

# LINDE FUSRAP PROJECT NO. 07-3210.02, TASK NO. 2 - UTILITY REPLACEMENT PROJECT

## SPECIFICATIONS:

### 0100 GENERAL CONDITIONS

- CONSTRUCTION SHALL CONFORM TO THE BUILDING CODE OF NEW YORK STATE (BCNYS) 2010. COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.
- SUBCONTRACTORS ARE RESPONSIBLE FOR SAFETY AND SHORING DURING CONSTRUCTION INCLUDING ANY TEMPORARY SHORING AT EXISTING STRUCTURES.
- CONSTRUCTION MEANS, METHODS, AND CRAFTSMANSHIP ARE THE RESPONSIBILITY OF THE SUBCONTRACTORS.
- CONTRACTOR SHALL SET ALL GRADES.
- SUBCONTRACTORS SHALL VERIFY BY SITE VISIT/FIELD MEASUREMENT ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. NOTIFY THIS ENGINEER OF ANY CONDITIONS NOT MATCHING THESE DRAWINGS.
- EXISTING ROUNDED TUNNEL SECTION IS ASSUMED TO HAVE 6'-8"x6'-8" CLEAR DIMENSIONS, TOP OF BOTTOM SLAB ELEVATION OF 593'-2 1/4", THICKNESS OF 8" FOR FLOOR/WALLS, AND THICKNESS OF 5" AT TUNNEL TOP. ALL INFORMATION SHALL BE VERIFIED IN FIELD.
- EXISTING TUNNEL SECTION NEAR JUNCTION BOX 8A IS ASSUMED TO HAVE 8'x8' CLEAR DIMENSIONS, TOP OF BOTTOM SLAB ELEVATION OF 593'-8 3/4", AND THICKNESS OF 10" FOR FLOOR/WALLS/ROOF. ALL INFORMATION SHALL BE VERIFIED IN FIELD.
- EXACT DIMENSIONS OF TUNNEL CUT OUT MAY VARY FROM THAT SHOWN.
- SUBCONTRACTORS TO PATCH, MATCH, AND RESTORE TO EXISTING CONDITION ALL AREAS AFFECTED BY MODIFICATION CONSTRUCTION.
- SUBCONTRACTORS TO PROVIDE ADEQUATE MEANS TO PROTECT EXISTING AREAS FROM DUST AND FOREIGN MATERIAL DURING MODIFICATION CONSTRUCTION.
- SUBCONTRACTORS TO PROVIDE ADEQUATE PROVISIONS TO ENSURE THAT AREAS REMAIN WEATHER TIGHT DURING MODIFICATION CONSTRUCTION.
- SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL INFORMATION ON DRAWINGS.
- ALL SUBMITTALS, INCLUDING SHOP DRAWINGS, MUST BE STAMPED BY THE CONTRACTOR. BY STAMPING THE SUBMITTAL, CONTRACTOR ACKNOWLEDGES HAVING REVIEWED THE SUBMITTAL.
- SHOP DRAWING SUBMITTALS SHALL INCLUDE A MINIMUM OF ONE REPRODUCIBLE AND ONE PRINT AND SHALL BE SUBMITTED TO THIS ENGINEER PRIOR TO FABRICATION.
- SUBSTITUTIONS WILL BE MADE ON AN "OR EQUIVALENT" BASIS AND ARE TO BE APPROVED BY THIS ENGINEER.
- IT IS THE RESPONSIBILITY OF THE SUBCONTRACTORS TO VERIFY/CONFIRM THE LOCATION OF ALL EQUIPMENT, ANCHORAGES, OPENINGS (INCLUDING SIZE AND CLEARANCES), DRAINS, PIPING, CONDUIT, ETC., AND REPORT ANY DISCREPANCY TO THIS ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- DESIGN OF ELECTRIC, PLUMBING, PIPING, HEATING/VENTILATION/AIR CONDITIONING, AND SEWER/SEPTIC SYSTEM SHALL BE BY OTHERS. GENERAL CONTRACTOR WILL INSURE THAT THE FACILITY IS IN COMPLIANCE WITH ALL APPLICABLE CODES, THE NEW YORK STATE BUILDING CODE, AND THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE.
- VIF = VERIFY IN FIELD
- UNO = UNLESS NOTED OTHERWISE
- ALL ELEVATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. GENERAL CONTRACTOR SHALL RETAIN SURVEYOR TO VERIFY/CONFIRM ALL ELEVATIONS NECESSARY FOR PROJECT COMPLETION.

