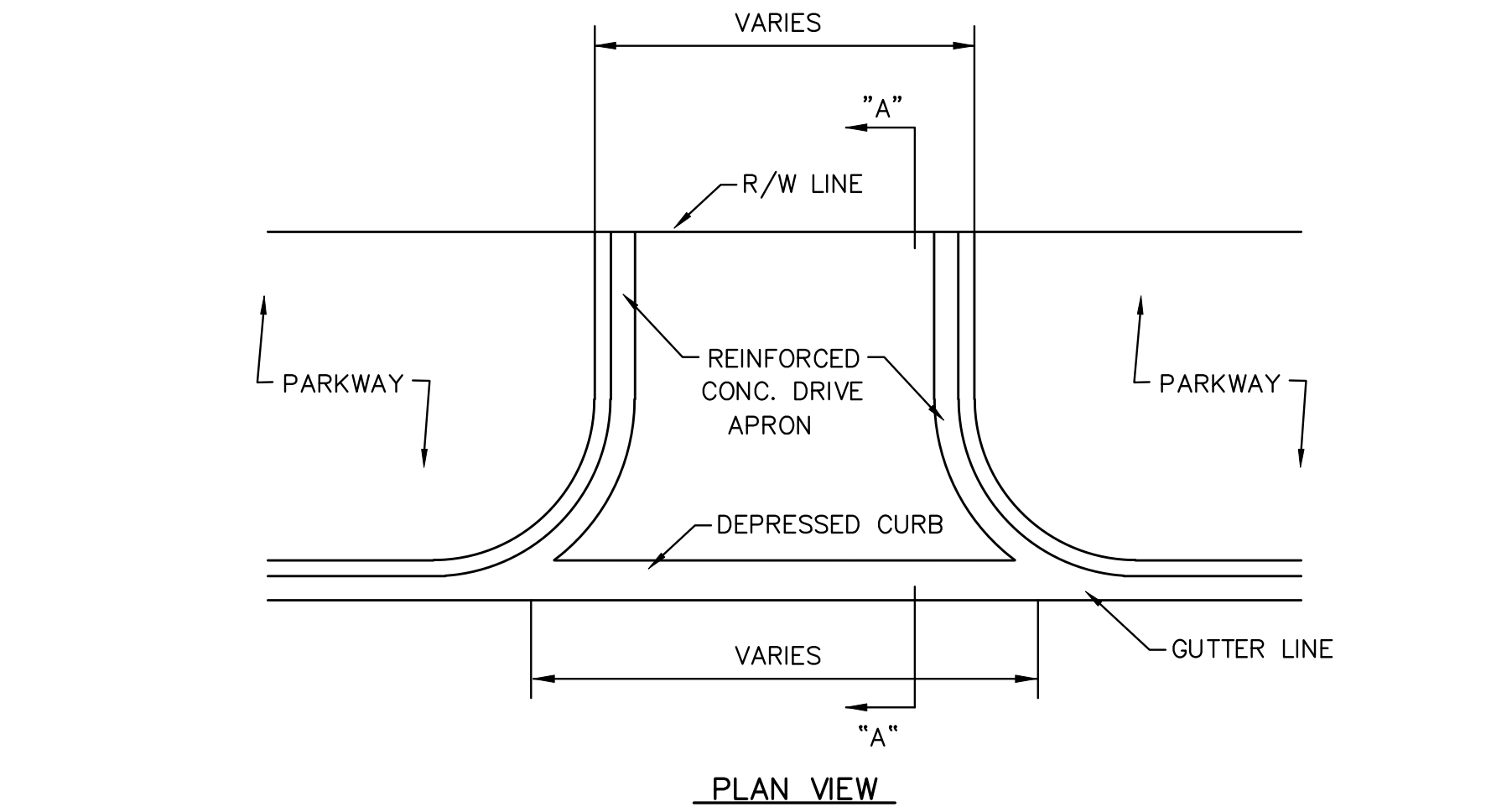
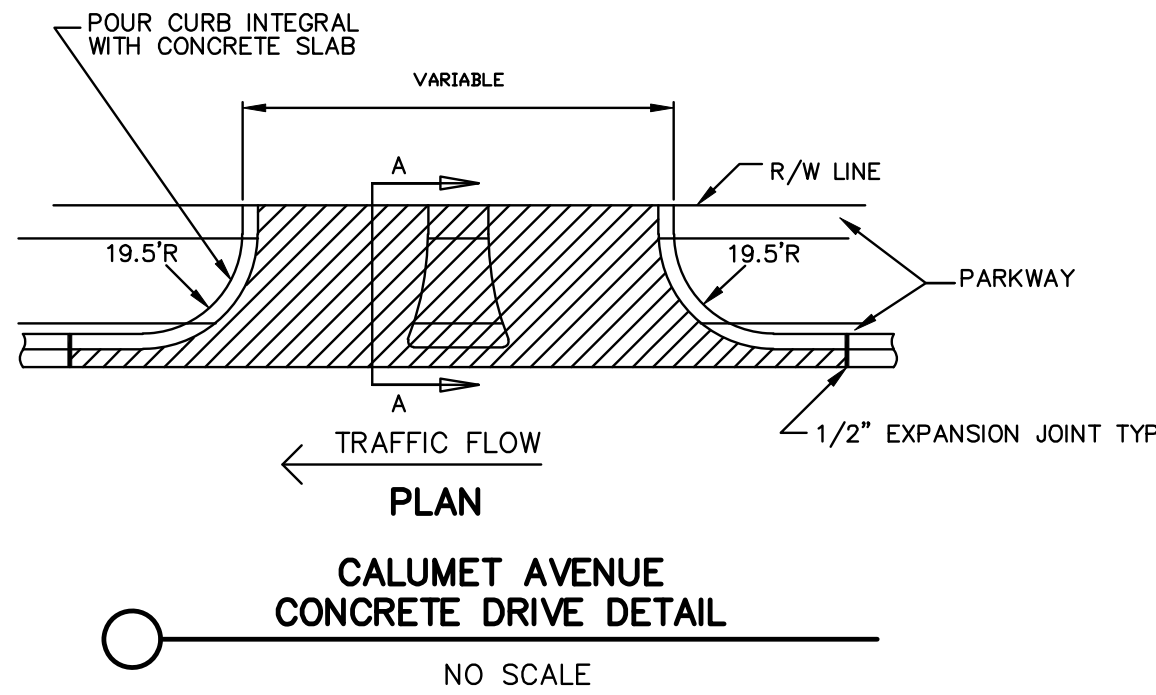
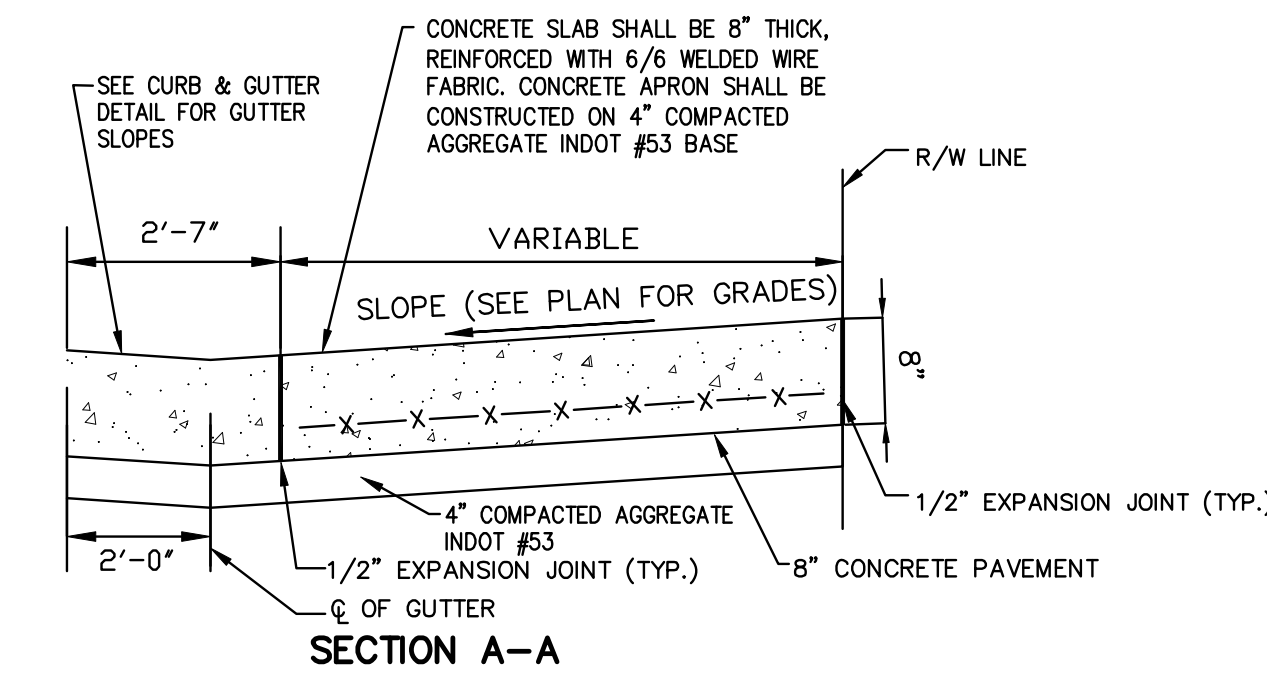
DATE: 05-11-2020

SHEET
C-5.1

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT

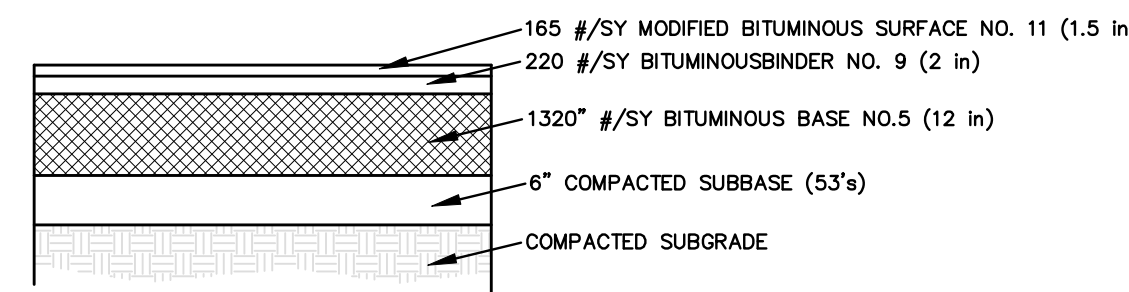
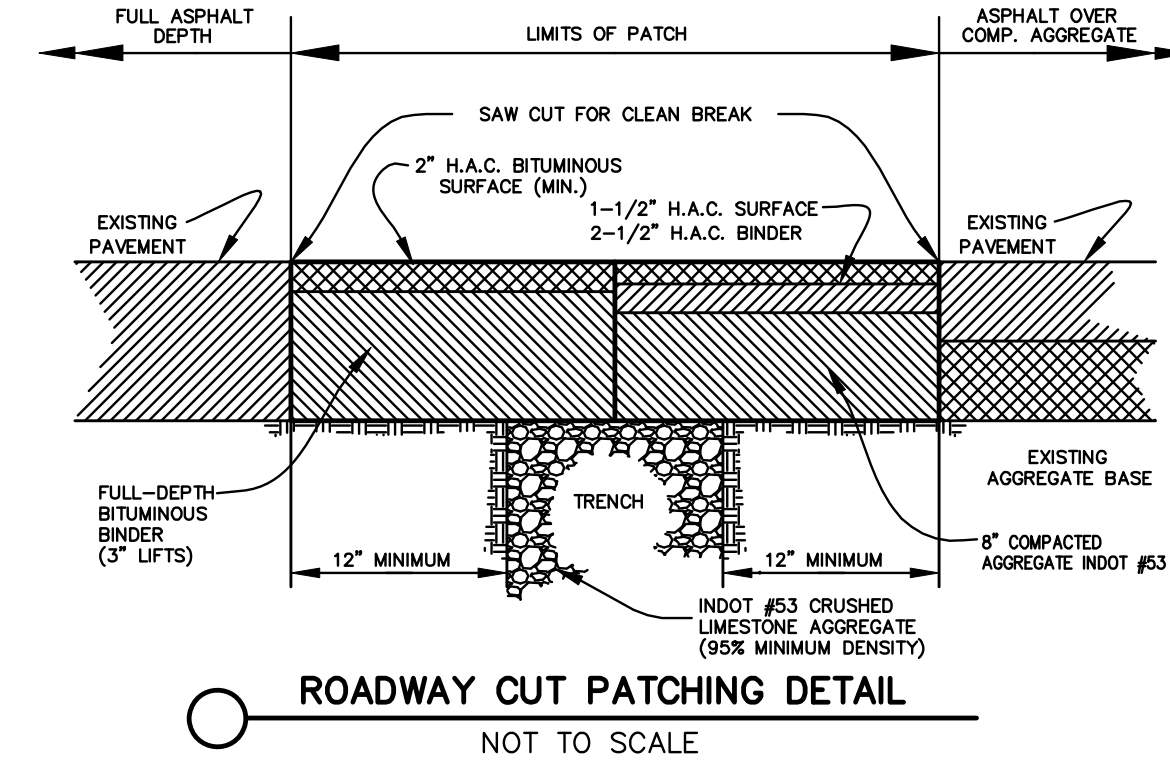


- NOTE:
1. ALL REGULATORY SIGNS SHALL BE HIGH INTENSITY AND IN ACCORDANCE WITH THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MOST RECENT EDITION.
 2. ALL PAVEMENT MARKINGS SHALL BE WHITE THERMOPLASTIC AND SPAN ACROSS APPROACH LANES.



NOTE:
All concrete work for the drive aprons shall be in accordance with the codes and ordinances of the Town of Munster.

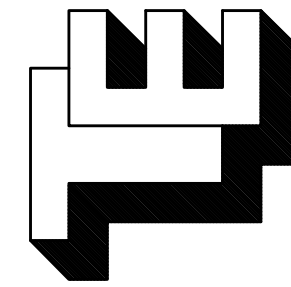
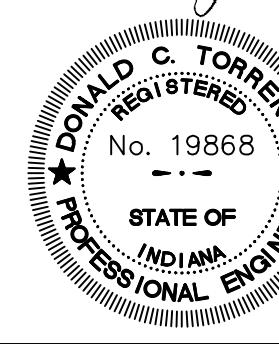
All driveway aprons extending beyond the sidewalk and into the street (parkway) shall consist of reinforced concrete at least seven inches in thickness and placed as shown on these plans and/or site plan accompanying the permit application.



- NOTES:
1. PAVEMENT & AGGREGATE THICKNESS ARE TAKEN FROM THE TYPICAL CROSS SECTION DETAIL ON THE ORIGINAL PLANS FOR CALUMET AVENUE STATE HIGHWAY MAM-M-PROJECT NO. 152 (2), DATED 12/23/86
 2. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.

TYPICAL PAVEMENT SECTION
CALUMET AVENUE
NOT TO SCALE

Donald C. Torrence



TORRENGA ENGINEERING, INC.
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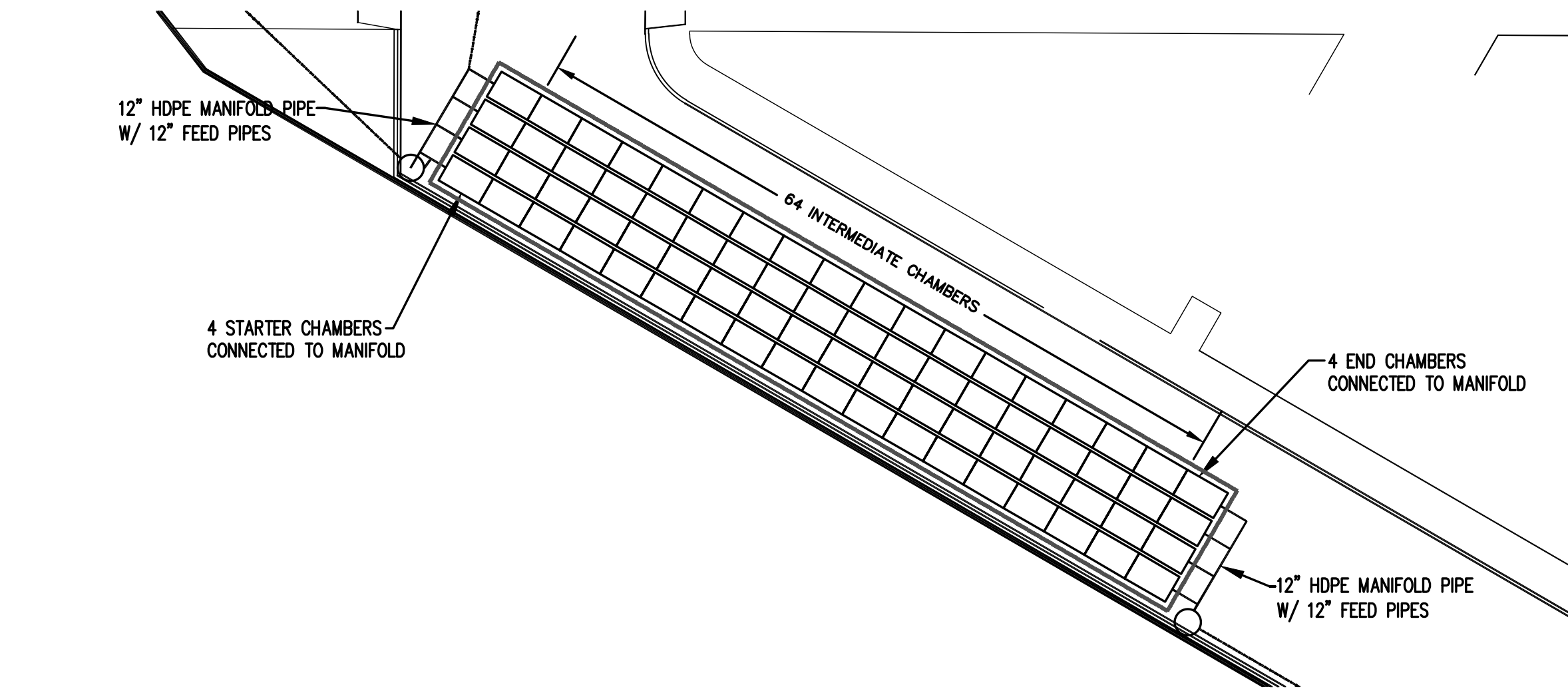
MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
DETAILS & SPECIFICATIONS

CLIENT:
First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321
JOB NO: 2019-5052
SCALE: NTS
DATE: 05-11-2020
REVISIONS:

06-26-2020
06-05-2020
06-05-2020

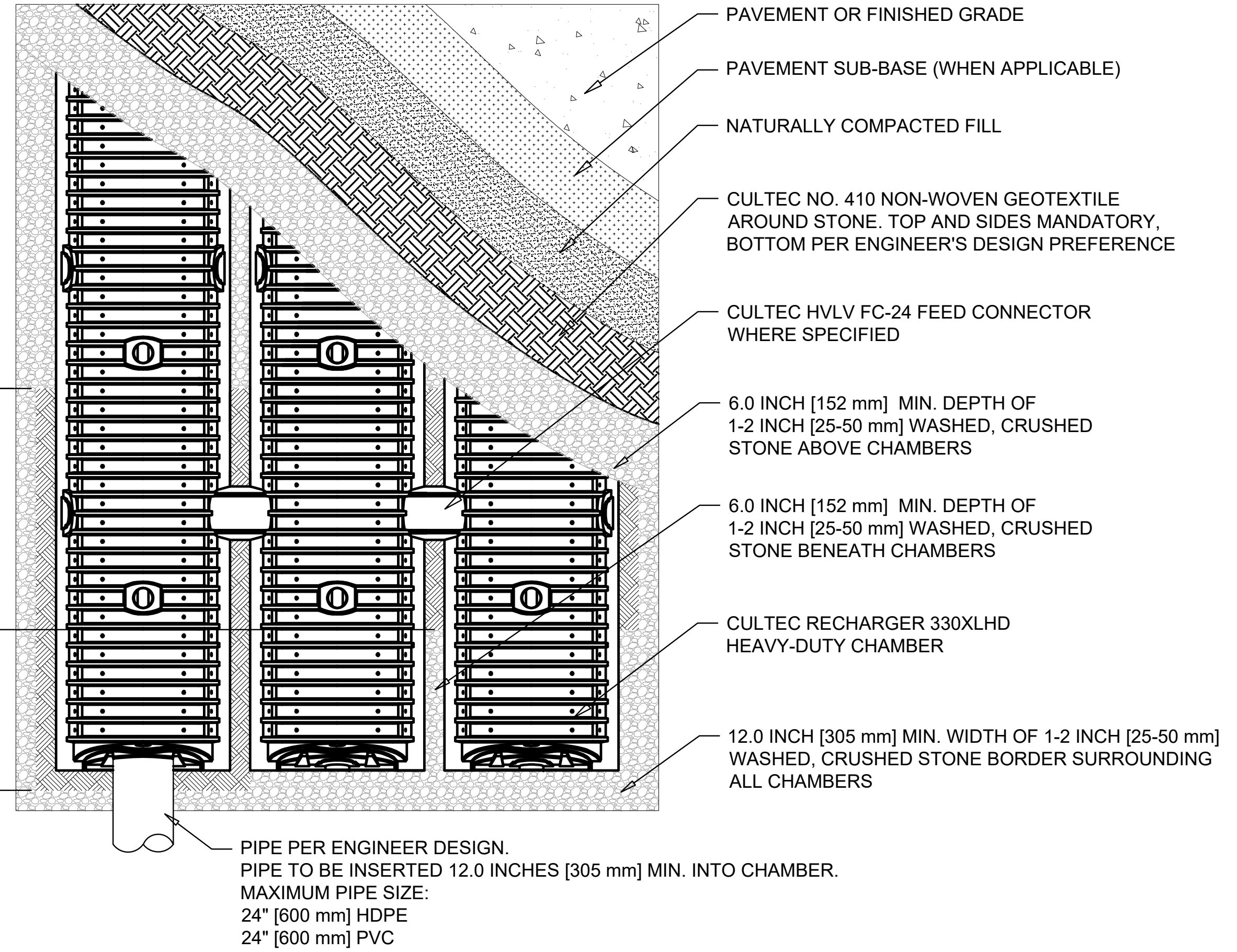
SHEET
C-5.2

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT



7.5' [2.29 m] MIN.
CULTEC NO. 4800 WOVEN GEOTEXTILE
BENEATH FEED CONNECTORS

10.0' [3.0 m] MIN.
CULTEC NO. 4800 WOVEN GEOTEXTILE
BENEATH INLET PIPES



CULTEC Stormwater Design Calculator

Date:	June 15, 2020
Project Information:	
Maple Leaf Crossings 9450 Calumet Avenue Munster Indiana United States	

INPUT INFO

RECHARGER 330XLHD



Project Number:	2019-5052
Calculations Performed By:	
Ryan Torrenge Torrenge Engineering 907 Ridge Road Munster Indiana 46321 United States (219) 836-8918 Ryan.Torrenge@Torrenge.com	

Recharger 330XLHD Chamber Specifications		
Height	30.5	inches
Width	52.0	inches
Length	8.50	feet
Installed Length	7.00	feet
Bare Chamber Volume	52.21	cu. feet
Installed Chamber Volume	99.56	cu. feet

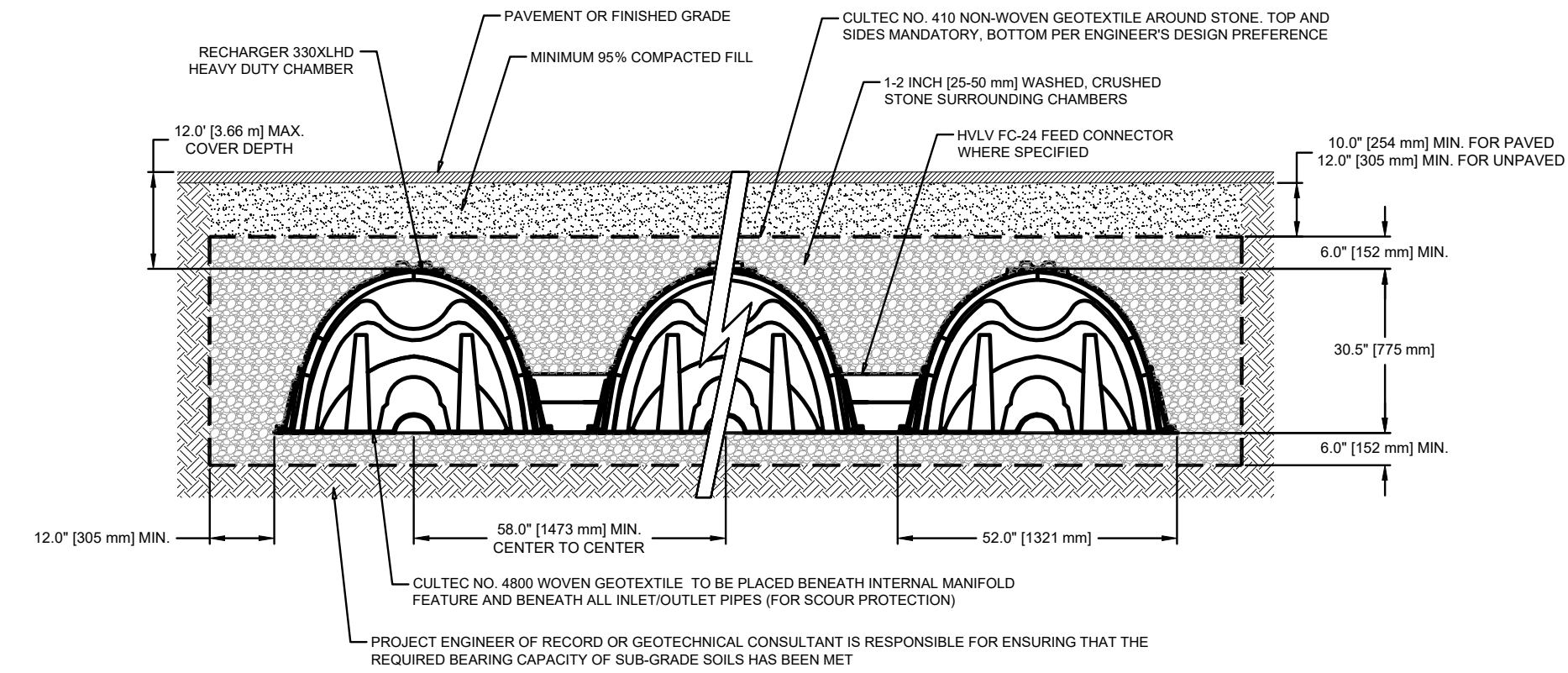
Breakdown of Storage Provided by Recharger 330XLHD Stormwater System		
Within Chambers	3,804.09	cu. feet
Within Feed Connectors	-	cu. feet
Within Stone	3,919.16	cu. feet
Total Storage Provided	7,723.3	cu. feet
Total Storage Required	7622.00	cu. feet

Materials List

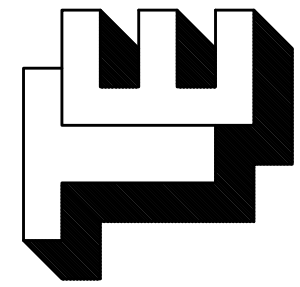
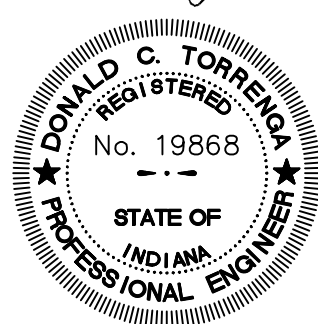
Recharger 330XLHD		
Total Number of Chambers Required	72	pieces
Separator Row Chambers	18	pieces
Starter Chambers	4	pieces
Intermediate Chambers	64	pieces
End Chambers	4	pieces
HVLV FC-24 Feed Connectors	0	pieces
CULTEC No. 410 Non-Woven Geotextile	960	sq. yards
CULTEC No. 4800 Woven Geotextile	128	feet
Stone	363	cu. yards

Separator Flow Qty. Included in Total

Based on: External/Pipe/Manifold



Donald C. Torrenge



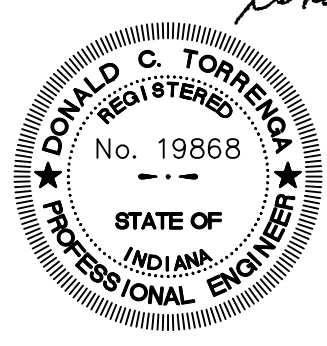
TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
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MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
DETAILS & SPECIFICATIONS

CLIENT: First Metropolitan Builders 400 Fisher Avenue Munster, Indiana 46321	REVISIONS: 06-26-2020 06-05-2020 DATE: 05-11-2020
JOB NO: 2019-5052 SCALE: NTS	

SHEET
C-5.3

NOTES:
1. ANY CATCH BASINS WITHIN THE PROJECT FRONTAGE AND IMMEDIATELY DOWNSTREAM OF THE PROJECT AREA SHALL BE PROTECTED WITH BASKET DROP INLET PROTECTION.



LEGEND

EXISTING

- MANHOLE
- CATCH BASIN/INLET
- POWER POLE
- LIGHT POLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- WATER VALVE
- FIRE HYDRANT
- GAS VALVE
- NIPSCO GAS LINE-FLAGGED
- SANITARY SEWER
- STORM SEWER
- UNDERGROUND GAS LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND FIBER OPTIC CABLE LINE
- OVERHEAD ELECTRIC LINE

LEGEND

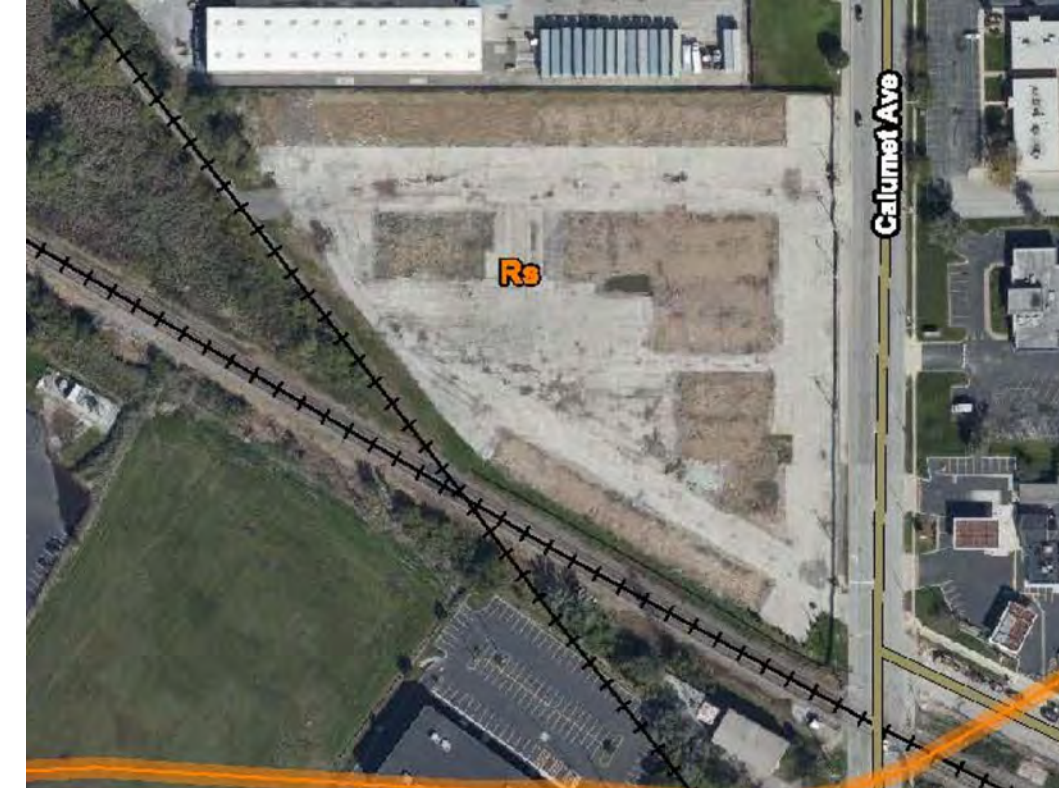
PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- FIRE DEPT. CONNECTION
- GRADE PROPOSED
- FINISHED GRADE
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER STUB
- WATER MAIN
- WATER MAIN STUB
- GRADE DIRECTION ARROW

SWPPP LEGEND:

- TEMPORARY ENTRANCE/EXIT (GRAVEL OR MAT)
- SOIL STOCK PILE
- BASKET DROP INLET PROTECTION
- GRADE LIMITS
- SILT FENCE (SEDIMENT FENCE)
- CONCRETE WASH OUT AREA
- TEMPORARY SEEDING (SEE NOTE 12)
- POSTING RULE 5 NOI & NOS LETTERS AND LOCAL SWPPP PERMIT (SEE NOTE 14)

- GENERAL NOTES:
- THIS PROPERTY IS LOCATED IN FLOOD ZONE "X" (SHADED), AREA WITH REDUCED FLOOD RISK DUE TO LEVEE AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18880C DSE, EFFECTIVE DATE JANUARY 18, 2012.
 - HYDROLOGIC UNIT CODES: 07120030300630 - HART DITCH (PLUM CREEK) - DYER DITCH.
 - STATE OR FEDERAL WATER QUALITY PERMITS ARE REQUIRED FOR THE PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) IDEM RULE 5 WATER QUALITY PERMIT IS REQUIRED.
 - THE SITE CONSISTS PRIMARILY OF DEMOLISHED BUILDINGS, BROKEN ASPHALT AND STONE.
 - THERE IS NO PRESENCE OF HYDRIC SOILS ON THIS PROPERTY.
 - THERE ARE EXISTING WETLAND AREAS ON THIS PROPERTY AS CLASSIFIED BY THE U.S. FISH AND WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY, AND THE UNITED STATES DEPARTMENT OF THE INTERIOR. HART DITCH (PLUM CREEK), DYER DITCH IS THE WATER COURSE WHICH THE STORMWATER FROM THE PROPOSED SITE WILL ULTIMATELY DISCHARGE INTO, ITS LOCATED APPROXIMATELY 1 MILE EAST OF THE PROJECT SITE, AND IS CLASSIFIED AS A WATER OF THE U.S., WITH A NWL = 602.
 - POTENTIAL SOURCE OF STORM WATER DISCHARGE ENTERING THE GROUNDWATER FROM THIS DEVELOPMENT WILL BE THROUGH NATURAL GROUND ABSORPTION ONLY. THERE ARE NO ABANDONED WELLS OR SINKHOLES ON THE PROPERTY.
 - THERE ARE NO REGULATED DRAINS WITHIN THIS PROPERTY, OR ON ADJACENT PROPERTIES. THERE IS NO RECORD OR KNOWLEDGE OF EXISTING FARM DRAINS OR FIELD TILE, INLETS AND OUTFALLS LOCATED WITHIN THE EXISTING PROPERTY LIMITS.
 - SOIL STOCKPILES, BORROW AND DISPOSAL AREAS ARE LOCATED WITHIN THE PROJECT SITE. THERE ARE NO OFFSITE BORROW, STOCKPILES, OR DISPOSAL AREA ASSOCIATED WITH THIS PROJECT. SOIL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCING AT ALL TIMES TO PREVENT EXCESSIVE EROSION, AND IF LEFT UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS, IT SHALL BE TEMPORARILY SEEDED.
 - ALL ACRESAGE OF THIS PROPERTY WILL BE DISTURBED DURING CONSTRUCTION.
 - FUEL STORAGE AREA SHALL BE WITHIN THE CONSTRUCTION STAGING AREA, FUEL SHALL BE STORED IN APPROVED MOBILE REFUELING TANK LOCATED AWAY FROM DRAINAGE STRUCTURES AND CHANNELS. FIRE EXTINGUISHERS SHALL BE LOCATED NEAR FUEL STORAGE AREA AND BE OF SUITABLE TYPE, POSTED, AND BE MAINTAINED IN GOOD CONDITION.
 - TEMPORARY SEED ALL AREAS OF BARE SOIL (WITH THE ADDITION OF A BLANKET WHERE SLOPES ARE GREATER THAN 2:1) THAT WILL REMAIN UNDISTURBED FOR A PERIOD OF MORE THAN 14 DAYS. SEEDING, OPTIMUM SEEDING DATED ARE MARCH 1 - MAY 10 AND AUGUST 10 - SEPTEMBER 30. SEEDING DATES BETWEEN MAY 10 AND AUGUST 10, MAY NEED TO BE IRRIGATED. FOR SEEDING RECOMMENDATIONS SEE PRACTICE 3.12, INDIANA STORM WATER QUALITY MANUAL.
 - ALL SOIL STOCKPILES, AREAS THAT ARE DISTURBED DURING CONSTRUCTION, AND DRAINAGE SWALES WHICH ARE SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FOURTEEN (14) CALENDAR DAYS OR MORE MUST BE TEMPORARILY OR PERMANENTLY SEEDED WITH MEASURES APPROPRIATE FOR THE SEASON.
 - LOCATION OF ON-SITE POSTING, OF THE COMPLETE RULE 5 NOI WITH ASSIGNED PERMIT NUMBER, NOS LETTERS, LOCAL SWPPP PERMIT AND LOCATION OF THE COMPLETE SET OF ENGINEERING PLANS, SHALL BE AVAILABLE AT THE ENTRANCE TO THE SITE AND VISIBLE TO THE PUBLIC.
 - ALL PUBLIC AND PRIVATE STREETS AND ROADS FRONTING THE PROJECT SHALL BE SWEEPED OF ANY DEBRIS, TRASH OR SEDIMENT WHICH MAY ULTIMATELY DRAIN TO STORM SEWER.
 - SITE ELEVATIONS ARE BASED ON NAVD 88, AND HORIZONTAL DATUM IS BASED ON INDIANA STATE PLANE COORDINATES NAD 83.



SOIL MAP

NOT TO SCALE



Temporary stabilization plans and sequence of implementation.

- On site posting of the complete Rule 5 NOI and NOS Letters. Location of the posting and plans shall be made available by the owner contractor.
- Installation of all erosion/sedimentation controls including stabilized construction entrance, silt fences, etc., per the engineering plans.
- Clearing and grubbing.
- All disturbed areas shall be permanent seeded, mulched, when no additional disturbance is anticipated.
- Topsoil stockpile surrounded with silt fencing.
- Rough cut and fill of all proposed swales, road, and other major grading per the engineering plans shall be done to rough grades at start of construction to prevent excessive soil erosion due to construction.
- Construction of storm sewers, sanitary sewers, water mains, and other utility, and implementation of storm sewer inlet protection at each open-grate structure (fabric drop inlet protection, basket inlet protection, etc., as per engineering plans).
- Regrade and construct road.
- Complete permanent erosion control and restoration of site vegetation. Erosion control measures are to be removed upon permanent vegetative cover being established.