### 0200 SITE WORK

- PRIOR TO ANY EXCAVATION IN NEW YORK STATE, CALL DIG SAFELY NEW YORK AT 1-800-962-7962.
- PRIOR TO CONSTRUCTION, GENERAL CONTRACTOR SHALL VERIFY ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. NOTIFY THIS ENGINEER IN WRITING IF SOIL BEARING CAPACITY IS LESS THAN THAT STATED.
- FOUNDATION SHALL BEAR ON FIRM, LEVEL, AND UNDISTURBED NATURAL SOIL OR COMPACTED SELECT STRUCTURAL FILL. REMOVE ALL TOPSOIL, ORGANIC SUBSOIL, FILL SOIL AND DEBRIS FROM LOAD BEARING AREAS. BEARING GRADE SHALL BE FREE OF FROST AND LOOSE MATERIAL. SELECT STRUCTURAL FILL, IF USED, SHALL BE PLACED AND COMPACTED IN LOOSE LIFTS NOT TO EXCEED 9" IN THICKNESS AND COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557.)
- FOUNDATION SUBGRADE (BEARING GRADE) SHALL BE SLOPED TO DRAIN AND PROVIDED WITH A SUMP (OUTSIDE OF WORK AREA FOOTPRINT) TO KEEP ALL EXCAVATIONS FREE OF STANDING WATER DURING CONSTRUCTION.
- ALL FOUNDATION EXCAVATIONS ARE TO BE FINISHED BY HAND. COMPACT FOOTING SUBGRADES TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557) WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- SOIL AT SITE SHALL BE CLASSIFIED BY AN OSHA COMPETENT PERSON PRIOR TO AND DURING EXCAVATION TO DETERMINE EXCAVATION GEOMETRY AND THE NEED FOR EXCAVATION BRACING.
- BOTTOM OF FOUNDATION ELEVATION SHALL MATCH ADJACENT EXISTING FOUNDATION UNO.
- COMMON FILL IS DEFINED AS SOIL MATERIALS WITH THE EXCEPTION OF THOSE CLASSIFIED BY UCSC AS CH, MH, OH AND OL.
- STRUCTURAL FILL IS DEFINED AS SOIL MATERIALS WITH THE EXCEPTION OF THOSE CLASSIFIED BY UCSC AS CH, MH, OH, OL, ML AND CL-ML.
- SELECT STRUCTURAL FILL IS DEFINED AS SOIL MATERIALS MEETING THE REQUIREMENTS OF NYSDOT ITEM 304-2.02, TYPE 4 AND THE REQUIREMENTS OF ASTM D-248 WELL-GRADED.
- BACKFILL SHALL BE STRUCTURAL FILL OR GRADED #2 GRAVEL.
- STRUCTURAL BACKFILL SHALL BE PLACED IN LOOSE LIFTS OF 9" MAXIMUM. EACH LIFT SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D1557.)
- DO NOT PLACE ANY FILL IN WATER, OVER SATURATED GROUND, OR OVER FROZEN SUBGRADE.
- BACKFILL AGAINST FOUNDATION WALLS BELOW GRADE SO THAT THE DIFFERENCE IN FILL LEVEL ON OPPOSITE SIDES OF JUNCTION BOXES, TUNNELS, ECT DO NOT EXCEED 1'-0" AT ANY TIME. BACKFILL MAY BE PLACED PRIOR TO TOP SLAB PLACEMENT UNO.
- SOIL REMOVAL AGAINST CONCRETE WALLS SHALL OCCUR SO THAT THE DIFFERENCE IN FILL LEVEL ON OPPOSITE SIDES OF JUNCTION BOXES, TUNNELS, ECT DO NOT EXCEED 1'-0" AT ANY TIME.

### 0300 CONCRETE

- CONCRETE CONSTRUCTION/DESIGN SHALL CONFORM TO ACI 318 (INCLUDING CHAPTER 21) AND ACI 301 LATEST EDITIONS.
- FOR HOT OR COLD WEATHER CONCRETE REQUIREMENTS REFER TO ACI 305 OR ACI 306 LATEST EDITIONS.
- DO NOT PLACE ANY CONCRETE IN WATER, OVER SATURATED GROUND, OR OVER FROZEN SUBGRADE.
- ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A NOMINAL AIR DRY DENSITY OF 145 PCF.
- IF WATER IS ADDED AT THE PROJECT SITE, COMPLY WITH ALL ACI REQUIREMENTS/GUIDELINES. ONLY ONE SUCH ADDITION OF WATER SHALL BE MADE PROVIDED SUCH ADDITION DOES NOT INCREASE THE WATER - CEMENT RATIO BEYOND THE MAXIMUM STATED HEREIN.
- MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS IS 3500 PSI UNO.
- SLUMP SHALL BE 3" +/- 1" (WITHOUT HIGH RANGE WATER REDUCER, IF USED.)
- MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45.
- PORTLAND CEMENT SHALL COMPLY WITH ASTM C 150 TYPE I OR II.
- COURSE AGGREGATE SHALL BE #1 AND #2 STONE.
- NORMAL WEIGHT AGGREGATE SHALL COMPLY WITH ASTM C 33, UNIFORMLY GRADED, 3/4" MAXIMUM AGGREGATE SIZE.
- ENTRAINED AIR SHALL BE 5% +/- 1% FOR FOOTINGS, WALLS, AND PIERS.
- FLOWABLE FILL SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH, FINE AGGREGATE, WATER, AND POSSIBLY ADMIXTURES WITH A 28 DAY COMPRESSIVE STRENGTH OF 50 TO 150 PSI. SLUMP SHALL BE 8" TO 10" AND THE MIX MUST REMAIN EXCAVATABLE BY STANDARD BACKHOE EQUIPMENT WITHOUT THE USE OF CHIPPING/BREAKING EQUIPMENT.
- ALL KEYS INDICATED ON DRAWINGS SHALL BE 1-1/2" X 3-1/2" BEVELED.
- ALL WATERSTOPS INDICATED SHALL BE "GREENSTREAK PVC STYLE #783, 3/8" X 6", SERRATED OR APPROVED EQUIVALENT.
- SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
- REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60. LAP 48 BAR DIAMETERS MIN. CORNER BARS SHALL MATCH HORIZONTAL WALL/FOOTING REINFORCING. DO NOT WELD.
- FOOTING FOR REINFORCEMENT SHALL BE:
 

FOOTINGS	3" BOTTOM
	2" SIDE AND TOP
WALLS	2" SIDE AND TOP
PIERS	2" TOP
	1-1/2" TO TIES
COLUMNS	2" TOP
	1-1/2" TO TIES
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNO.
- ALL HOOKS SHALL BE ACI STANDARD UNO.
- PROVIDE MINIMUM (2) #5 BARS EACH SIDE OF ALL OPENINGS IN FOUNDATION WALLS. BARS SHALL EXTEND A MINIMUM OF 24" BEYOND THE CORNERS OF OPENINGS.
- FABRICATION, PLACING AND SUPPORTING REINFORCEMENT SHALL COMPLY WITH ALL RECOMMENDATIONS IN CRSI "MANUAL OF STANDARD PRACTICE."
- BAR SUPPORTS SHALL BE GALVANIZED OR STAINLESS STEEL. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE GALVANIZED AND PLASTIC TIPPED.
- MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.
- WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, ROUGHEN EXISTING SURFACE AND BRUSH CLEAN ALL FOREIGN MATERIAL PRIOR TO COATING WITH BONDING AGENT SIKADUR 32 POURABLE EPOXY.
- NOTIFY ENGINEER OF RECORD A MINIMUM OF 48 HOURS PRIOR TO CONCRETE POUR SO THAT ARRANGEMENTS CAN BE MADE FOR CONCRETE TESTING, OBSERVATION, AND CASTING OF CYLINDERS.
- CYLINDERS FOR STRENGTH TESTS SHALL BE MOLDED AND LABORATORY CURED PER ASTM C31 AND TESTED IN ACCORDANCE WITH ASTM C39. PROVIDE 4 CYLINDERS FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED.