RESPONSIBLE INDIVIDUAL FOR SWPPP

COMPANY: FIRST METROPOLITAN BUILDERS
NAME: JACK LIESER
ADDRESS: 400 FISHER AVENUE
MUNSTER, IN 46321
PHONE: (219) 746-0753
E-MAIL: JACKLIESER@AOL.COM

MAPLE LEAF CROSSING
A P.U.D. TO THE TOWN MUNTER, INDIANA

STORM WATER POLLUTION PREVENTION PLAN

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenge.com

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

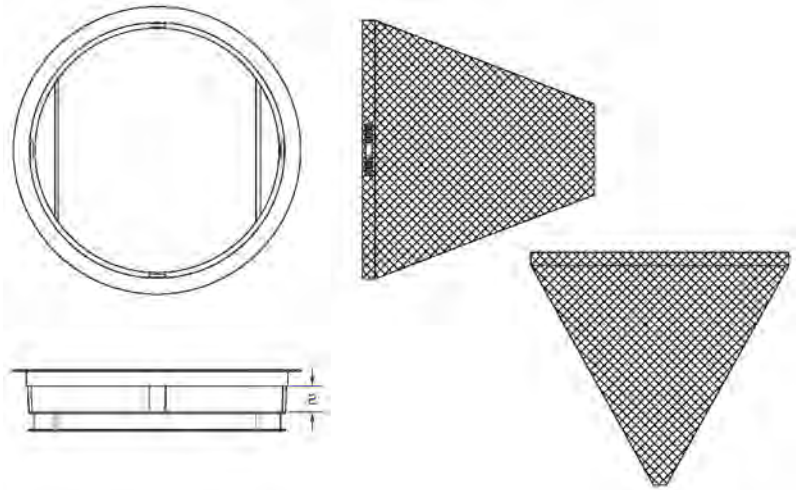
JOB NO: 2019-5052

SCALE: 1" = 40'

SHEET
C-6.0

BASKET INLET / CATCH BASIN PROTECTION

- Purpose:** To prevent excessive sediment from entering storm sewers at inlet/catch basin, allowing full use of the storm drain system during the construction period.
- Requirements:** Steel Frame with top width-length dimensions such that the basket fits into the inlet and/or catch basin (circular and/or rectangular), and a replaceable Geotextile fabric bag attached with a steel band locking cap that is suspended from the frame, **Catch-all Inlet Protector Hancor Flo-Gard bt Nyloplast** or approved equal.
- Installation:**
1. Install protection to existing and newly installed inlet/catch basin in a new development before land disturbing activities begin in a stabilized area.
 2. Remove the grate, and place the basket assembly under the grate on the lip of the structure frame.
 3. Replace the inlet/catch basin grate.
- Maintenance:**
1. Inspect weekly during construction and after each storm event of a minimum of 1/2 inch rainfall, and remove built-up sediment.
 2. Replace bag every six (6) months.
 3. Replace the Geotextile fabric bag if there is a hole and/or won't pass water.
 4. Replace the Geotextile fabric bag after any oil, gasoline or solvent spill.



GENERAL NOTES:
FRAME: Top Flange fabricated from 1/4"x1/4"x1/4" angle. Base rim fabricated from 1/4"x3/4"x1/4" channel. Handles and suspension brackets fabricated from 1/4"x1/4" flat stock. All steel conforming to ASTM-A36.
SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

TYPICAL INLET/CATCH BASIN PROTECTION INSERT DETAIL

STREET AND PARKING LOT SWEEPING

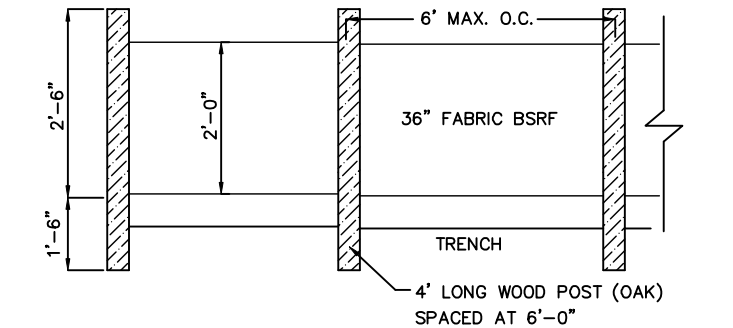
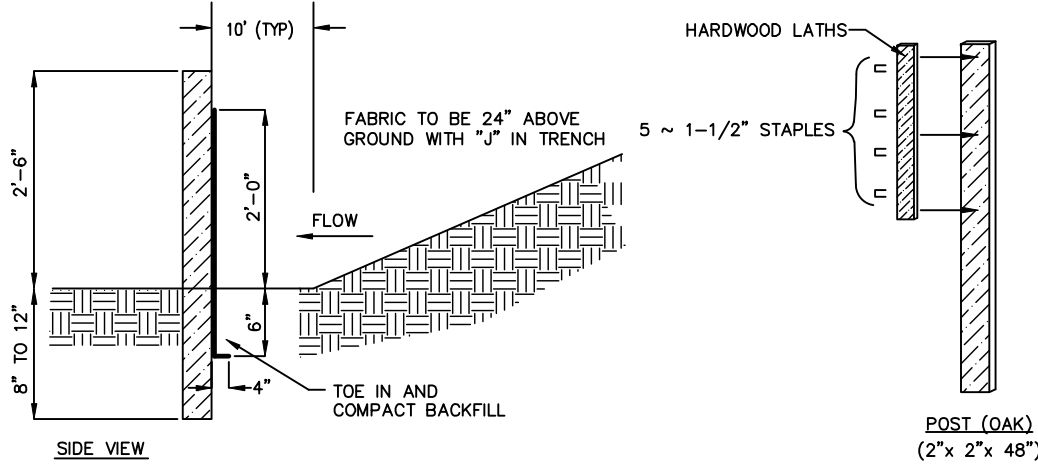
- Purpose:** To reduce the amount of pollutants that get washed into the storm drain and ultimately transported and deposited in waterbodies.
- Application:**
1. Sweeping at points of egress where sediment is tracked from project site onto public or private streets and roads.
- Limitations:**
1. Sweeping may be ineffective if soil is wet or heavy accumulation of mud.
 2. May require repeat cleanings.
- Maintenance:**
1. Inspect potential sediment tracking ingress and egress points locations daily, and after rain events.
 2. Visible sediment observed outside the construction limits shall be swept and removed daily.
 3. Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
 4. If not mixed with debris or trash, consider incorporating the removed sediment back into the project.
 5. Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
 6. Adjust brooms frequently; maximize efficiency of sweeping operations.
 7. After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

SILT FENCE

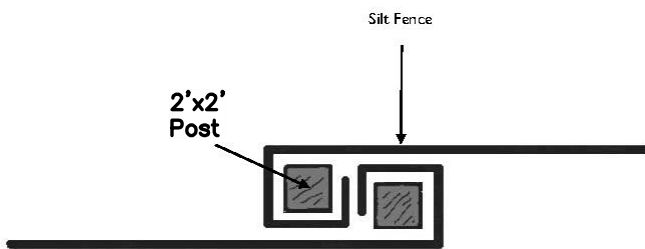
- Purpose:** To retain sediment from small sloping disturbed areas by reducing the velocity of sheet flow.
- Requirements:** Trench: 6" minimum depth, flat bottom, filled with compacted soil to bury lower portion of fence fabric.
- Support : 2" x 2" hardwood stakes set at least 8-inches to 12-inches deep.
- Spacing of Support: 6-foot maximum on center.
- Fence height: A 2-ft. minimum or high enough so depth of impounded water does not exceed one-half the height of the fence at any point along the line.
- Attachment: Hardwood laths secured to stakes with five (5) 1-1/2 inch staples.
- Fence Fabric: Spunbound polyester material with a fiberglass scrim or net sandwiched in between the layers, **SS-700 SiltSaver** or approved equal.

- Installation:**
1. Along the entire intended fence line, maintain contour as much as possible, dig a 6" deep flat bottom trench.
 2. On the downslope side of the trench, drive the post 8" to 12" into the ground.
 3. Run a continuous length of fence fabric along upslope side of posts.
 4. Fasten fence fabric to the upslope side of the stakes, extending it into the trench, and securing it with hardwood laths secured with five (5) 1-1/2 staples. The bottom 12" of the fence fabric shall be left unsecured to allow for entrenchment.
 5. If a joint is necessary, staple the overlap to the nearest post with a wood lath.
 6. Place the bottom 1' of fabric in the 6" deep trench, extending the remaining 4" of fabric toward the upslope side.
 7. Backfill the trench with compacted earth.

- Maintenance:**
1. Inspect silt fence once every seven calendar days and 24 hours after each storm event of minimum of 1/2 inch rainfall.
 2. If fence fabric tears, starts to decompose, or becomes ineffective, replace the affected portion, as outlined by the manufacturer.
 3. Remove deposited sediment when it reaches one-half the height of the fence at its lowest point or is causing the fabric to bulge.
 4. Take care to avoid undermining the fence during clean out.
 5. After watershed has been stabilized, remove fence and sediment deposits, bring the disturbed area to grade and stabilize.



FRONT ELEVATION
BELTED SILT RETENTION FENCE



Silt Fence Wrap Joint Detail

TOPSOIL SALVAGE & UTILIZATION

- Purpose:** To provide a method of preserving topsoil for use in establishing vegetation to achieve final site stabilization.
- Specifications:** Material
Typically the darker, friable, loamy surface layer of soil found immediately below vegetation.
- Storage Area
1. Free of stumps, rock, and construction debris.
 2. Stockpile covered with vegetation or a tarp.
 3. Surrounded by a sediment barrier or sediment filter.
 4. Stockpile outside rooting zone of trees to be protected.

- Application:** Salvaging and Stockpiling Topsoil
1. Determine depth and suitability of topsoil at site.
 2. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
 3. Remove soil material no deeper than the "surface soil".
 4. Stockpile the material in accessible locations that will not interfere with other construction activities or block drainage.
 5. Stockpiled soil should be temporarily seeded and surrounded by a sediment control measure.

- Spreading Topsoil
1. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking.
 2. Apply topsoil evenly to a depth of a minimum of four inches, then compact slightly to improve contact with the subsoil.
 3. Do not apply topsoil when the site is wet, muddy, or frozen.
 4. After spreading the topsoil, grade and stabilize the site.

- Maintenance:**
1. Inspect daily.
 2. Check for damage to perimeter barrier; repair immediately.
 3. Check for erosion or damage to newly spread topsoil; repair immediately and revegetate.

CONCRETE WASHOUT

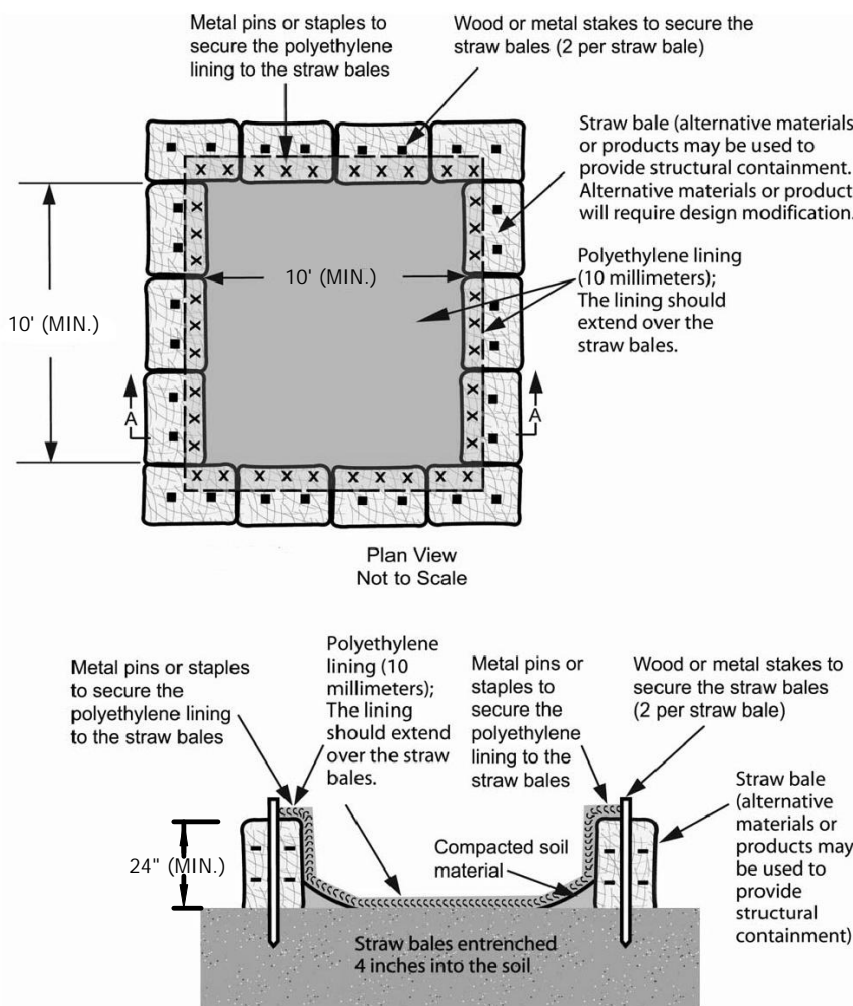
- Purpose:** To reduce the discharge of pollutants associated with concrete waste through consolidation of solids and retention of liquids.
- Requirements:**
- 1.) Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.
 - 2.) Locate concrete washout systems in relatively flat areas with established vegetative cover and do not receive runoff from adjacent land areas.
 - 3.) Locate in areas that provide easy access for concrete trucks and other construction equipment.
 - 4.) Locate away from other construction traffic to reduce the potential for damage to the system.
 - 5.) Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining.
 - 6.) Signage.
 - 7.) Orange safety fencing or equivalent.
 - 8.) Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade systems).

- Installation:**
- 1.) Dependent upon the type of system, either excavate the pit or install the containment system.
 - 2.) A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
 - 3.) Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
 - 4.) Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
 - 5.) Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
 - 6.) Install signage that identifies concrete washout areas.
 - 7.) Post signs directing contractors and suppliers to designated locations.

- Maintenance:**
- 1.) Inspect daily and after each storm event.
 - 2.) Inspect the integrity of the overall structure including, where applicable, the containment system.
 - 3.) Inspect the system for leaks, spills, and tracking of soil by equipment.
 - 4.) Inspect the polyethylene lining for failure, including tears and punctures.
 - 5.) Once concrete wastes harden, remove and dispose of the material.
 - 6.) Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
 - 7.) Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
 - 8.) Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
 - 9.) The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
 - 10.) The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
 - 11.) Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
 - 12.) Prefabricated units are often pumped and the company supplying the unit provides this service.
 - 13.) Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.
 - 14.) When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
 - 15.) Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

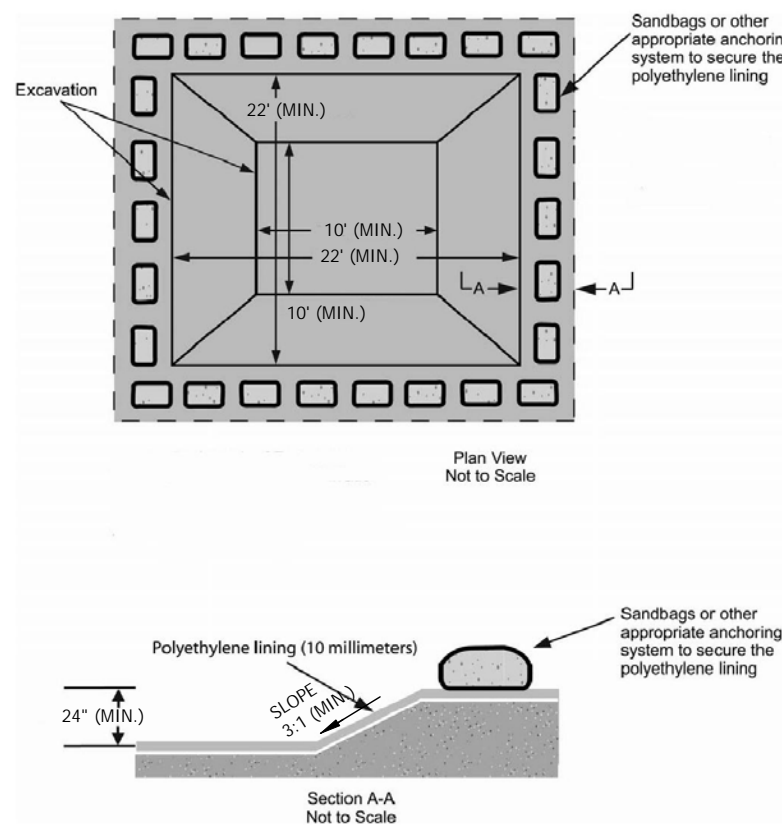
CONCRETE WASHOUT

Concrete Washout (Above Grade System) Worksheet

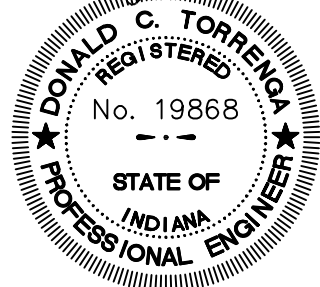


CONCRETE WASHOUT

Concrete Washout (Below Grade System) Worksheet



Donald C. Torrenge



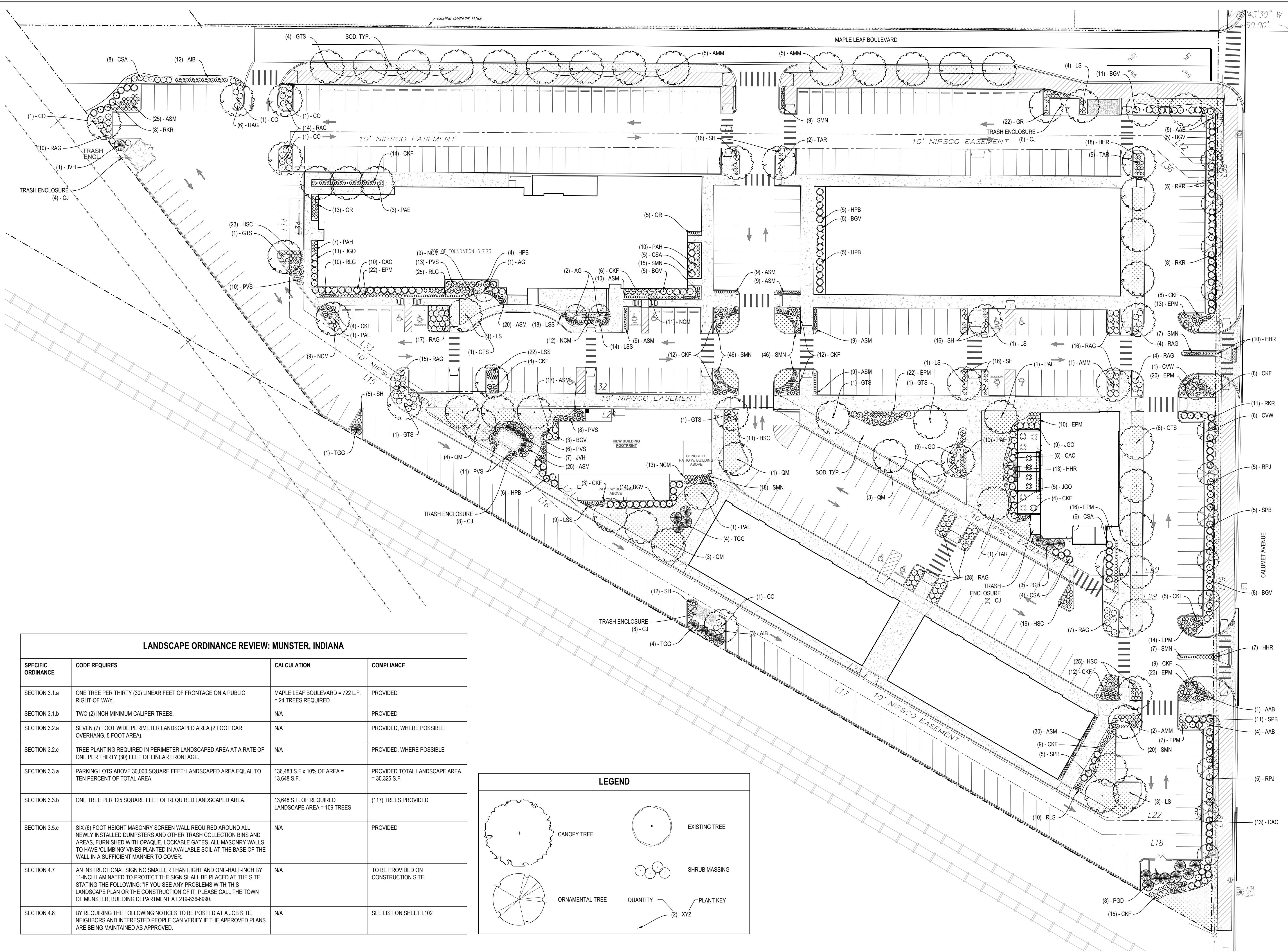
MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SWPPP DETAILS & SPECIFICATIONS