### 0500 METALS

- DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN CONFORMANCE WITH AISC SPECIFICATIONS AND CODES, LATEST EDITIONS.
- STEEL PIPE SHALL COMPLY WITH ASTM A53 GRADE B WITH A MINIMUM FY=35 KSI.
- ALL OTHER STRUCTURAL STEEL SHALL COMPLY WITH ASTM A36 OR A992.
- WELDING SHALL CONFORM TO AWS D1.1 WITH A MINIMUM 3/16" FILLET WELD UNO. ELECTRODES SHALL BE E70XX. ALL WELDS SHALL BE VISUALLY INSPECTED. ALL SHOP WELDS SHALL COMPLY WITH AISC MINIMUMS AND MAXIMUMS.
- STRUCTURAL STEEL SHALL BE PREPARED BY POWER TOOL PRIOR TO BEING PAINTED WITH RUST RESISTANT, TYPE ONE PAINT. AFTER COMPLETING ERECTION, TOUCH UP ALL AREAS WHERE PAINT IS MISSING, INCLUDING FIELD WELDS.
- FLOOR AND ROOF DECK SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH STEEL DECK INSTITUTE SPECIFICATIONS. ATTACH DECK TO SUPPORTING MEMBERS WITH 5/8" DIAMETER PUDDLE WELDS AT 12" OC UNO. (FOR STEEL LESS THAN 1/4", ATTACH WITH #12 SELF-DRILLING FASTENERS AT SPACING ADEQUATE TO PROVIDE DIAPHRAGM STRENGTH EQUAL TO 5/8" PUDDLE WELDS.) FASTEN SIDELAPS AT 30" MAXIMUM ON CENTER.
- FABRICATE METAL DECKING FROM STEEL WHICH CONFORMS TO ASTM A446, GRADE A, HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI.
- METAL DECK SHALL CONFORM TO G90 REQUIREMENTS.
- PROVIDE CONTINUOUS SHEET METAL CLOSURES AT ALL SLAB OPENINGS AND SLAB EDGES AND CONTINUOUS DECK CLOSURES AT ALL DECK ENDS. PROVIDE SUPPLEMENTARY FRAMING AT OPENINGS AS REQUIRED FOR SUPPORT OF METAL DECK. PROVIDE STRAP ANCHORS AS NECESSARY TO CONTROL CANTILEVER DEFLECTIONS AT FLOOR SLAB EDGES.
- DO NOT HANG LOADS EXCEEDING 50 LBS. FROM ANY METAL DECKING. HANG ALL DUCTWORK, PIPING, ETC DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS OR ANCHORS EMBEDDED IN THE CONCRETE. SUBMIT ALL HANGING LOAD DETAILS FOR REVIEW.

### 0900 FINISHES

- SUBCONTRACTOR SHALL COORDINATE REQUIREMENTS WITH OWNER UNO.

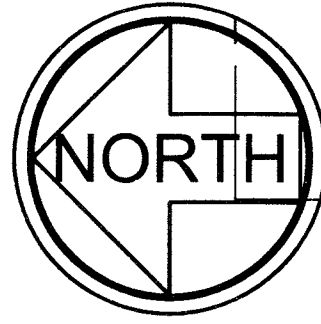
### NOTES:

- FOR DRAWING LIST, REFER TO DWG-10060-001.



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REV	DESCRIPTION	DATE	INIT		MACHINED SURFACES FINISHES .003 FINISH	TOLERANCES		DRAWN BY: MEK		DWG NO.: DWG-10058-000	
0	FOR REVIEW	06/02/11	MEK			FRACTION: 1/8" 2 PLACE: 1.41 3 PLACE: 2.005 ANGLE: 0°:30'		CHECKED BY: XXX		NO SCALE	
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP				ENGINEER: RMC		REV: 1		
				PROJECT #: 10058		LINDE FUSRAP UTILITY REPLACEMENT PROJECT SPECIFICATIONS		DWG SCALE: NO SCALE		DWG SIZE: D	





EXISTING JUNCTION BOX #6  
EXISTING JUNCTION BOX #2

FORMER BUILDING #31

NEW CABLE VAULT EXTENSION.  
SEE DWG-10058-008,  
DWG-10058-009 AND  
DWG-10059-011.

NEW UNDERGROUND  
UTILITY TRENCH  
BY OTHERS

NEW UNDERGROUND  
CONCRETE ENCASED  
DUCT BANK BY OTHERS

EXISTING JUNCTION BOX #7

± 30'± SUBCONTRACTOR SHALL DETERMINE

NEW JUNCTION BOX 8A  
13'-10" x 20'-8 1/2" x 8'-0" TALL.  
REMOVE SIDE ONLY OF  
TWO ALTERNATE EXISTING TUNNEL  
SECTIONS. ADD HEADER.  
SEE DWG-10058-006 AND  
DWG-10058-007.

EXISTING 80" TUNNEL  
NEW JUNCTION BOX 7A  
28'-0" x 23'-0" x 10'-0" TALL.  
SEE DWG-10058-005.

NEW UNDERGROUND  
UTILITY TRENCH  
BY OTHERS

EXISTING 72" TUNNEL

EXISTING 97" TUNNEL

EXISTING JUNCTION  
BOX #8

REMOVE WHOLE SECTIONS OF  
EXISTING TUNNEL AS REQUIRED

EXISTING TRUCK RAMP / BRIDGE

RELOCATE TRUCK RAMP / BRIDGE

FOR AREAS WHERE RAILROAD  
CROSSES OVER PIPE TRENCH,  
REFER TO CASING INSTALLATION  
DETAIL (02600-445), LOCATED IN  
SECTION F OF 100% DESIGN  
SUBMITTAL PACKAGE  
(TYPICAL)

EXISTING ASPHALT ROADWAY

BLDG #75

BLDG #76

BLDG  
#50

BLDG #104

BLDG #8

± 49'± SUBCONTRACTOR SHALL DETERMINE

BUILDING #70A

BUILDING #70B

BUILDING #70

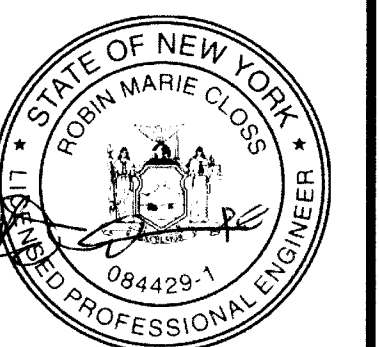
NEW JUNCTION BOX 9A  
18'-2 1/2" x 19'-6" x 8'-0" TALL.  
REMOVE THREE EXISTING  
ROUNDED TUNNEL SECTIONS  
EXCEPT BOTTOM.  
SEE DWG-10058-003 AND  
DWG-10058-004.

BUILDING #2C

BUILDING #2A

NOTE:

1. FOR DRAWING LIST, REFER TO DWG-10060-001.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
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1	ISSUE FOR CONSTRUCTION	08/31/11	TPP