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenge.com

CLIENT: Metropolitan Builders
First 400 Fisher Avenue
Munster, Indiana 46321
JOB NO: 2019-5052
SCALE: NTS
REVISIONS:
06-26-2020
06-05-2020
DATE: 05-11-2020

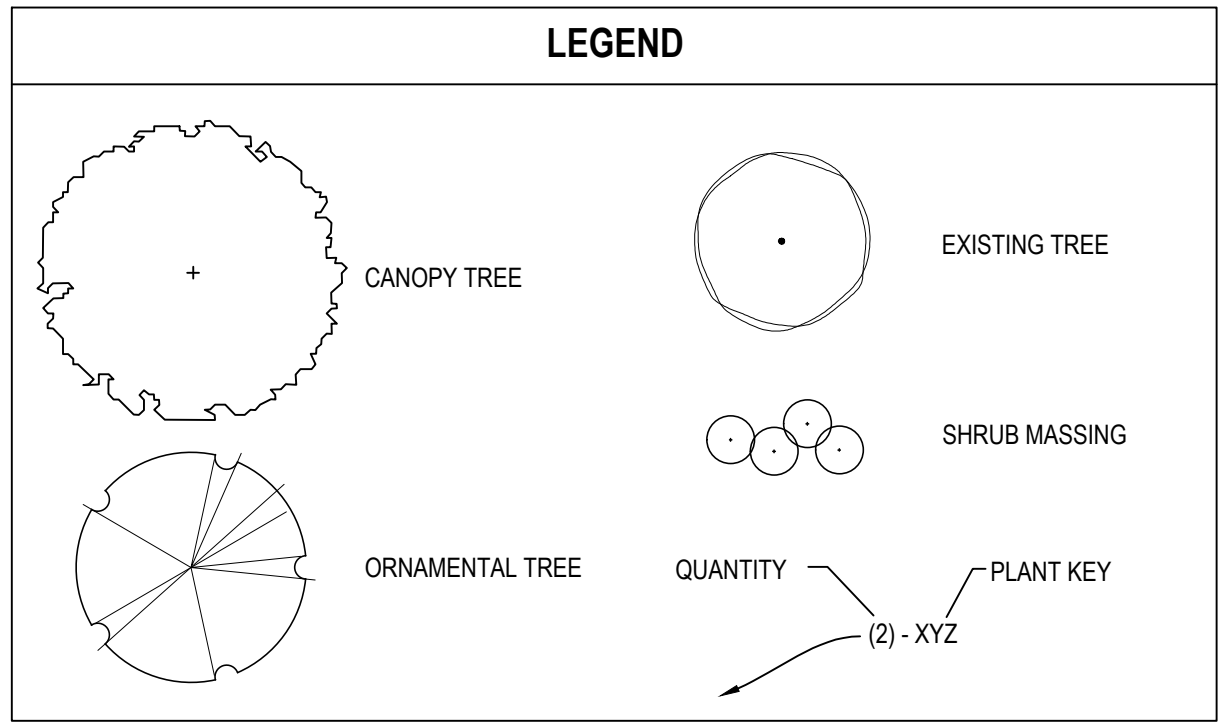
STATE OF INDIANA
PROFESSIONAL ENGINEER
No. 19868

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LANDSCAPE ORDINANCE REVIEW: MUNSTER, INDIANA

SPECIFIC ORDINANCE	CODE REQUIRES	CALCULATION	COMPLIANCE
SECTION 3.1.a	ONE TREE PER THIRTY (30) LINEAR FEET OF FRONTAGE ON A PUBLIC RIGHT-OF-WAY.	MAPLE LEAF BOULEVARD = 722 L.F. = 24 TREES REQUIRED	PROVIDED
SECTION 3.1.b	TWO (2) INCH MINIMUM CALIPER TREES.	N/A	PROVIDED
SECTION 3.2.a	SEVEN (7) FOOT WIDE PERIMETER LANDSCAPED AREA (2 FOOT CAR OVERHANG, 5 FOOT AREA).	N/A	PROVIDED, WHERE POSSIBLE
SECTION 3.2.c	TREE PLANTING REQUIRED IN PERIMETER LANDSCAPED AREA AT A RATE OF ONE PER THIRTY (30) FEET OF LINEAR FRONTAGE.	N/A	PROVIDED, WHERE POSSIBLE
SECTION 3.3.a	PARKING LOTS ABOVE 30,000 SQUARE FEET: LANDSCAPED AREA EQUAL TO TEN PERCENT OF TOTAL AREA.	136,483 S.F x 10% OF AREA = 13,648 S.F.	PROVIDED TOTAL LANDSCAPE AREA = 30,325 S.F.
SECTION 3.3.b	ONE TREE PER 125 SQUARE FEET OF REQUIRED LANDSCAPED AREA	13,648 S.F. OF REQUIRED LANDSCAPE AREA = 109 TREES	(117) TREES PROVIDED
SECTION 3.5.c	SIX (6) FOOT HEIGHT MASONRY SCREEN WALL REQUIRED AROUND ALL NEWLY INSTALLED DUMPSTERS AND OTHER TRASH COLLECTION BINS AND AREAS, FURNISHED WITH OPAQUE, LOCKABLE GATES, ALL MASONRY WALLS TO HAVE 'CLIMBING' VINES PLANTED IN AVAILABLE SOIL AT THE BASE OF THE WALL IN A SUFFICIENT MANNER TO COVER.	N/A	PROVIDED
SECTION 4.7	AN INSTRUCTIONAL SIGN NO SMALLER THAN EIGHT AND ONE-HALF-INCH BY 11-INCH LAMINATED TO PROTECT THE SIGN SHALL BE PLACED AT THE SITE STATING THE FOLLOWING: "IF YOU SEE ANY PROBLEMS WITH THIS LANDSCAPE PLAN OR THE CONSTRUCTION OF IT, PLEASE CALL THE TOWN OF MUNSTER, BUILDING DEPARTMENT AT 219-836-6990.	N/A	TO BE PROVIDED ON CONSTRUCTION SITE
SECTION 4.8	BY REQUIRING THE FOLLOWING NOTICES TO BE POSTED AT A JOB SITE, NEIGHBORS AND INTERESTED PEOPLE CAN VERIFY IF THE APPROVED PLANS ARE BEING MAINTAINED AS APPROVED.	N/A	SEE LIST ON SHEET L102



PROJECT NAME:
MAPLE LEAF CROSSING
PLANNED UNIT DEVELOPMENT
MUNSTER, IN 46321

OWNER NAME:
MAPLE LEAF CROSSING, LLC.
400 FISHER AVENUE
MUNSTER, IN 46321

CONSULTANTS:
TORRENGA ENGINEERING, INC.
907 RIDGE ROAD
MUNSTER, IN 46321

PLANNED ENVIRONMENT ASSOCIATES
P.O. BOX 2256
CRESTVIEW, IN 46034
(219) 299-3383
www.peminfo.com

SUBMITTAL & REVISIONS	1	06/29/2021	SCHEMATIC DESIGN
	2	07/15/2021	CONSTRUCTION DOCUMENTS
	3	06/28/2022	REVISED LOT 7
	4	05/05/2023	REVISED SITE PLAN
	5	05/16/2023	REVISED PLAN
	6	05/17/2023	REVISED PLAN
	7	07/07/2023	REVISED SITE PLAN

STAMP:

EXP: 12/31/2023

TITLE:
LANDSCAPE PLAN

SHEET:
L101

DRAWN BY: MD
CHECK BY: JR
PROJECT #: 20-027

0 15 30 60 feet

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PLANTING NOTES

1.

SEE SHEET L101 FOR PLANTING PLAN. SEE SHEET L201 FOR PLANTING DETAILS.
2.

THE LANDSCAPE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR HIS PORTION OF WORK.
3.

ESTIMATED SCHEDULE FOR PLANTING IS FALL 2021.
4.

IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE GRAPHIC SYMBOLS SHOWN ON THE PLAN SHALL DICTATE.
5.

PLANT MATERIALS:

5.1.

ALL PLANT MATERIALS SHALL MEET OR EXCEED THE AMERICAN STANDARDS FOR NURSERY STOCK, 1986 EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSERYMEN.

5.2.

PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. PLANTS SHALL BE EQUAL TO OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST.

5.3.

TREES SHALL HAVE STRAIGHT TRUNK WITH LEADER INTACT, UNDAMAGED AND UN CUT. BRANCHING MUST BE WELL DEVELOPED.

5.4.

ALL PLANT MATERIAL AND SEED SHALL BE PROVIDED FROM A NURSERY (WITHIN 200 MILES) WITH A SIMILAR PLANT HARDINESS ZONE AS PROJECT LOCATION.

5.5.

NO SUBSTITUTIONS OF PLANT MATERIALS WILL BE ALLOWED. IF PLANTS ARE NOT AVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BID IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT I.D. AT NURSERY OR CONTRACTORS OPERATIONS PRIOR TO MOVING TO JOB SITE. PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE BY LANDSCAPE ARCHITECT.

5.6.

LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IN WRITING PRIOR TO BID DATE OF ANY PLANTS HE/SHE FEELS MAY NOT SURVIVE IN LOCATIONS NOTED ON PLANS
6.

IRRIGATION:

6.1.

CONTRACTOR SHALL PROVIDE BID ALTERNATE FOR IRRIGATION SHALL BE PROVIDED PER IRRIGATION PERFORMANCE DRAWING AND NOTES.

6.2.

IF BID ALTERNATE OF IRRIGATION SYSTEM IS NOT SELECTED BY OWNER, CONTRACTOR RESPONSIBLE FOR ESTABLISHMENT WATERING THROUGH TEMPORARY FACILITIES, WATERING BAGS, ETC., AS APPROVED BY OWNER FOR PLANT WARRANTY.
7.

TOPSOIL & PLANTING MIXTURES:

7.1.

CONTRACTOR SHALL ENSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL AREAS

7.2.

SALVAGE TOPSOIL FROM THE EARTHWORK AREAS AS APPROPRIATE AND/OR AS DIRECTED BY LANDSCAPE ARCHITECT AND STOCKPILE FOR REUSE IN LOCATION APPROVED BY OWNER.

7.3.

TOPSOIL SHALL BE MATERIALS CONSISTING OF FERTILE, FRIABLE, FINE SANDY LOAM, UNIFORM IN COMPOSITION AND FREE OF SUBSOIL, STONES, LUMPS, CLOUDS OF HARD EARTH, PLANTS, PLANT ROOTS, STICKS, NOXIOUS WEEDS, SLAG, CINDERS, DEMOLITION DEBRIS OR OTHER EXTRANEOUS MATTER OVER 1" IN LARGEST DIMENSION.

7.4.

EXISTING TOPSOIL SHALL BE PREPARED BY THOROUGHLY MIXING IN ORGANIC MATTER AT THE RATE OF 1/3 VOLUME OF SOIL REPLACED.

7.4.1.

ADJUST SOIL TO A pH OF 6.0 TO 6.5.

7.4.2.

ORGANIC MATTER: 4% MIN, 10% MAX

7.4.3.

AVAILABLE PHOSPHORUS: 25 PPM, MIN

7.4.4.

EXCHANGEABLE POTASSIUM: 125 PPM, MIN

7.5.

PEATMOSS TO BE USED ON PROJECT SHALL BE DOMESTIC OR IMPORTED MATERIAL, CHOCOLATE BROWN IN COLOR AND COMPOSED OF PARTIALLY DECOMPOSED VEGETABLE MATERIAL. PEAT MOSS TO BE MILDLY ACIDIC IN CHARACTER AND SHALL BE APPROVED BY LANDSCAPE ARCHITECT.

7.6.

SEED & SOD AREAS SHALL RECEIVE A MINIMUM OF 4" DEPTH OF TOPSOIL.

7.7.

PLANTING BEDS SHALL RECEIVE MINIMUM 6" DEPTH OF AMENDED TOPSOIL.

8.

MULCH MATERIALS:

8.1.

ALL MULCH MATERIALS SHALL BE PROCESSED DOUBLE SHREDDED HARDWOOD BARK MULCH OF UNIFORM SIZE. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED. SUBMIT SAMPLE TO ARCHITECT.

8.2.

MULCH SHALL BE 2-INCH THICKNESS MINIMUM COVERAGE IN ALL AREAS OF TREE PITS OR PLANTING BEDS, UNLESS OTHERWISE NOTED.

8.3.

MULCH SHALL BE HELD 1' BELOW SURFACE ELEVATION OF DOWNHILL SIDE OF WALK, SLAB, CURB, LAWN, ETC.

9.

LANDSCAPE BED EDGING:

9.1.

ALL LANDSCAPE BED EDGING SHALL BE SHOVEL-CUT SPADE EDGE BETWEEN LAWN AREAS, UNLESS OTHERWISE NOTED.

10.

STORAGE, INSTALLATION, MAINTENANCE & WARRANTY:

10.1.

CONFIRM LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.

10.2.

EXISTING TREES FOUND ON SITE SHALL BE PROTECTED AND SAVED UNLESS NOTED TO BE REMOVED OR ARE LOCATED IN AN AREA TO BE GRADED. NO VEHICLES OR EQUIPMENT ARE ALLOWED WITHIN THE DRIP LINE OF TREES TO BE PROTECTED. QUESTIONS REGARDING EXISTING PLANT MATERIAL SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO REMOVAL.

10.3.

PRUNING AND REMOVAL OF BRANCHES ON EXISTING TREES SHALL BE DIRECTED IN THE FIELD BY OWNER OR LANDSCAPE ARCHITECT.

10.4.

EQUIPMENT, PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE STORED OUTSIDE OF THE DRIPLINE OF TREES TO BE PROTECTED AND PLACED WHERE THEY WILL NOT CONFLICT W/ CONSTRUCTION OPERATIONS.

10.5.

NEW PLANTING AREAS ARE TO BE TREATED WITH HERBICIDE TO KILL ALL EXISTING GROUND COVER. THERE SHALL BE A MINIMUM OF TWO (2) APPLICATIONS SEPARATED BY 10 DAYS. IF ALL EXISTING GROUND COVER VEGETATION IS NOT KILLED WITHIN 10 DAYS OF 2ND APPLICATION, A 3RD APPLICATION IS REQUIRED.

10.6.

WHERE PROPOSED PLANTING ARE INDICATED IN EXISTING PAVING AREAS, CONTRACTOR SHALL EXCAVATE A MINIMUM OF 2'-0" BELOW PAVING SURFACE.

10.7.

FINAL PLACEMENT OF PLANT MATERIALS, ETC., SHALL BE APPROVED BY LANDSCAPE ARCHITECT BEFORE PLANTING OPERATIONS ARE TO PROCEED. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOOD STAKE INDICATING VARIETY AND SIZE OF TREE. ALL GROUND COVER AND PLANTING BED LINES SHALL BE MARKED W/ HIGHLY VISIBLE PAINT LINES W/ OCCASIONAL WOOD STAKES FOR REFERENCE. ALL STAKES SHALL BE REMOVED FOLLOWING PLANTING OPERATIONS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANT LOCATIONS ON SITE.

10.8.

ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.

10.9.

PRIOR TO FINAL PAYMENT, CONTRACTOR SHALL COORDINATE A FINAL INSPECTION WALK-THROUGH WITH OWNER AND LANDSCAPE ARCHITECT FOR OWNER ACCEPTANCE. THE LANDSCAPE ARCHITECT WILL PROVIDE A PUNCHLIST OF ANY DEFICIENCIES AND PROVIDE TO OWNER AND CONTRACTOR FOR REVIEW.

10.10.

INCLUDE PRICING WITH THE BID FOR A 60-DAY MAINTENANCE PERIOD OF ALL LANDSCAPE PLANTINGS FOLLOWING COMPLETE INSTALLATION AND FINAL INSPECTION BY LANDSCAPE ARCHITECT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, MULCHING, MOWING, AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF LAWNS AND PLANTINGS.

10.11.

ALL LANDSCAPE PLANTINGS SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE ARCHITECT. AT THE END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR. THE REPLACEMENTS SHALL ALSO BE WARRANTED FOR 1 YEAR.
- IRRIGATION NOTES:
1.

CONTRACTOR SHALL PROVIDE DESIGN/BUILD IRRIGATION SYSTEM PER THE IRRIGATION NOTES BELOW:

1.1.

DESIGN GUIDELINES: CONTRACTOR TO VERIFY PRESSURE AND AVAILABLE WATER SERVICE SIZE

1.2.

EMISSION (LAWNS): HUNTER I-40 SPRAY ROTARS (OR APPROVED EQUAL)

1.3.

DRIP (BEDS): HUNTER HDL-CV (OR APPROVED EQUAL)

1.4.

QUICK COUPLER: HUNTER QCV - 3RC

1.5.

CONTROLLER: HUNTER HCC (OR APPROVED EQUAL)

1.6.

SENSOR: HUNTER SOLAR-SYNC & HC FLOW METER (OR APPROVED EQUAL)

1.7.

PIPING: PVC OR APPROVED EQUAL

2.

CONTRACTOR SHALL PROVIDE A QUALIFIED IRRIGATION DESIGNER OR IRRIGATION CONSULTANT TO DESIGN THE SYSTEM FOR EFFICIENT AND UNIFORM DISTRIBUTION OF WATER. "QUALIFIED" MEANS CERTIFIED BY ONE THE FOLLOWING AGENCIES BELOW:

2.1.

CERTIFIED IRRIGATION CONTRACTOR (CIC)

2.2.

CERTIFIED LANDSCAPE IRRIGATION AUDITOR (CLIA)

2.3.

CERTIFIED LANDSCAPE IRRIGATION MANAGER (CLIM)

2.4.

CERTIFIED IRRIGATION DESIGNER (CID)

2.5.

CERTIFIED WATER CONSERVATION MANAGER-LANDSCAPE (CWM)

3.

SYSTEM DESIGN:

3.1.

THE SYSTEM SHALL BE COMPRISED OF EITHER:

3.1.1.

DRIP/MICRO-IRRIGATION COMPONENTS THAT ALLOW FOR HIGHER DISTRIBUTION UNIFORMITY AND LOWER EVAPORATION AND RUNOFF.

3.1.2.

THE DESIGN AND LAYOUT OF THE EMISSION DEVICES PROVIDES FOR ZERO OVERSPRAY ACROSS OR ONTO A STREET, PUBLIC DRIVEWAY OR SIDEWALK, PARKING AREA, BUILDING, FENCE OR ADJOINING PROPERTY. OVERSPRAY MAY OCCUR DURING THE OPERATION OF THE IRRIGATION SYSTEM DUE TO THE ACTUAL WIND CONDITION THAT DIFFER FROM THE DESIGN CRITERIA.

4.

SYSTEM CONTROLLER:

4.1.

THE SYSTEM SHOULD USE A CONTROLLER THAT HAS MULTI-PROGRAM CAPABILITY WITH AT LEAST FOUR START TIMES(FOR MULTIPLE REPEAT SOAK CYCLES) AND RUN TIME ADJUSTMENT IN ONE MINUTE INCREMENTS. THE CONTROLLER PROGRAMMING (SCHEDULING) SHOULD BE MANAGED TO RESPOND TO THE CHANGING NEED FOR WATER IN THE LANDSCAPE.

5.

DESIGN FEATURES:

5.1.

FOLLOW ALL ORDINANCES RELATING TO IRRIGATION SYSTEMS INCLUDING THE INSTALLATION OF BACKFLOW DEVICES.

5.2.

INSTALL A MASTER VALVE TO STOP UNSCHEDULED FLOW OF IRRIGATION WATER

5.3.

A DESIGN THAT RESULTS IN UNIFORM AND EFFICIENT COVERAGE. SPRINKLER HEAD SPACING SHOULD BE A MINIMUM OF "HEAD-TO-HEAD" (MINIMUM 50% OF DIAMETER) UNLESS THE COVERAGE IS DESIGNED FOR WIND DE-RATING. WIND DE-RATING SHOULD BE BASED ON AVERAGE NIGHTTIME WIND SPEED.

5.4.

A MINIMUM OF "HEAD-TO-HEAD" (MINIMUM OF 50% OF DIAMETER) UNLESS THE COVERAGE IS DESIGNED FOR WIND DE-RATING. WIND DE-RATING SHOULD BE BASED ON AVERAGE NIGHTTIME WIND SPEED. DESIGN TO AVOID OVERSPRAY ONTO HARDSCAPES, FENCES, BUILDINGS AND ADJOINING PROPERTY.

5.5.

HAVE SEPARATE STATIONS/ZONES (HYDROZONES) FOR AREAS WITH DISSIMILAR WATER OR SCHEDULING REQUIREMENTS

5.6.

PROVIDE SENSOR TO SUSPEND IRRIGATION DURING WET WEATHER CONDITIONS.

5.7.

PROVIDE FLOW METER FOR MONITORING FLOW CONDITIONS AND SAVING WATER.

5.8.

PROVIDE OWNER WITH WALKTHROUGH FOR SYSTEM OPERATIONS, PRIOR TO FINAL ACCEPTANCE. INCLUDE PROCEDURES FOR CONTROLLER PROGRAMMING, MAINTENANCE AND WINTERIZATION.
- FOLLOWING TO BE POSTED ON-SITE PER SECTION 4.8
1.

A COPY OF THE APPROVED LANDSCAPE PLAN:

1.1.

NO SMALLER THAN 11 INCHES BY 17 INCHES

1.2.

LAMINATED TO PROTECT THE PLAN

1.3.

SHOWING ALL PLANT TYPES, SIZES, AND LOCATIONS

2.

AN INSTRUCTIONAL SIGN:

2.1.

NO SMALLER THAN 11 INCHES BY 17 INCHES

2.2.

LAMINATED TO PROTECT THE SIGN

2.3.

STATING THE FOLLOWING:

2.3.1.

"THE OWNER OF THIS SITE HAS AGREED TO INSTALL AND MAINTAIN THE REQUIRED LANDSCAPING ON THIS SITE IN ACCORDANCE WITH THE TOWN OF MUNSTER LANDSCAPE ORDINANCE. COMPLIANCE REQUIRES THE FOLLOWING:

2.3.2.

NEW TREES AND SHRUBS WILL BE WATERED FOR THE FIRST TWO YEARS UNTIL FIRMLY ESTABLISHED.

2.3.3.

NEW TREES AND SHRUBS WILL BE PRUNED TO REMOVE DEAD OR DAMAGED WOOD.

2.3.4.

MULCH IN PLANTING BEDS WILL BE MAINTAINED AT A DEPTH OF THREE INCHES.

2.3.5.

ALL PLANTING BEDS AND TREE MULCH CIRCLES WILL BE WEDED REGULARLY.

2.3.6.

PERENNIALS AND HERBACEOUS SHRUBS WILL BE PRUNED BEFORE THE ONSET OF NEW SPRING GROWTH.

2.3.7.

ALL GRASS WILL BE MOWED REGULARLY (I.E. ONCE PER WEEK) DURING THE GROWING SEASON.

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2.3.7.

ALL GRASS WILL BE MOWED REGULARLY (I.E. ONCE PER WEEK) DURING THE GROWING SEASON.

3.

THE SIGN SHALL ALSO STATE: "IF YOU SEE ANY PROBLEMS WITH THE LANDSCAPING OF THIS SITE OR THE MAINTENANCE OF IT, PLEASE CALL THE TOWN OF MUNSTER, BUILDING DEPARTMENT AT 219-836-6990".

SWORN STATEMENT BY OWNER:

THE UNDERSIGNED ACKNOWLEDGES THAT THE LANDSCAPE PLANTING PLAN SHOWN ON THE ATTACHED LANDSCAPE PLAN(S) FOR THE MAPLE LEAF CROSSING PLANNED UNIT DEVELOPMENT, TOWN OF MUNSTER, INDIANA HAS TO THE BEST OF THE UNDERSIGNED APPLICANT'S KNOWLEDGE, BEEN DESIGNED AND WILL BE INSTALLED, MAINTAINED AND REPLACED AS REQUIRED BY CURRENT AND SUBSEQUENT OWNERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF MUNSTER MUNICIPAL CODE, THE LANDSCAPING STANDARDS OF THE TOWN OF MUNSTER ZONING ORDINANCE, AND THE GUIDE TO THE TOWN OF MUNSTER LANDSCAPE ORDINANCE.

EXISTING PARKWAY AND ON-SITE INTERIOR TREES ARE TO BE PROTECTED WHILE PROJECT IS UNDER CONSTRUCTION AND WILL BE REPLACED BY CURRENT AND SUBSEQUENT OWNER IF DAMAGED.

SWORN STATEMENT BY REGISTERED LANDSCAPE ARCHITECT:

THE UNDERSIGNED LANDSCAPE ARCHITECT, REGISTERED IN THE STATE OF INDIANA, ACKNOWLEDGES THAT THE LANDSCAPE PLANTING PLAN AND CONSTRUCTION DETAILS SHOWN ON THE ATTACHED LANDSCAPE PLAN(S) FOR THE MAPLE LEAF CROSSING PLANNED UNIT DEVELOPMENT, TOWN OF MUNSTER, INDIANA HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF MUNSTER MUNICIPAL CODE, THE LANDSCAPING STANDARDS OF THE TOWN OF MUNSTER ZONING ORDINANCE, AND THE GUIDE TO THE TOWN OF MUNSTER LANDSCAPE ORDINANCES.

[Signature]

PLANTING SCHEDULE						
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DECIDUOUS TREES						
AMM	13	ACER MIYABEI 'MORTON'	STATE STREET MAPLE	2.5' CAL.		B&B SPECIMEN
CO	5	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2.5' CAL.		B&B SPECIMEN
GTS	16	GLEDITSIA TRIACANTHOS 'SKYCOLE'	SKYLINE HONEYLOCUST	2.5' CAL.		B&B SPECIMEN
LS	10	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	2.5' CAL.		B&B SPECIMEN
PAE	5	PLATANUS X ACERFOLIA 'MORTON CIRCLE'	EXCLAMATION LONDON PLANE TREE	2.5' CAL.		B&B SPECIMEN
QM	12	QUERCUS MACROCARPA	BUR OAK	2.5' CAL.		B&B SPECIMEN
TAR	8	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	2.5' CAL.		B&B SPECIMEN
EVERGREEN TREES						
JVH	8	JUNIPERUS VIRGINIANA 'CUPRESSIFOLIA'	HILLSPIRE EASTERN REDCEDAR	6'-8' HT.	6' O.C.	B&B SPECIMEN
PGD	11	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE	8'-10' HT.		B&B SPECIMEN
TGG	9	THUJA PLICATA x STANDISHII 'GREEN GIANT'	GREEN GIANT CEDAR	8'-10' HT.		B&B SPECIMEN
ORNAMENTAL TREES						
AG	3	ACER GRISEUM	PAPERBARK MAPLE	8' HT.		SINGLE-TRUNK SPECIMEN
AAB	10	AMELANCHIER 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	8' HT.		MULTI-STEM SPECIMEN
CVW	7	CRAEAGUS VIRIDIS 'WINTER KING'	THORNLESS COCKSPUR HAWTHORN	8' HT.		MULTI-STEM SPECIMEN
DECIDUOUS SHRUBS						
AIB	15	ARONIA MELANOCARPA 'MORTON'	IROQUOIS BEAUTY CHOKEBERRY	#3 CONT.	36" O.C.	
CAC	28	CLETHRA ALNIFOLIA 'CALEB'	VANILLA SPICE SUMMERSWEET	#3 CONT.	48" O.C.	
CSA	23	CORNUS SERICEA 'FARROW'	ARCTIC FIRE DOGWOOD	#3 CONT.	48" O.C.	
HPB	20	HYDRANGEA PANICULATA 'BOBO'	BOBO HYDRANGEA	#3 CONT.	48" O.C.	
RAG	121	RHUS AROMATICA 'GRO LOW'	GRO-LOW SUMAC	#3 CONT.	48" O.C.	
RKR	32	ROSA 'RADRAZZ'	RADRAZZ KNOCKOUT ROSE	#3 CONT.	48" O.C.	
SPB	21	SYRINGA PENDA 'BLOOMERANG'	BLOOMERANG DWARF LILAC	#3 CONT.	36" O.C.	
EVERGREEN SHRUBS						
BGV	51	BUXUS 'GREEN VELVET'	GREEN VELVET BOXWOOD	#3 CONT.	48" O.C.	
JGO	34	JUNIPERUS VIRGINIANA 'GREY OWL'	GREY OWL COMPACT JUNIPER	#3 CONT.	48" O.C.	
RPJ	10	RHODODENDRON 'PJM'	PJM RHODODENDRON	#3 CONT.	48" O.C.	
ORNAMENTAL GRASSES						
CKF	125	CALAMOGROSTIS X 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#3 CONT.	36" O.C.	
PVS	46	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	#3 CONT.	36" O.C.	
PAH	27	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN DWARF FOUNTAIN GRASS	#1 CONT.	24" O.C.	
SH	65	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1 CONT.	24" O.C.	
PERENNIALS & GROUNDCOVERS						
ASM	172	ALLIUM 'MILLENIUM'	MILLENIUM ALLIUM	#1 CONT.	18" O.C.	
CJ	28	CLEMATIS 'JACKMANI'	JACKMAN'S CLEMATIS	#1 CONT.	48" O.C.	TRAIN AS VINE
EPM	147	ECHINACEA 'CBG CONE2'	PIXIE MEADOWBRITE CONEFLOWER	#1 CONT.	24" O.C.	
GR	40	GERANIUM 'ROZANNE'	ROZANNE GERANIUM	#1 CONT.	24" O.C.	
HHR	48	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	#1 CONT.	24" O.C.	
HSC	78	HEMEROCALLIS 'STRAWBERRY CANDY'	STRAWBERRY CANDY DAYLILY	#1 CONT.	24" O.C.	
LSS	63	LEUCANTHEMUM SUPERBUM 'SNOWCAP'	SNOWCAP SHASTA DAISY	#1 CONT.	18" O.C.	
NCM	54	NEPETA 'CATS MEOW'	CAT'S MEOW NEPETA	#1 CONT.	24" O.C.	
RLG	45	RUDBECKIA 'LITTLE GOLDSTAR'	LITTLE GOLDSTAR BLACK-EYED SUSAN	#1 CONT.	18" O.C.	
SMN	162	SALVIA 'MAY NIGHT'	MAY NIGHT SALVIA	#1 CONT.	18" O.C.	

PROJECT NAME:

MAPLE LEAF CROSSING

PLANNED UNIT DEVELOPMENT
MUNSTER, IN 46321

OWNER NAME:

MAPLE LEAF CROSSING, LLC.

400 FISHER AVENUE
MUNSTER, IN 46321

CONSULTANTS:

TORRENGA ENGINEERING, INC.

907 RIDGE ROAD
MUNSTER, IN 46321

1

06/02/2021

SUBMITTAL & REVISIONS

2

07/15/2021

SCHEMATIC DESIGN

3

06/28/2022

CONSTRUCTION DOCUMENTS

4

05/05/2023

REVISED LOT 7

5

05/16/2023

REVISED SITE PLAN

6

05/17/2023

REVISED PLAN

7

07/07/2023

REVISED SITE PLAN

STAMP:

PLANNED ENVIRONMENT ASSOCIATES

219 299-3383

www.pamilton.com

NON PUBLISHED

REGISTERED

No. LA21200020

STATE OF INDIANA

LANDSCAPE ARCHITECT

[Signature]

EXP: 12/31/2023

TITLE:

PLANTING LISTS & SPECIFICATIONS

SHEET:

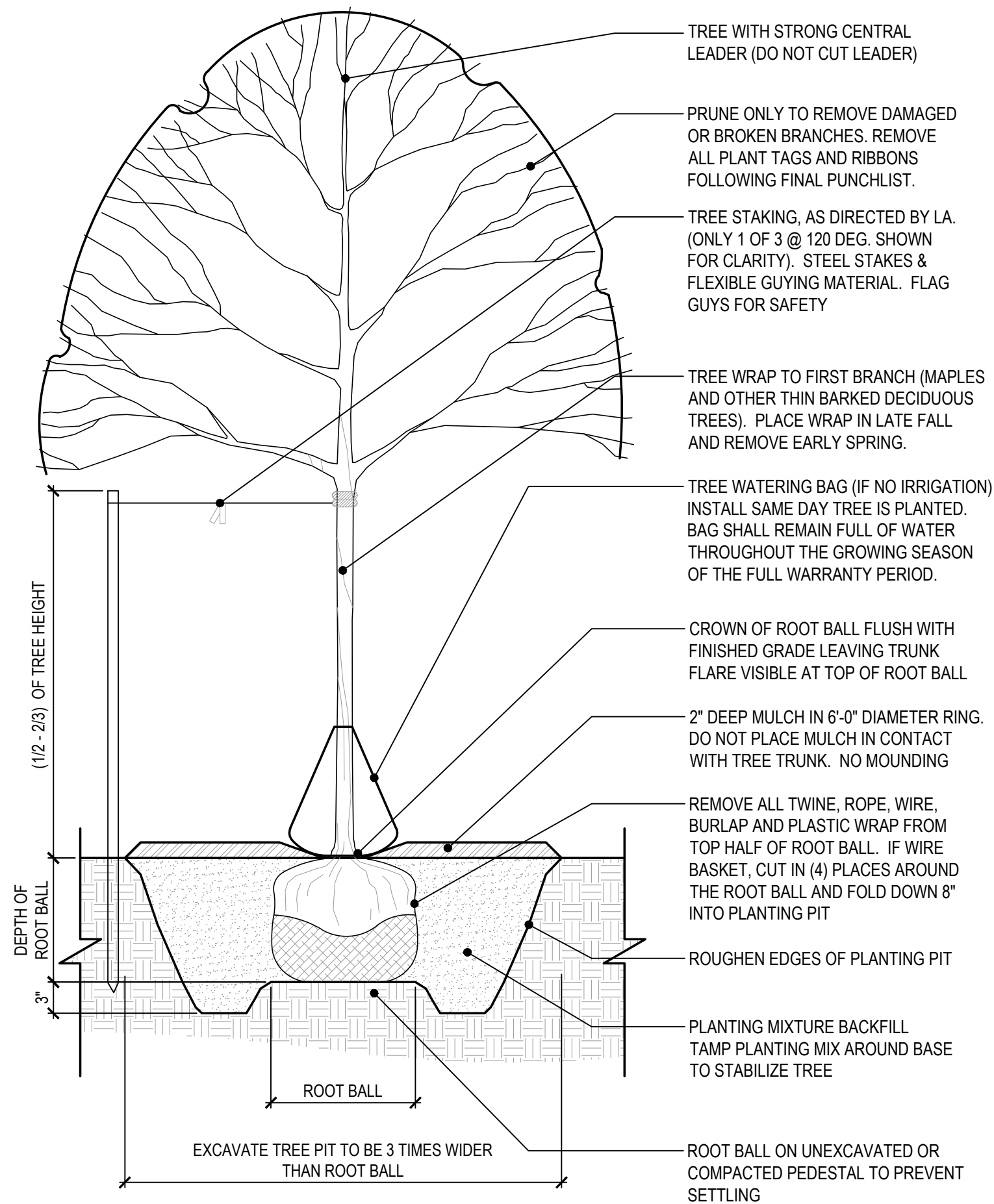
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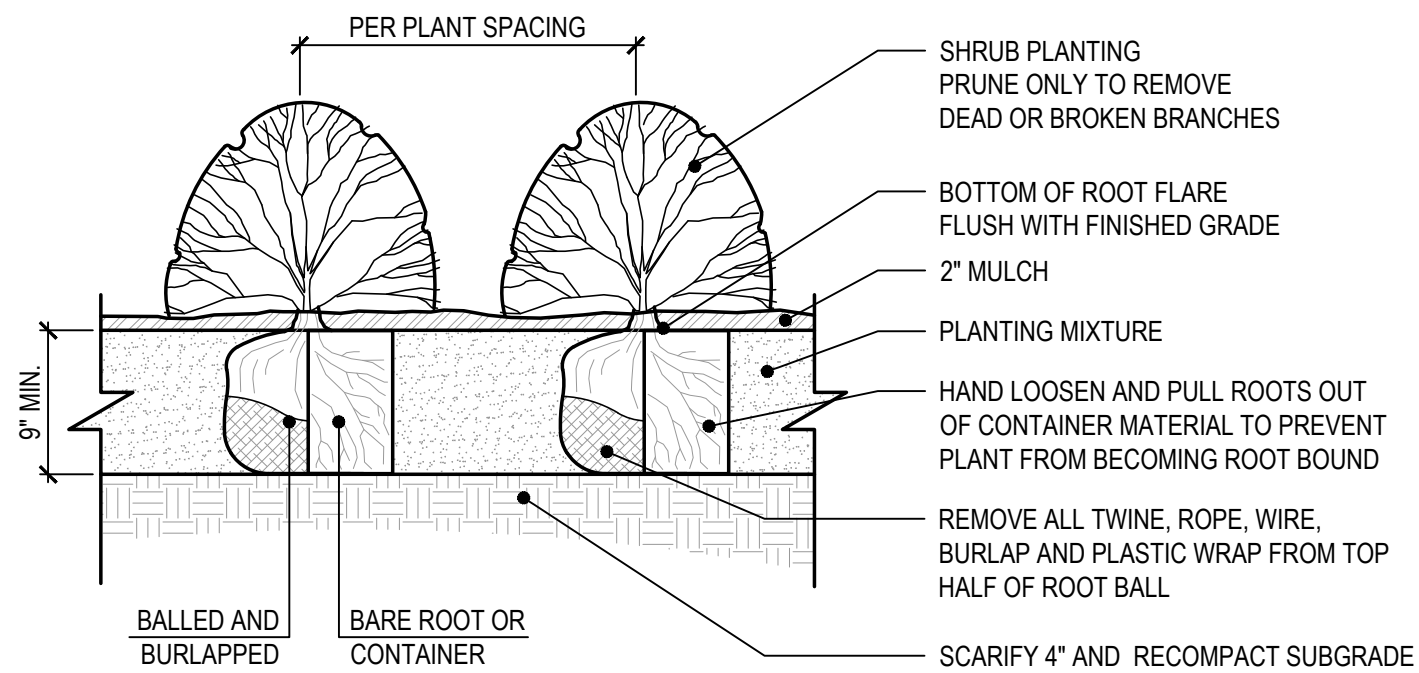
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PROJECT #: 20-027