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UNLESS OTHERWISE SPECIFIED  
ALL DIMENSIONS IN INCHES

FINISH SURFACES  
FLATNESS .003  
FINISH

TOLERANCES  
FRACTION: 1/8  
3 PLACE: ±.005

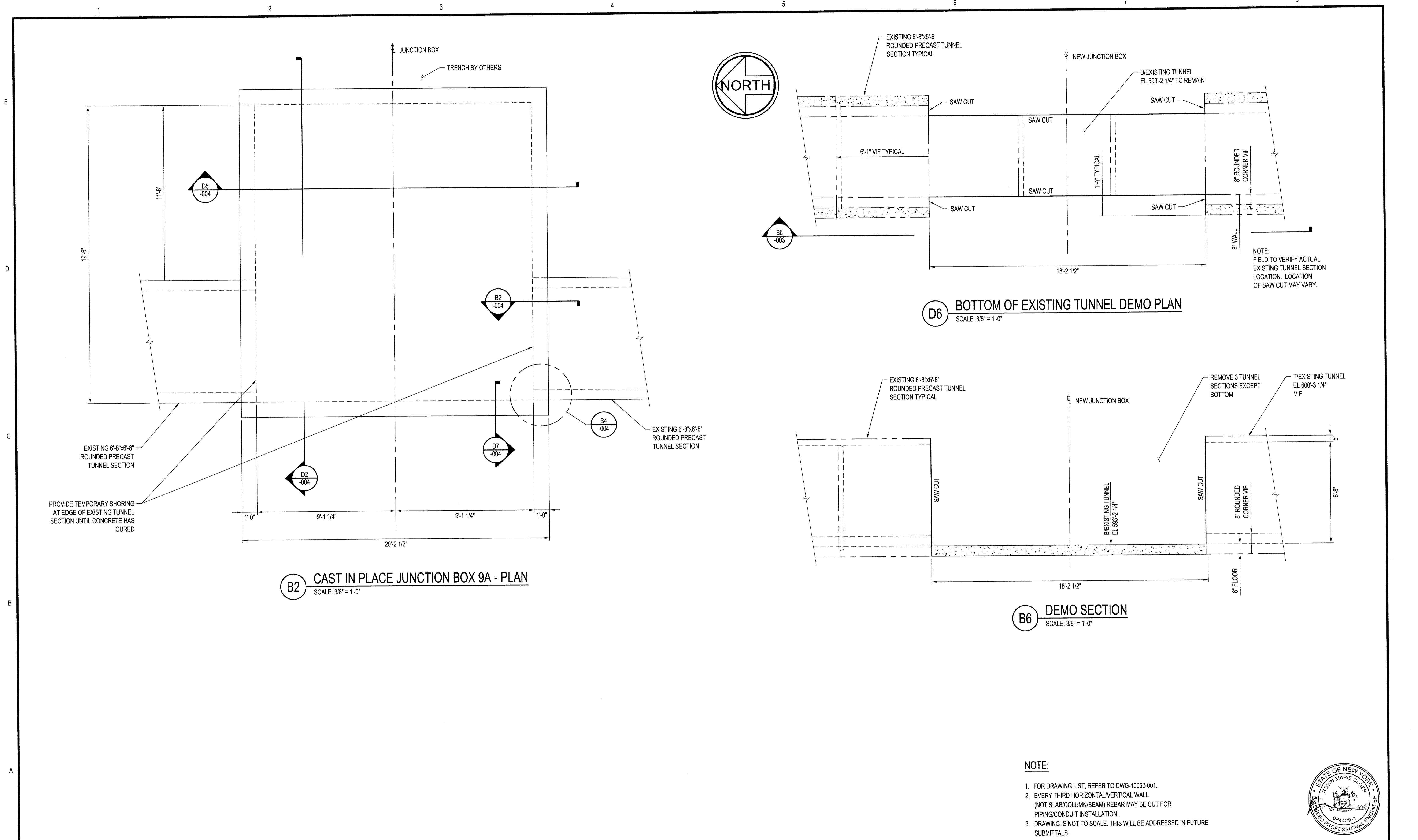
DRAWN BY: MEK  
CHECKED BY: XXX  
ENGINEER: RMC

MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

PROJECT #: 10058

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23 Mechanic Street - P.O. Box 344  
Springville, New York 14141-0344  
PH. (716)-592-3980 FAX. (716)-592-4216  
www.rjr.com

DWG NO. DWG-10058-002  
DWG SCALE: 1/32" = 1'-0" REV: 1  
DWG SIZE: D



NOTE:  
FIELD TO VERIFY ACTUAL  
EXISTING TUNNEL SECTION  
LOCATION. LOCATION  
OF SAW CUT MAY VARY.