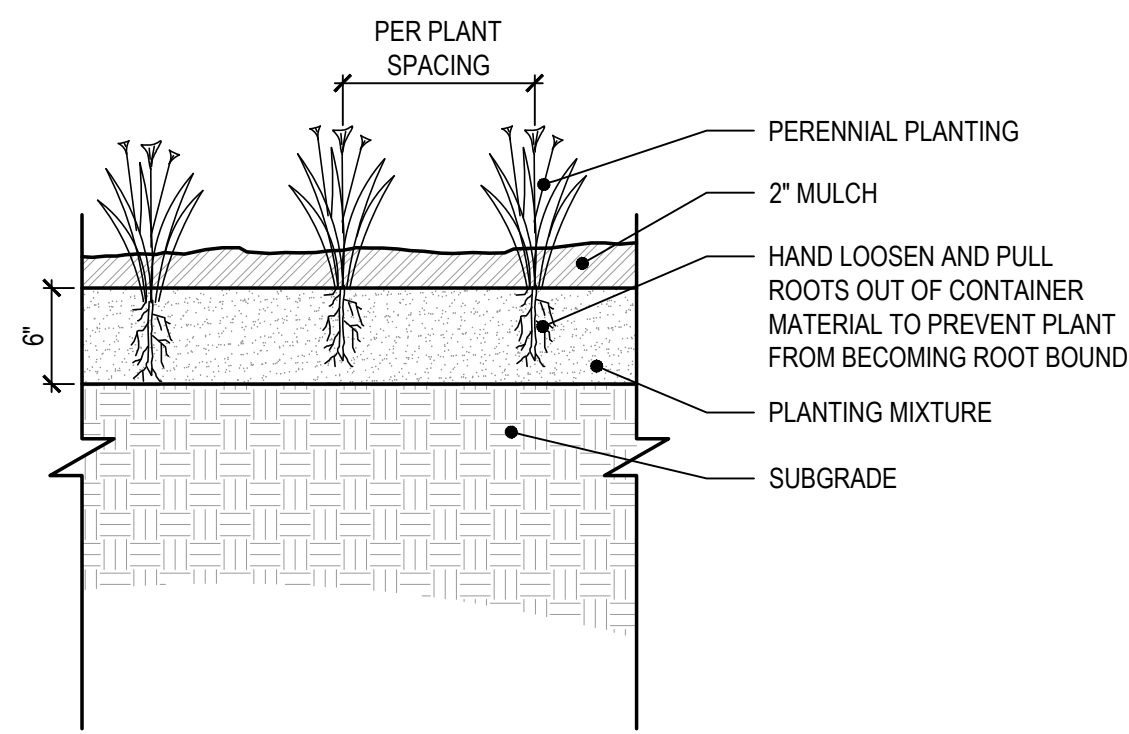
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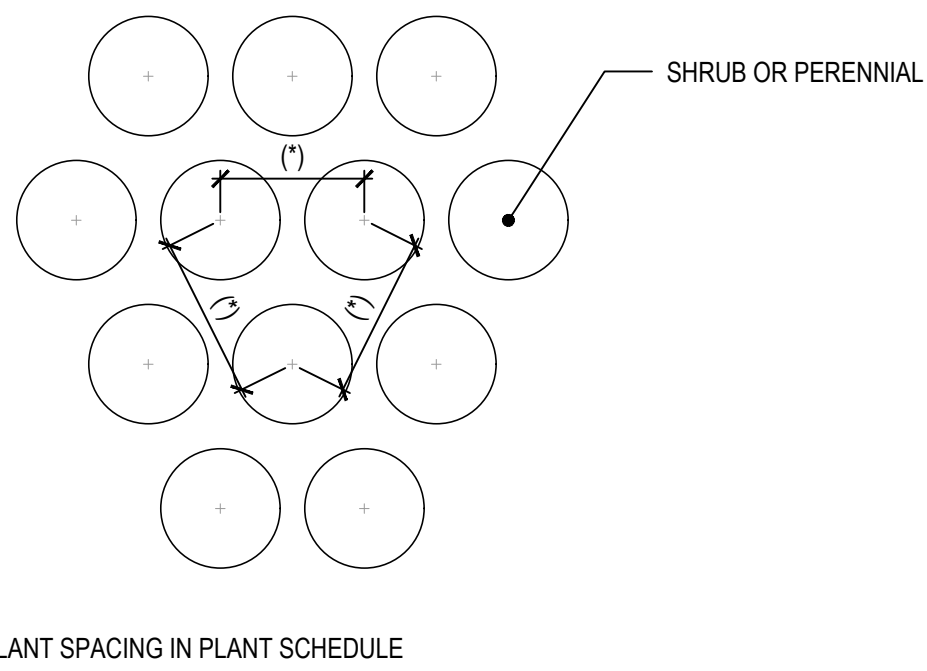
1 TREE PLANTING
SCALE: 1/2" = 1'-0"



2 SHRUB PLANTING
SCALE: 1" = 1'-0"



3 PERENNIAL PLANTING
SCALE: 1" = 1'-0"



4 PLANT SPACING
NOT TO SCALE

PROJECT NAME:
MAPLE LEAF CROSSING
PLANNED UNIT DEVELOPMENT
MUNSTER, IN 46321

OWNER NAME:
MAPLE LEAF CROSSING, LLC.
400 FISHER AVENUE
MUNSTER, IN 46321

CONSULTANTS:
TORRENGA ENGINEERING, INC.
907 RIDGE ROAD
MUNSTER, IN 46321

PLANNED ENVIRONMENT ASSOCIATES
(219) 299-0383
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SUBMITTAL & REVISIONS	
1	06/29/2021 SCHEMATIC DESIGN
2	07/15/2021 CONSTRUCTION DOCUMENTS
3	06/28/2022 REVISED LOT 7
4	05/05/2023 REVISED SITE PLAN
5	05/16/2023 REVISED PLAN
6	05/17/2023 REVISED PLAN
7	07/07/2023 REVISED SITE PLAN

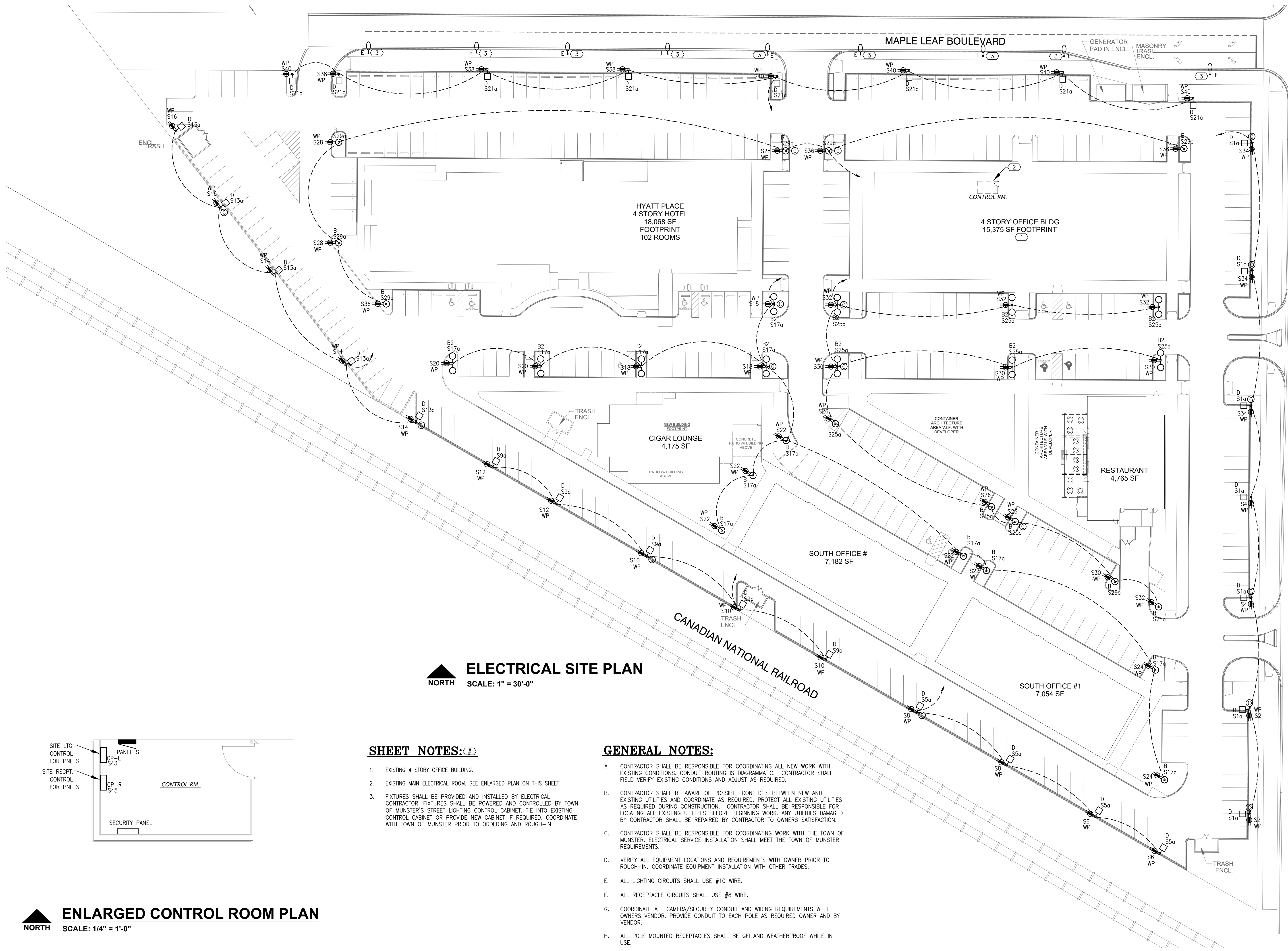
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EXP: 12/31/2023

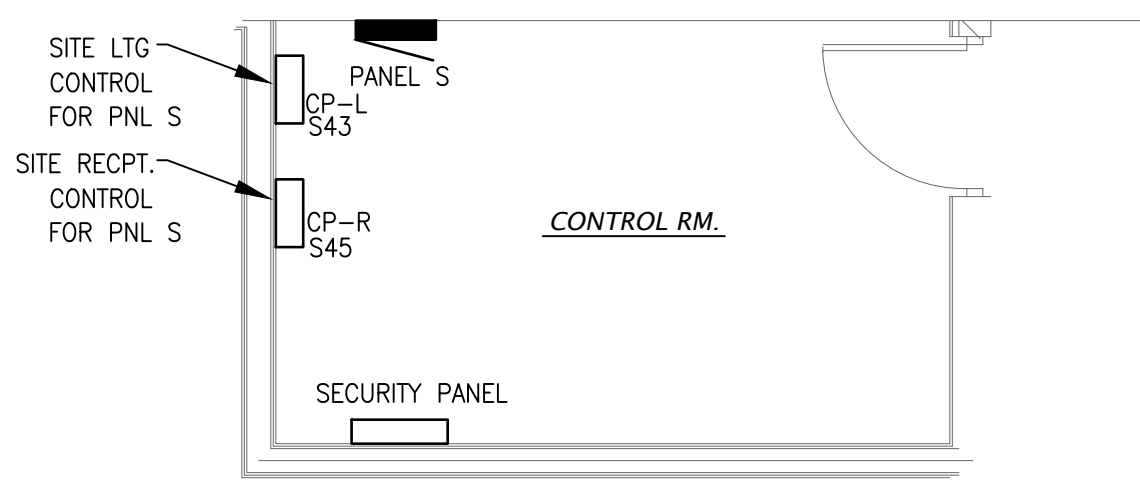
TITLE:
PLANTING DETAILS

SHEET:
L103

DRAWN BY: MD
CHECK BY: JR
PROJECT #: 20-027



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



ENLARGED CONTROL ROOM PLAN
SCALE: 1/4" = 1'-0"

- SHEET NOTES:**
- EXISTING 4 STORY OFFICE BUILDING.
 - EXISTING MAIN ELECTRICAL ROOM. SEE ENLARGED PLAN ON THIS SHEET.
 - FIXTURES SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. FIXTURES SHALL BE POWERED AND CONTROLLED BY TOWN OF MUNSTER'S STREET LIGHTING CONTROL CABINET. TIE INTO EXISTING CONTROL CABINET OR PROVIDE NEW CABINET IF REQUIRED. COORDINATE WITH TOWN OF MUNSTER PRIOR TO ORDERING AND ROUGH-IN.

- GENERAL NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL NEW WORK WITH EXISTING CONDITIONS. CONDUIT ROUTING IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND ADJUST AS REQUIRED.
 - CONTRACTOR SHALL BE AWARE OF POSSIBLE CONFLICTS BETWEEN NEW AND EXISTING UTILITIES AND COORDINATE AS REQUIRED. PROTECT ALL EXISTING UTILITIES AS REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES BEFORE BEGINNING WORK. ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO OWNERS SATISFACTION.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE TOWN OF MUNSTER. ELECTRICAL SERVICE INSTALLATION SHALL MEET THE TOWN OF MUNSTER REQUIREMENTS.
 - VERIFY ALL EQUIPMENT LOCATIONS AND REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN. COORDINATE EQUIPMENT INSTALLATION WITH OTHER TRADES.
 - ALL LIGHTING CIRCUITS SHALL USE #10 WIRE.
 - ALL RECEPTACLE CIRCUITS SHALL USE #8 WIRE.
 - COORDINATE ALL CAMERA/SECURITY CONDUIT AND WIRING REQUIREMENTS WITH OWNERS VENDOR. PROVIDE CONDUIT TO EACH POLE AS REQUIRED OWNER AND BY VENDOR.
 - ALL POLE MOUNTED RECEPTACLES SHALL BE GFI AND WEATHERPROOF WHILE IN USE.

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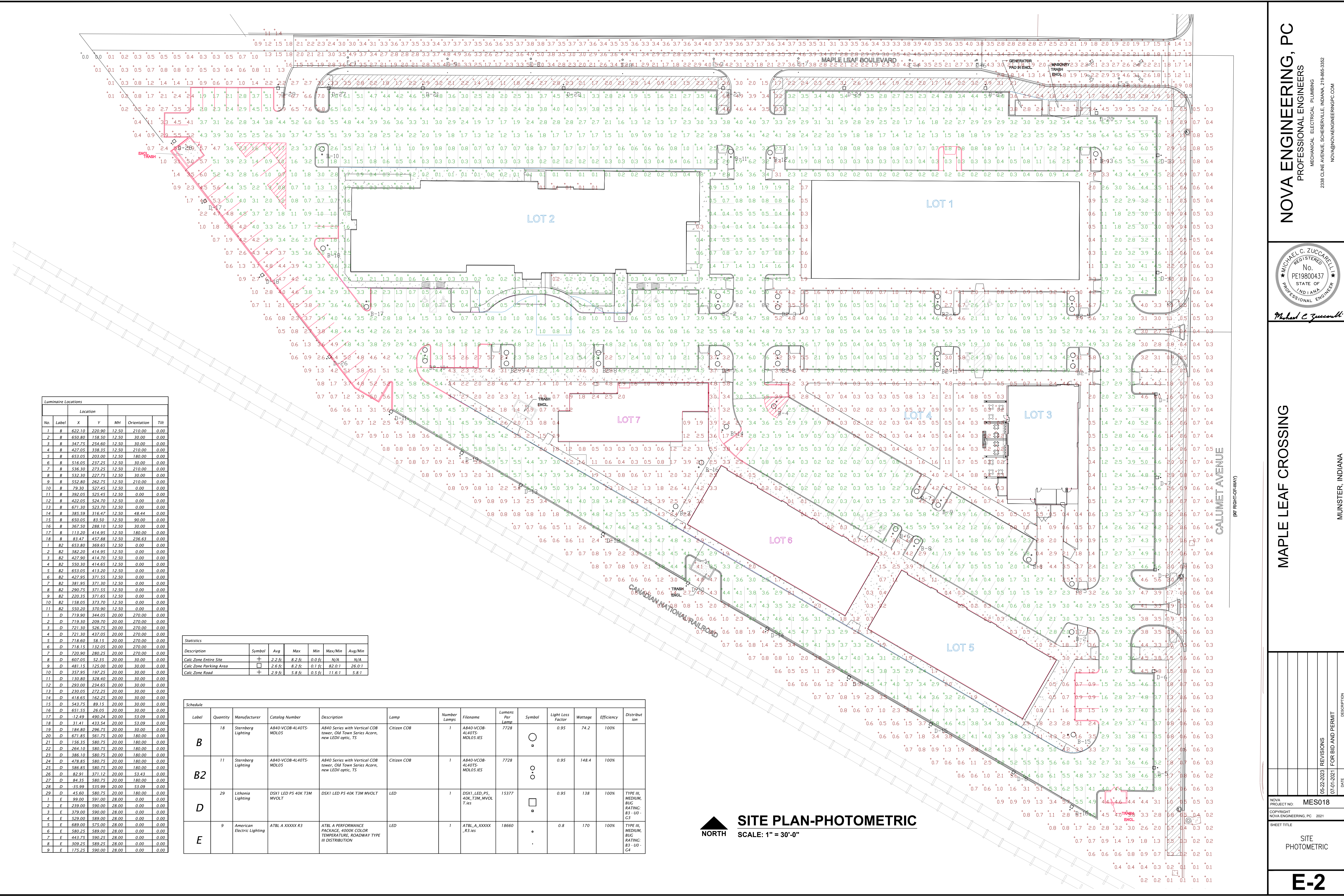
MICHAEL C. ZUCCARELLI
REGISTERED
No. PE19800437
STATE OF INDIANA
PROFESSIONAL ENGINEER
Michael C. Zuccarelli

MAPLE LEAF CROSSING
(90' RIGHT-OF-WAY)

MUNSTER, INDIANA

NOVA PROJECT NO:	MES018
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SHEET TITLE	ELECTRICAL SITE PLAN
DATE	05-22-2023
REVISIONS	07-01-2021 FOR BID AND PERMIT
DESCRIPTION	

E-1



Luminaire Locations					
		Location			
No.	Label	X	Y	MH	Orientation
1	B	622.10	220.90	12.50	210.00 0.00
2	B	650.80	158.50	12.50	30.00 0.00
3	B	347.75	254.60	12.50	30.00 0.00
4	B	427.05	338.35	12.50	210.00 0.00
5	B	653.05	203.00	12.50	180.00 0.00
6	B	516.05	237.25	12.50	30.00 0.00
7	B	536.30	273.25	12.50	210.00 0.00
8	B	532.30	227.75	12.50	30.00 0.00
9	B	552.80	262.75	12.50	210.00 0.00
10	B	79.30	327.45	12.50	0.00 0.00
11	B	392.05	525.45	12.50	0.00 0.00
12	B	422.05	224.70	12.50	0.00 0.00
13	B	671.30	523.70	12.50	0.00 0.00
14	B	385.59	316.47	12.50	48.44 0.00
15	B	650.05	83.50	12.50	90.00 0.00
16	B	367.50	288.10	12.50	30.00 0.00
17	B	113.20	414.95	12.50	180.00 0.00
18	B	83.47	437.88	12.50	236.63 0.00
1	B2	653.80	169.65	12.50	0.00 0.00
2	B2	382.20	414.95	12.50	0.00 0.00
3	B2	427.90	414.70	12.50	0.00 0.00
4	B2	550.30	414.65	12.50	0.00 0.00
5	B2	653.05	413.20	12.50	0.00 0.00
6	B2	427.95	371.55	12.50	0.00 0.00
7	B2	381.95	371.30	12.50	0.00 0.00
8	B2	290.75	371.55	12.50	0.00 0.00
9	B2	220.35	371.65	12.50	0.00 0.00
10	B2	158.05	373.70	12.50	0.00 0.00
11	B2	550.20	370.90	12.50	0.00 0.00
1	D	719.90	344.05	20.00	270.00 0.00
2	D	719.30	209.70	20.00	270.00 0.00
3	D	721.30	526.75	20.00	270.00 0.00
4	D	721.30	437.05	20.00	270.00 0.00
5	D	718.60	58.15	20.00	270.00 0.00
6	D	718.15	132.05	20.00	270.00 0.00
7	D	720.90	280.25	20.00	270.00 0.00
8	D	607.05	52.35	20.00	30.00 0.00
9	D	481.15	125.00	20.00	30.00 0.00
10	D	352.95	192.25	20.00	30.00 0.00
11	D	130.80	238.40	20.00	30.00 0.00
12	D	293.00	234.65	20.00	30.00 0.00
13	D	230.05	272.25	20.00	30.00 0.00
14	D	418.65	162.25	20.00	30.00 0.00
15	D	543.75	89.15	20.00	30.00 0.00
16	D	651.35	26.05	20.00	30.00 0.00
17	D	12.49	490.24	20.00	53.09 0.00
18	D	31.41	433.54	20.00	53.09 0.00
19	D	184.80	296.75	20.00	30.00 0.00
20	D	671.85	561.75	20.00	180.00 0.00
21	D	156.35	580.75	20.00	180.00 0.00
22	D	264.10	580.75	20.00	180.00 0.00
23	D	386.10	580.75	20.00	180.00 0.00
24	D	478.85	580.75	20.00	180.00 0.00
25	D	586.85	580.75	20.00	180.00 0.00
26	D	82.91	371.12	20.00	53.43 0.00
27	D	84.35	380.75	20.00	180.00 0.00
28	D	35.99	535.99	20.00	53.09 0.00
29	D	45.60	580.75	20.00	180.00 0.00
1	E	99.00	391.00	28.00	0.00 0.00
2	E	239.00	590.00	28.00	0.00 0.00
3	E	379.00	590.00	28.00	0.00 0.00
4	E	529.00	589.00	28.00	0.00 0.00
5	E	689.00	575.00	28.00	0.00 0.00
6	E	580.25	589.00	28.00	0.00 0.00
7	E	443.75	590.25	28.00	0.00 0.00
8	E	309.25	589.25	28.00	0.00 0.00
9	E	175.25	590.00	28.00	0.00 0.00

Statistics					
Description	Symbol	Avg	Max	Min	Max/Min
Calc Zone Entire Site	+	2.2 fc	8.2 fc	0.0 fc	N/A
Calc Zone Parking Area	□	2.6 fc	8.2 fc	0.1 fc	82.0:1
Calc Zone Road	+	2.9 fc	5.8 fc	0.5 fc	11.6:1

Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Luminaire	Symbol	Light Loss Factor	Wattage	Efficiency	Distribut ion
B	18	Sternberg Lighting	A840-VC0B-4L40TS-MDL05	A840 Series with Vertical COB tower, Old Town Series Acorn, new LEDLI optic, TS	Citizen COB	1	A840-VC0B-4L40TS-MDL05.IES	7728		0.95	74.2	100%	
B2	11	Sternberg Lighting	A840-VC0B-4L40TS-MDL05	A840 Series with Vertical COB tower, Old Town Series Acorn, new LEDLI optic, TS	Citizen COB	1	A840-VC0B-4L40TS-MDL05.IES	7728		0.95	148.4	100%	
D	29	Lithonia Lighting	DSX1 LED P5 40K T3M MVOLT	DSX1 LED P5 40K T3M MVOLT	LED	1	DSX1_LED_PS_40K_T3M_MVOL T.IES	15377		0.95	138	100%	TYPE III, MEDIUM, BUC RATING: B3 - U0 - G3
E	9	American Electric Lighting	ATBLA XXXXX R3	ATBLA PERFORMANCE PACKAGE, 4000K COLOR TEMPERATURE, ROADWAY TYPE III DISTRIBUTION	LED	1	ATBLA_XXXXX_R3.IES	18660		0.8	170	100%	TYPE III, MEDIUM, BUC RATING: B3 - U0 - G4



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

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REGISTERED
No.
PE19800437
STATE OF
INDIANA
PROFESSIONAL ENGINEER
Michael C. Zuccarelli

MAPLE LEAF CROSSING

REVISIONS
05-22-2023
07-01-2021
FOR BID AND PERMIT
DATE
DESCRIPTION

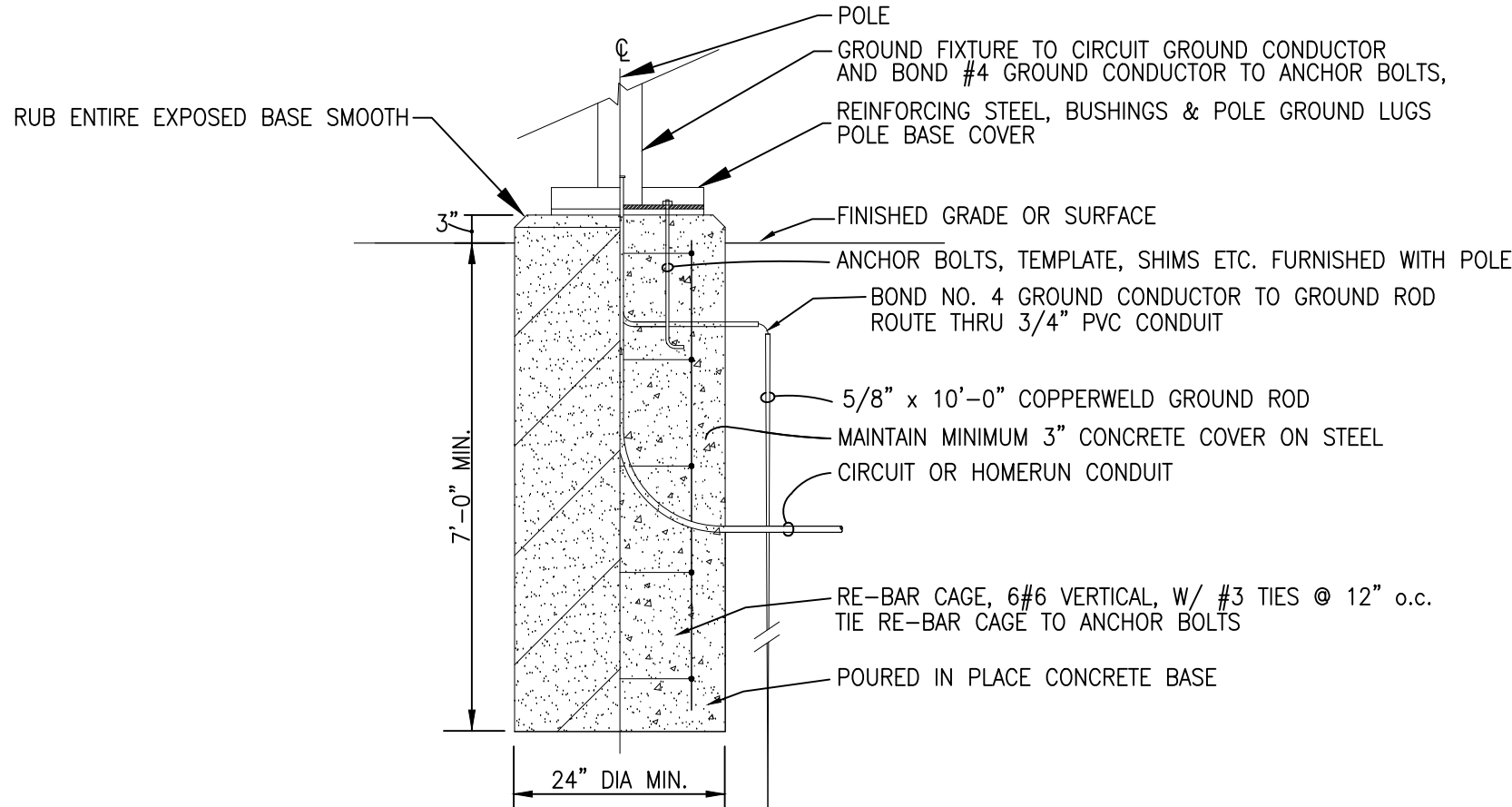
NOVA PROJECT NO: MES018
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SHEET TITLE SITE PHOTOMETRIC

E-2

SPECIFICATIONS			
GENERAL 1. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS NECESSARY TO PROVIDE A COMPLETE INSTALLATION OF THE SYSTEMS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. 2. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND COMPLY WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES AND ORDINANCES AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY. ALL EQUIPMENT SHALL BE U.L. (OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY) LISTED. 3. ALL DRAWINGS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL INSTALL SYSTEMS TO MEET FIELD CONDITIONS. CONTRACTOR SHALL COORDINATE ALL WORK WITH RESPECTIVE TRADES, AND VERIFY LOCATIONS FROM THE ARCHITECTURAL DRAWINGS, SUPPLIER DRAWINGS, AND FIELD DIMENSIONS. CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF THE WORK AND THE WORKING CONDITIONS. 4. THE DRAWINGS AND SPECIFICATIONS HAVE BEEN DEVELOPED FOR ONE (1) PRIME CONTRACTOR. THEY ARE NOT INTENDED TO DIVIDE THE WORK BETWEEN CONTRACTORS. COORDINATE INTERFACES WITH GENERAL CONTRACTOR. 5. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL REQUIREMENTS FOR THE FOLLOWING EQUIPMENT WITH THE ASSOCIATED VENDOR AND/OR CONTRACTOR AND THE AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN: A. OWNER PROVIDED SECURITY EQUIPMENT/CAMERAS PERMITS OBTAIN AND PAY FOR ALL LICENSES, PERMITS AND INSPECTIONS FOR ALL WORK COVERED BY THIS CONTRACT. ALL CERTIFICATES OF INSPECTION SHALL BE DELIVERED TO THE OWNER. CONSTRUCTION POWER PROVIDE TEMPORARY POWER AND LIGHTING FOR THE JOB SITE DURING CONSTRUCTION. ELECTRICAL TIE-INS COORDINATE WITH THE BUILDING OWNER FOR THE FURNISHING OF ELECTRICAL POWER FOR THE PROJECT OPENINGS 1. PROVIDE ALL REQUIRED OPENINGS THROUGH WALLS, CEILINGS AND FLOORS. 2. ALL DISTURBED SURFACES OR FINISHES MUST BE REPLACED OR REPAIRED TO THE ARCHITECT'S SATISFACTION. 3. FIRE SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS. CONDUIT 1. ALL ELECTRICAL WORK SHALL BE INSTALLED IN A METAL CONDUIT SYSTEM, INCLUDING LOW VOLTAGE WIRING. 2. SERVICE ENTRANCE CONDUIT, EXTERIOR CONDUIT AND CONDUIT EXPOSED TO WEATHER AND SHALL BE RIGID GALVANIZED STEEL. 3. CONDUIT IN WET LOCATIONS SHALL BE RIGID GALVANIZED STEEL. 4. UNDERGROUND FEEDER AND UNDERGROUND BRANCH CONDUITS SHALL BE RIGID GALVANIZED STEEL OR SCHEDULE 40 PVC AS PERMITTED BY CODE. RIGID GALVANIZED STEEL CONDUIT SHALL BE USED FOR MAKING FINAL TURNS OUT OF EQUIPMENT PADS AND FINISHED FLOOR. EXTERIOR UNDERGROUND CONDUITS SHALL BE INSTALLED 36" BELOW GRADE. CONDUIT BELOW CONCRETE FLOOR SLAB SHALL BE A MINIMUM OF 6" BELOW BOTTOM OF SLAB. 5. ALL CONDUIT IN DRY LOCATIONS SHALL BE EMT. 6. MINIMUM SIZE CONDUIT ABOVE GRADE SHALL BE 1/2". MINIMUM SIZE CONDUIT BELOW GRADE SHALL BE 3/4". 7. ALL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED. CONDUITS SHALL NOT BE SUPPORTED FROM MECHANICAL SYSTEMS OR CEILING SUSPENSION WIRES. 8. ALL CONDUITS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE EXPOSED, CONDUITS SHALL BE RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO BUILDING CONSTRUCTION. WIRE (120V AND ABOVE): 1. ALL WIRE SHALL BE COPPER WITH 600V INSULATION. CONDUCTORS SHALL BE STRANDED FOR SIZES NO. 8 AWG AND LARGER, SOLID FOR SIZES NO. 10 AWG AND SMALLER. 2. TYPE THWN SHALL BE USED INDOORS NOT INCLUDING SERVICES. 3. TYPE XHHW SHALL BE USED BELOW SLABS, SERVICE ENTRANCES AND EXTERIOR UNDERGROUND WORK, INCLUDING SITE LIGHTING. 4. MINIMUM SIZE SHALL BE #12. RUNS OVER 75' SHALL BE MINIMUM #10 UNLESS NOTED OTHERWISE. SPLICES AND TERMINATIONS 1. ALL SPLICES AND PITGAL CONNECTIONS FOR INDOOR AND DRY LOCATIONS FOR CABLE SIZES NUMBER 10 AWG AND SMALLER SHALL BE MADE UP WITH PREINSULATED SPRING CONNECTORS, 3M COMPANY "SCOTCHLOCK," IDEAL INDUSTRIES, INC., WIRENUTS, OR APPROVED EQUAL. SPLICES FOR CABLE		SIZES NUMBER 8 AWG AND LARGER SHALL BE BUTT SPlice TYPE CONSISTING OF LONG BARREL COPPER ONLY TYPE COMPRESSION CONNECTOR. SPlice SHALL BE COVERED WITH EITHER A COLD SHRINK CONNECTOR INSULATOR OR HEAT SHRINK CONNECTOR INSULATOR. 2. ALL SPLICES OUTDOORS, ABOVE GRADE, SUCH AS IN LIGHT POLES, SHALL BE A WATERPROOF TWIST CONNECTOR. IDEAL WEATHERPROOF OR EQUAL. 3. ALL SPLICES OUTDOORS BELOW GRADE, SUCH AS IN UNDERGROUND PULL BOXES, SHALL BE MADE USING MOISTURE RESISTANT GEL ENCAPSULATED SPlice KIT. ACCEPTABLE MANUFACTURERS SHALL BE RAYCHEM, BURNDY OR 3M. BRANCH WIRING: 1. CONDUITS AND BOXES SHALL BE CONCEALED WHEREVER POSSIBLE. 2. CONNECT EQUIPMENT AND DEVICES TO THE CIRCUITS AND SWITCH LEGS SHOWN. 3. ARCS SHOWN ON DRAWINGS REPRESENT SWITCH ARRANGEMENT ONLY, AND ARE NOT INTENDED TO SHOW CONDUIT ROUTINGS. 4. EACH CIRCUIT SHALL HAVE AN INDEPENDENT NEUTRAL. 5. AMPACITIES OF CONDUCTORS WHEN MORE THAN THREE (3) CURRENT -CARRYING CONDUCTORS ARE PLACED IN A RACEWAY SHALL BE DERATED PER CODE. 6. WHERE WIRE SIZES MUST BE INCREASED TO LIMIT VOLTAGE DROP, CONTRACTOR SHALL COORDINATE TERMINAL SIZES AT TERMINATIONS. LIGHTING FIXTURES: 1. FURNISH FIXTURES AND LAMPS AS SPECIFIED IN THE FIXTURE SCHEDULE. 2. PROVIDE ADEQUATE SUPPORT FOR ALL FIXTURES. SITE LIGHTING 1. FUSE HOLDERS AND FUSES SHALL BE PROVIDED FOR ALL UNGROUNDED CONDUCTORS IN THE BASE OF EACH EXTERIOR SITE LIGHTING POLE. THE ASSEMBLY SHALL BE PROVIDED WITH INSULATING BOOTS. 2. FUSE HOLDERS USED IN MULTI-POLE APPLICATIONS, SUCH AS A 480 VOLT PHASE-TO-PHASE FEED TO A 480 VOLT LOAD, SHALL BE OF THE MULTI-POLE TYPE SO THAT ALL PHASE CONDUCTORS ARE DISCONNECTED AT THE SAME TIME. 3. FUSE HOLDERS FOR NEUTRAL CONDUCTORS SHALL HAVE A PERMANENTLY-INSTALLED SOLID NEUTRAL CONDUCTOR AND A WHITE PLASTIC COUPLING NUT AND SCREW SECTION. 4. THE TERMINALS AND THE CONTACTS IN THE FUSEHOLDER SHALL BE MADE OF ANNEALED COPPER. THE CONTACTS SHALL BE SPRING LOADED TO EXERT CONTACT PRESSURE ON MATING PARTS. 5. THE UNIT SHALL HAVE AN "O" RING WHICH SHALL PROVIDE A WATER AND VAPORTIGHT SEAL WHEN THE SECTIONS ARE JOINED. 6. FUSES SHALL BE RATED FOR 600 VOLTS, AC SMALL-DIMENSION CYLINDRICAL FUSES OF THE FAST-ACTING TYPE WITH CURRENT LIMITING CHARACTERISTICS. FUSES SHALL BE 10 AMPERE. PANELBOARDS: 1. PROVIDE NAMEPLATE FOR PANEL AND TYPEWRITTEN DIRECTORY FOR EACH PANELBOARD. 2. EXISTING PANELBOARD SHALL BE CLEANED AND REUSED. 3. TORQUE ALL EXISTING CONNECTIONS. 4. EXISTING FUNCTIONAL BREAKERS MAY BE REUSED. ADD ADDITIONAL BREAKERS WHERE NECESSARY. MATCH EXISTING. CONTROL PANELS (CP-L & CP-R): 1. PROVIDE VOLTAGE & RELAYS AS SHOWN ON THE DRAWINGS. 2. BUILT-IN LCD PROGRAMMING DISPLAY. 3. INDIVIDUAL DAILY SCHEDULING, 7 DAY REPEAT, WITH HOLIDAY SCHEDULE PROVISIONS. 4. ASTRONOMIC CLOCK WITH AUTOMATIC DAYLIGHT SAVINGS TIME. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED USING ASTRONOMIC CLOCK. 5. OVERRIDE SWITCH ON COVER. 6. INPUT AND LOAD TERMINALS SHALL ACCOMMODATE LARGER WIRE SIZES WHERE WIRE SIZES ARE INCREASED TO LIMIT VOLTAGE DROP. 7. MULTIPLE PANELS IF REQUIRED TO SUPPLY QUANTITY OF RELAYS INDICATED. 8. CONTRACTOR SHALL VERIFY TIME SCHEDULES WITH OWNER AND PROGRAM SYSTEM ACCORDINGLY. 9. PROVIDE A FACTORY-CERTIFIED FIELD SERVICE ENGINEER TO CONDUCT THREE SEPARATE SITE VISITS: A. ONE SITE VISIT TO CONDUCT A PRE-PROGRAMMING SESSION WITH THE OWNER IN ORDER TO EXPLAIN THE SYSTEM'S CAPABILITIES AND TO COORDINATE THE OWNERS PROGRAMMING DIRECTIONS. B. ONE SITE VISIT TO ENSURE PROPER SYSTEM INSTALLATION AND OPERATION AND TO PROGRAM THE SYSTEM. C. ONE SITE VISIT TO PROVIDE A MINIMUM OF FOUR HOURS OF TRAINING FOR THE OWNER'S REPRESENTATIVE. D. PROVIDE THE OWNER WITH ADVANCE NOTICE OF A MINIMUM OF TWO WEEKS PRIOR TO THE SCHEDULE OF THE SITE VISITS. INSTRUCTION MANUALS SHALL BE DELIVERED TO THE OWNER PRIOR TO THE TRAINING SESSION. 15. A TYPEWRITTEN DIRECTORY SHALL BE FURNISHED AND INSTALLED ON THE FRONT OF THE PANEL. DIRECTORY SHALL INDICATE THE CIRCUIT NUMBER, LOAD SERVED, AND TIME SETTINGS FOR EACH RELAY.	
16. SYSTEM SHALL BE LUTRON XPS OR EQUAL. GROUNDING: 1. GROUNDING SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITY. 2. VERIFY CODE COMPLIANCE OF EXISTING GROUNDING SYSTEM, AND MAKE NECESSARY CHANGES TO BRING INTO COMPLIANCE CONTROL CABINET (VERIFY WITH TOWN OF MUNSTER): 1. IDOT APPROVED. 2. PANELBOARD SHALL BE 65KAC SERIES RATED. 3. MAIN C/B AND BRANCH C/B'S AS LISTED. 4. NEUTRAL BUS. 5. GROUND BUS. 6. INCOMING AND OUTGOING TERMINALS, SIZED FOR WIRING SHOWN. 7. SITE LIGHTING SHALL BE CONTROLLED BY TIME CLOCK. SET TIME CLOCK ON/OFF TIMES AS INSTRUCTED BY OWNER. EACH CHANNEL SHALL BE ABLE TO BE SET TO DIFFERENT SCHEDULES. TIME CLOCK SHALL BE BY TORK OR EQUAL. 8. SWITCHED LED LIGHT FIXTURE. 9. SURGE ARRESTOR. 10. POWER WIRING SHALL BE RHH/RHW, 600V. 11. CONTROL WIRING SHALL BE #12 MTW. ALL CONTROL WIRING SHALL BE STRANDED AND MARKED WITH BRADY MARKERS. 12. ONE GFI RECEPTABLES INSIDE CABINET. 13. HOFFMAN #DAH1001A HEATER WITH BUILT-IN THERMOSTAT. 14. ENCLOSURE SHALL BE CONSOLE TYPE NEMA 4X, 14 GAUGE TYPE 304 STAINLESS STEEL. NOMINAL DIMENSIONS: 50"H X 30"W X 17"D. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL. GASKETED DOOR WITH PROVISIONS FOR PADLOCKING. DOORS SHALL BE EQUIPPED WITH THREE-POINT LATCHING. 15. 6" X 11" STAINLESS STEEL NAMEPLATE. 16. MOUNTED ON CONCRETE FOUNDATION. 17. ANCHOR BOLTS SHALL COMPLY WITH ASTM A576. PROVIDE 4 ANCHOR BOLT FOR EACH CONTROLLER. 18. SHALL BE UL LISTED. 19. SHALL BE AS MANUFACTURED BY EXCEL LTD OR LIGHTMATIC LIGHTING CONTROLS IDENTIFICATION 1. THE CONTRACTOR SHALL LABEL EQUIPMENT WITH 1/2" DYMO TAPE. 2. ALL MAJOR ELECTRICAL EQUIPMENT SHALL BE IDENTIFIED WHICH SHALL INCLUDE MDP, PANELBOARDS, MOTOR STARTERS, DISCONNECT SWITCHES, SWITCHES, ETC. 3. PROTECTIVE DEVICES IN MDP'S SHALL BE LABELLED WITH THE LOAD SERVED. 4. PROVIDE PANEL AND CIRCUIT NUMBER IDENTIFICATION ON ALL JUNCTION AND PULL BOXES. 5. APPLY THE FACTORY SUPPLIED ARC FLASH WARNING LABELS TO ALL SWITCHBOARDS AND PANELS AS REQUIRED PER NEC 110.16. 6. PROVIDE CIRCUIT IDENTIFICATION ON COVER PLATES. 7. PROVIDE NEW TYPEWRITTEN SCHEDULES FOR PANELBOARDS. AS-BUILT DRAWINGS: 1. PROVIDE AS-BUILT DRAWINGS TESTS: 1. UPON COMPLETION OF WORK, TEST EACH SYSTEM TO BE FREE OF GROUNDS AND/OR FAULTS. TEST FOR PROPER OPERATION. IF ANY DEFECTS ARE FOUND, TAKE IMMEDIATE ACTION TO REMEDY. 2. CHECK ALL FIXTURES FOR BURNT OUT OR DAMAGED LAMPS AND REPLACE. GUARANTEE: CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WIRING TO BE FREE FROM MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. SHOP DRAWINGS SUBMIT SHOP DRAWINGS FOR THE FOLLOWING EQUIPMENT FOR APPROVAL BY THE ENGINEER: 1. WIRING DEVICES 2. LIGHT FIXTURES 3. EXTERIOR LIGHTING CONTROLLER 4. PARKING LOT POLES		TYPE B DECORATIVE SINGLE POLE FIXTUR, HEIGHT OF POLE + BASE SHALL BE 12.5'. FINISH SELECTED BY OWNER, WITH GFCI RECEPTACLE. SYMMETRIC DISTRIBUTION, 75 WATTS FOR SINGLE LAMP, SHAFT SELECTION BY OWNER/ARCHITECT, GFCI RECEPTACLE HEIGHT SHALL BE AS REQUIRED BY OWNER, CAMERA MOUNT (SH) TYPE AND REQUIREMENTS SHALL BE VERIFIED WITH OWNER PRIOR TO ORDERING, BLACK. STERNBERG #PT-AB40-VC0B-5P-VC0B-4L-40-TS-MDL05-A-*FINISH* WITH POLE #6212*SHAFT*-125-GFIUC-*FINISH*-SH TYPE B2 DECORATIVE DOUBLE HEADED, HEIGHT OF POLE + BASE SHALL BE 12.5'. FINISH SELECTED BY OWNER, WITH GFCI RECEPTACLE. SYMMETRIC DISTRIBUTION, 75 WATTS EACH LAMP, 150 WATTS TOTAL. SHAFT SELECTION BY OWNER/ARCHITECT, GFCI RECEPTACLE HEIGHT SHALL BE AS REQUIRED BY OWNER, CAMERA MOUNT (SH) TYPE AND REQUIREMENTS SHALL BE VERIFIED WITH OWNER PRIOR TO ORDERING, VERIFY ARM MOUNT WITH OWNER, BLACK. STERNBERG #PT-AB40-VC0B-5P-VC0B-4L-40-TS-MDL05-A-*FINISH* WITH ARM MOUNT #TAPM WITH POLE #9228-S-RTS-RSBS-BKT TYPE D 4000K, TYPE 3 MEDIUM DISTRIBUTION, 138 WATTS, HEIGHT OF POLE + BASE SHALL BE 20', BLACK LITHONIA DSX1 LED P5 40K T3M MVOLT RPA *FINISH* W/ POLE# RSS 20 5C DM19AS *FINISH* FDLxy CPL34/xy TYPE E ROADWAY TYPE 2, 19,000 LUMENS, 4000K, WITH RECEPTACLE PHOTOCELL, VERIFY FINISH, POLE HEIGHT, ARM LENGTH, ETC. WITH THE TOWN OF MUNSTER. AMERICAN ELECTRIC ATBL A 1MVOLT R2 P5 BK WITH STERNBERG ARM# CAS-8-BKT WITH STERNBERG POLE# 9228-S-RTS-RSBS-BKT *SELECT FIXTURES SHALL BE EQUIPPED WITH A MOUNTING BRACKET FOR SECURITY CAMERAS. VERIFY ALL REQUIREMENTS WITH OWNERS CAMERA/SECURITY VENDOR AND PROVIDE ALL MOUNTING ACCESSORIES AS REQUIRED.	