- NOTE:**
- FOR DRAWING LIST, REFER TO DWG-10060-001.
  - EVERY THIRD HORIZONTAL/VERTICAL WALL (NOT SLAB/COLUMN/BEAM) REBAR MAY BE CUT FOR PIPING/CONDUIT INSTALLATION.
  - DRAWING IS NOT TO SCALE. THIS WILL BE ADDRESSED IN FUTURE SUBMITTALS.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES  
MACHINED SURFACES FLATNESS .003 FINISH  
TOLERANCES  
FRACTION: 1/8 2 PLACE: ±.01  
3 PLACE: ±.005 ANGLE: 0°:30'

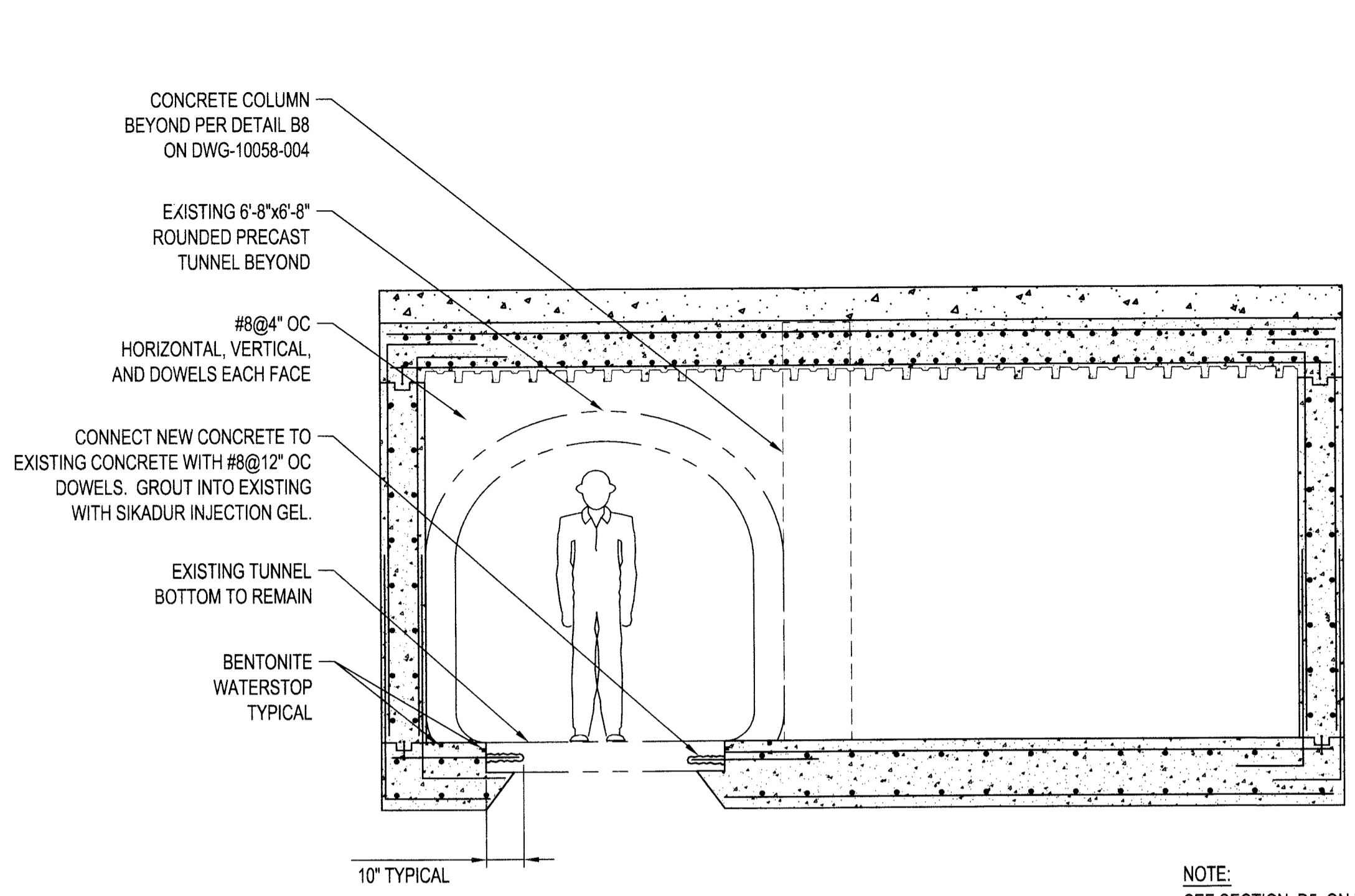
DRAWER: MEK  
CHECKER: XXX  
ENGINEER: RMC  
PROJECT #: 10058

MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
JUNCTION BOX 9A  
PLAN AND SECTIONS