SHEET NOTES

- VERIFY LOCATION OF SIGN WITH OWNER. VERIFY ELECTRICAL REQUIREMENTS WITH OWNER.
- ALL LIGHT POLE BASE TYPES SHALL BE VERIFIED WITH OWNER PRIOR TO ROUGH-IN.



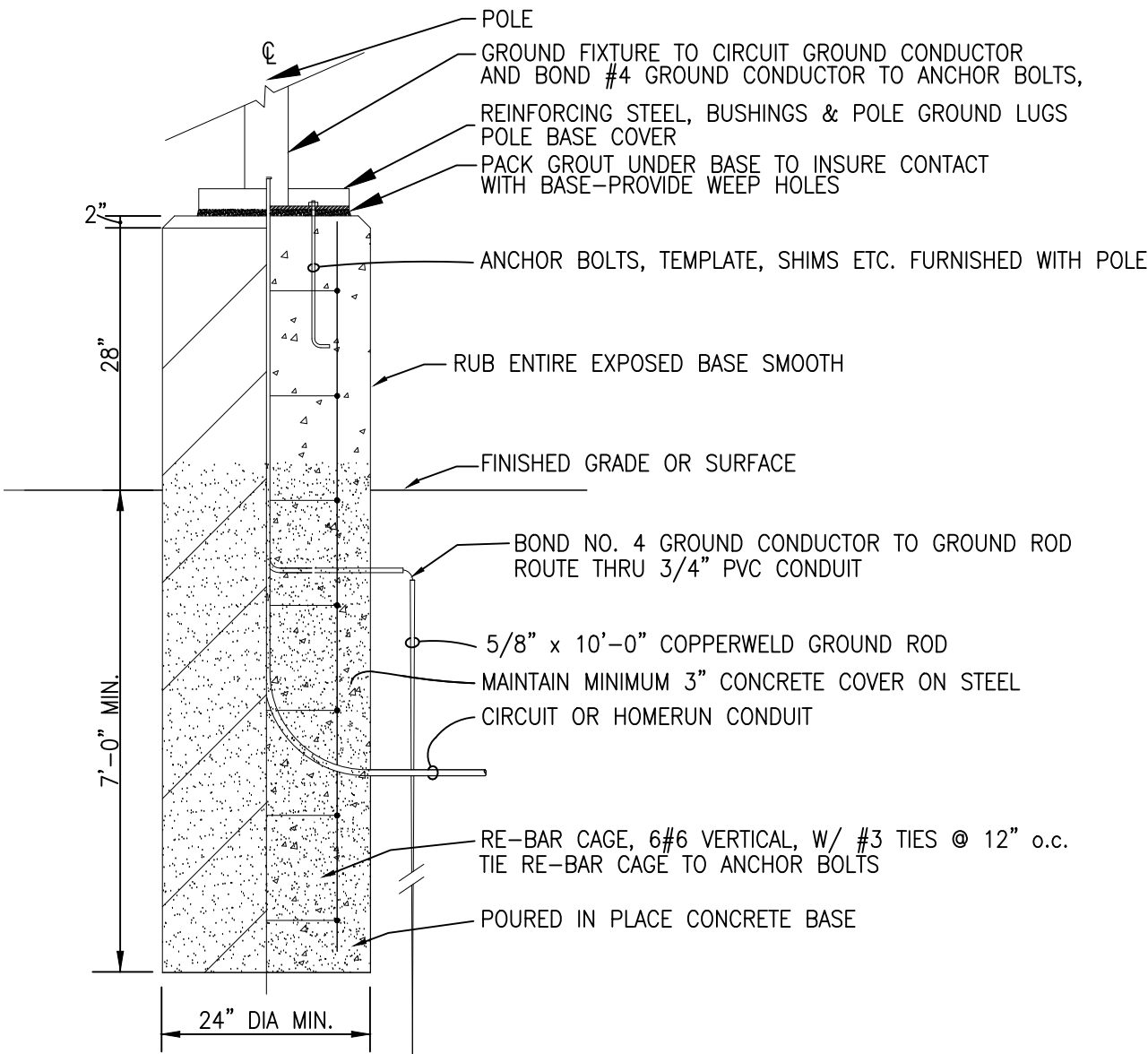
ORNAMENTAL LIGHT BASE

2 | DETAIL FOR FIXTURES B, B2 & E

NO SCALE

NOTES:

- BASE TO SET ON UNDISTURBED SOIL.
- SET ALL FIXTURES TRUE & PLUMB.
- DESIGNS BY STRUCTURAL ENGINEER SHALL BE FOLLOWED.
- VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION.
- COMPACTABLE BACKFILL TO 95%.
- 3000 PSI 28 DAY STRENGTH CONCRETE.
- HOLE FOR BASE SHALL BE AUGERED. PLACE CONCRETE SAME DAY AS AUGER.



LIGHT BASE DETAIL

1 | FOR FIXTURE D

NO SCALE

NOTES:

- BASE TO SET ON UNDISTURBED SOIL.
- SET ALL FIXTURES TRUE & PLUMB.
- DESIGNS BY STRUCTURAL ENGINEER SHALL BE FOLLOWED.
- VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION.
- COMPACTABLE BACKFILL TO 95%.
- 3000 PSI 28 DAY STRENGTH CONCRETE.
- HOLE FOR BASE SHALL BE AUGERED. PLACE CONCRETE SAME DAY AS AUGER.

ELECTRICAL SYMBOL LIST	
SYMBOL	DESCRIPTION
	DUPLEX GFI RECEPTACLE OUTLET, 20A, 120V "A" DENOTES PANELBOARD, "Z" DENOTES CIRCUIT NUMBER OTHER ABBREVIATIONS: WP = WEATHERPROOF WHILE IN USE
	LIGHTING FIXTURE "A" DENOTES LIGHT FIXTURE TYPE "D" DENOTES PANELBOARD "1" DENOTES CIRCUIT NUMBER "S" DENOTES SWITCH LEG
	PANELBOARD
	LIGHTING/RECEPTACLE CONTROL PANEL
	CAMERA MOUNT CONNECTION - SECURITY BY OTHERS

CONTROL PANEL R (CP-R)			
VOLTAGE: 120V MOUNTING: SURFACE TYPE: RELAY			
RELAY NO.	RELAY TYPE	SWITCH LEGS	
1	20A/1P	A2	RECEPTABLES
2	20A/1P	A4	RECEPTABLES
3	20A/1P	A6	RECEPTABLES
4	20A/1P	A8	RECEPTABLES
5	20A/1P	A10	RECEPTABLES
6	20A/1P	A12	RECEPTABLES
7	20A/1P	A14	RECEPTABLES
8	20A/1P	A16	RECEPTABLES
9	20A/1P	A18	RECEPTABLES
10	20A/1P	A20	RECEPTABLES
11	20A/1P	A22	RECEPTABLES
12	20A/1P	A24	RECEPTABLES
13	20A/1P	A26	RECEPTABLES
14	20A/1P	A28	RECEPTABLES
15	20A/1P	A30	RECEPTABLES
16	20A/1P	A32	RECEPTABLES
17	20A/1P	A34	RECEPTABLES
18	20A/1P	A36	RECEPTABLES
19	20A/1P	A38	RECEPTABLES
20	20A/1P	A40	RECEPTABLES
21	20A/1P	A37	SIGN
22	20A/1P	A39	SIGN
23	20A/1P	A41	SIGN
24	20A/1P	-	SPARE

CONTROL PANEL L (CP-L)			
VOLTAGE: 120V MOUNTING: SURFACE TYPE: RELAY			
RELAY NO.	RELAY TYPE	SWITCH LEGS	
1	20A/2P	A1/A3	LIGHTS
2	20A/2P	A5/A7	LIGHTS
3	20A/2P	A9/A11	LIGHTS
4	20A/2P	A13/A15	LIGHTS
5	20A/2P	A17/A19	LIGHTS
6	20A/2P	A21/A23	LIGHTS
7	20A/2P	A25/A27	LIGHTS
8	20A/2P	A29/A31	LIGHTS
9	20A/2P	A33/A35	LIGHTS
10	20A/2P	A37/A39	LIGHTS
11	20A/2P	A41/A43	LIGHTS
12	20A/2P	A45/A47	LIGHTS
13	20A/2P	A49/A51	LIGHTS
14	20A/2P	A53/A55	LIGHTS
15	20A/2P	A57/A59	LIGHTS
16	20A/2P	A61/A63	LIGHTS
17	-	-	SPARE
18	-	-	SPARE
19	-	-	SPARE
20	-	-	SPARE
21	-	-	SPARE
22	-	-	SPARE
23	-	-	SPARE
24	-	-	SPARE

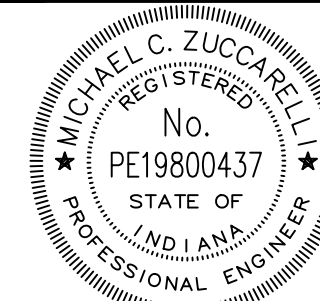
EXISTING PANELBOARD: S					
VOLTAGE: 208/120V, 3 PHASE, 4 WIRE MAINS: 200A MCB 22KAC SERIES RATED AS A SYSTEM MOUNTING: SURFACE					
CKT NO.	LOAD DESCRIPTION	C/B	LOAD VA		
			A	B	C
1	SITE POLE LIGHTS	20A/2P	483		
3					
5	SITE POLE LIGHTS	20A/2P	276	483	276
9	SITE POLE LIGHTS	20A/2P	345		345
11					
13	SITE POLE LIGHTS	20A/2P	345		345
15					
17	SITE POLE LIGHTS	20A/2P	638		638
19					
21	SITE POLE LIGHTS	20A/2P	638		552
23					
25	SITE POLE LIGHTS	20A/2P	638		552
27					
29	SITE POLE LIGHTS	20A/2P	638		638
31					
33	SPARE	20A/1P	225		225
35	SPARE	20A/1P	-	-	-
37	SITE SIGN (1)	20A/1P	1000		-
39	SITE SIGN (1)	20A/1P		1000	-
41	SITE SIGN (1)	20A/1P			1000
43	CONTROL PANEL L (CP-L)	20A/1P	500		-
45	CONTROL PANEL R (CP-R)	20A/1P		500	-
47	SPARE	20A/1P	-	-	-
49	SPARE	20A/1P	-	-	-
51	SPACE				
53	SPACE				
55	SPACE				
57	SPACE				
59	SPACE				
2	SITE RECEPTACLE	20A/1P	360		
4	SITE RECEPTACLE	20A/1P		360	
6	SITE RECEPTACLE	20A/1P	360		360
8	SITE RECEPTACLE	20A/1P		540	
10	SITE RECEPTACLE	20A/1P			360
12	SITE RECEPTACLE	20A/1P		360	
14	SITE RECEPTACLE	20A/1P	540		
16	SITE RECEPTACLE	20A/1P		360	
18	SITE RECEPTACLE	20A/1P			540
20	SITE RECEPTACLE	20A/1P	360		
22	SITE RECEPTACLE	20A/1P		900	
24	SITE RECEPTACLE	20A/1P			360
26	SITE RECEPTACLE	20A/1P		540	
28	SITE RECEPTACLE	20A/1P			540
30	SITE RECEPTACLE	20A/1P			720
32	SITE RECEPTACLE	20A/1P	720		
34	SITE RECEPTACLE	20A/1P		540	
36	SITE RECEPTACLE	20A/1P			540
38	SITE RECEPTACLE	20A/1P	540		
40	SITE RECEPTACLE	20A/1P		900	
42	SPARE	20A/1P	-	-	-
44	SPARE	20A/1P	-	-	-
46	SPARE	20A/1P	-	-	-
48	SPACE	20A/1P	-	-	-
50	SPACE				
52	SPACE				
54	SPACE				
56	SPACE				
58	SPACE				
60	SPACE				
TOTALS PER PHASE			7255	8003	5918
TOTAL (KVA)				21.2	
MAX AMPS				67	

NOVA ENGINEERING, PC

MECHANICAL ELECTRICAL PLUMBING

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Michael C Zuccarelli

MAPLE LEAF CROSSING

MUNSTER, INDIANA

REVISIONS	DATE	DESCRIPTION
05-22-2023	07-01-2021	FOR BID AND PERMIT

NOVA PROJECT NO: MES018

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SHEET TITLE

ELECTRICAL SCHEDULES

E-3