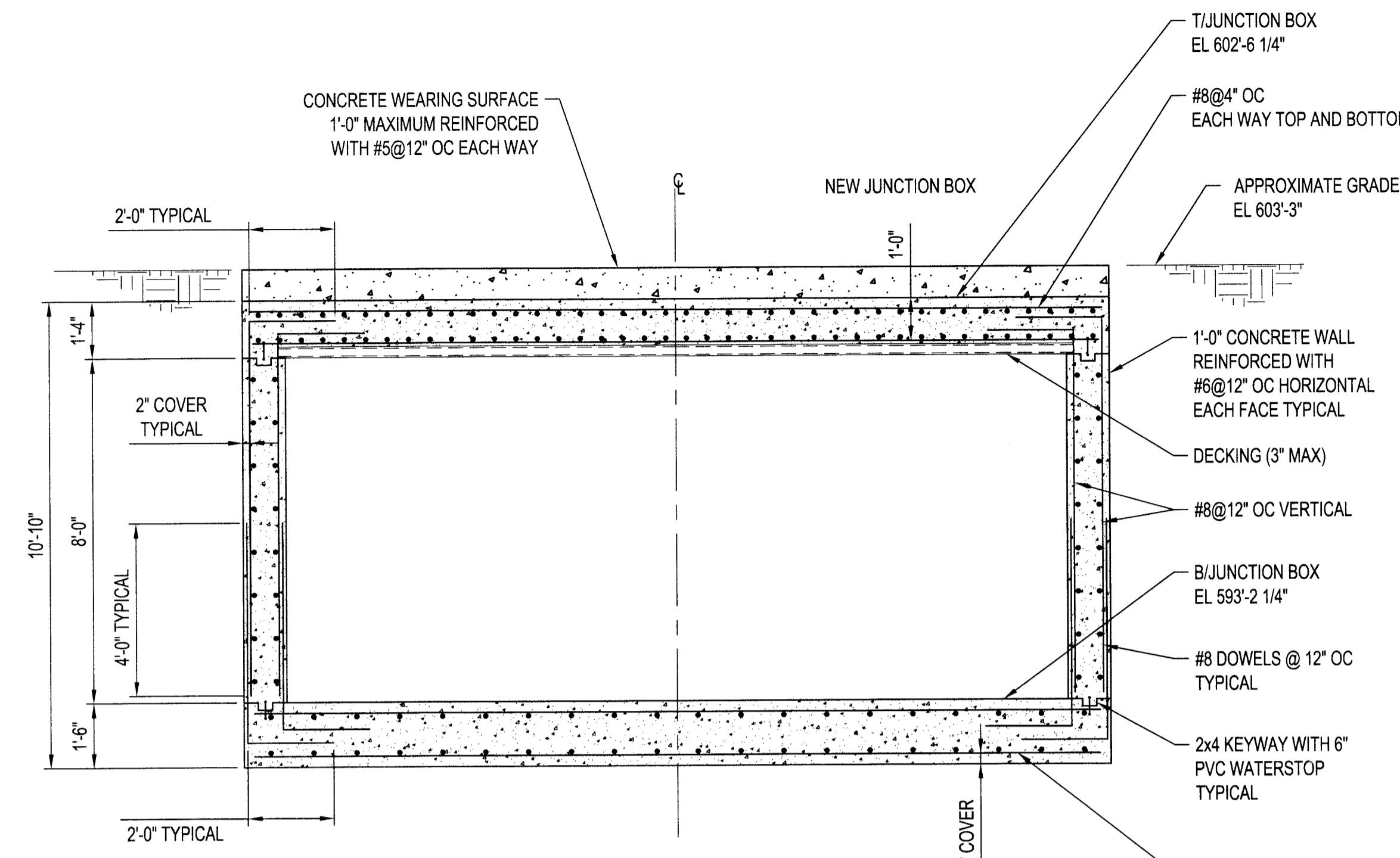
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DWG NO.: DWG-10058-003  
DWG SCALE: SEE DRAWING  
REV: 1  
DWG SIZE: D

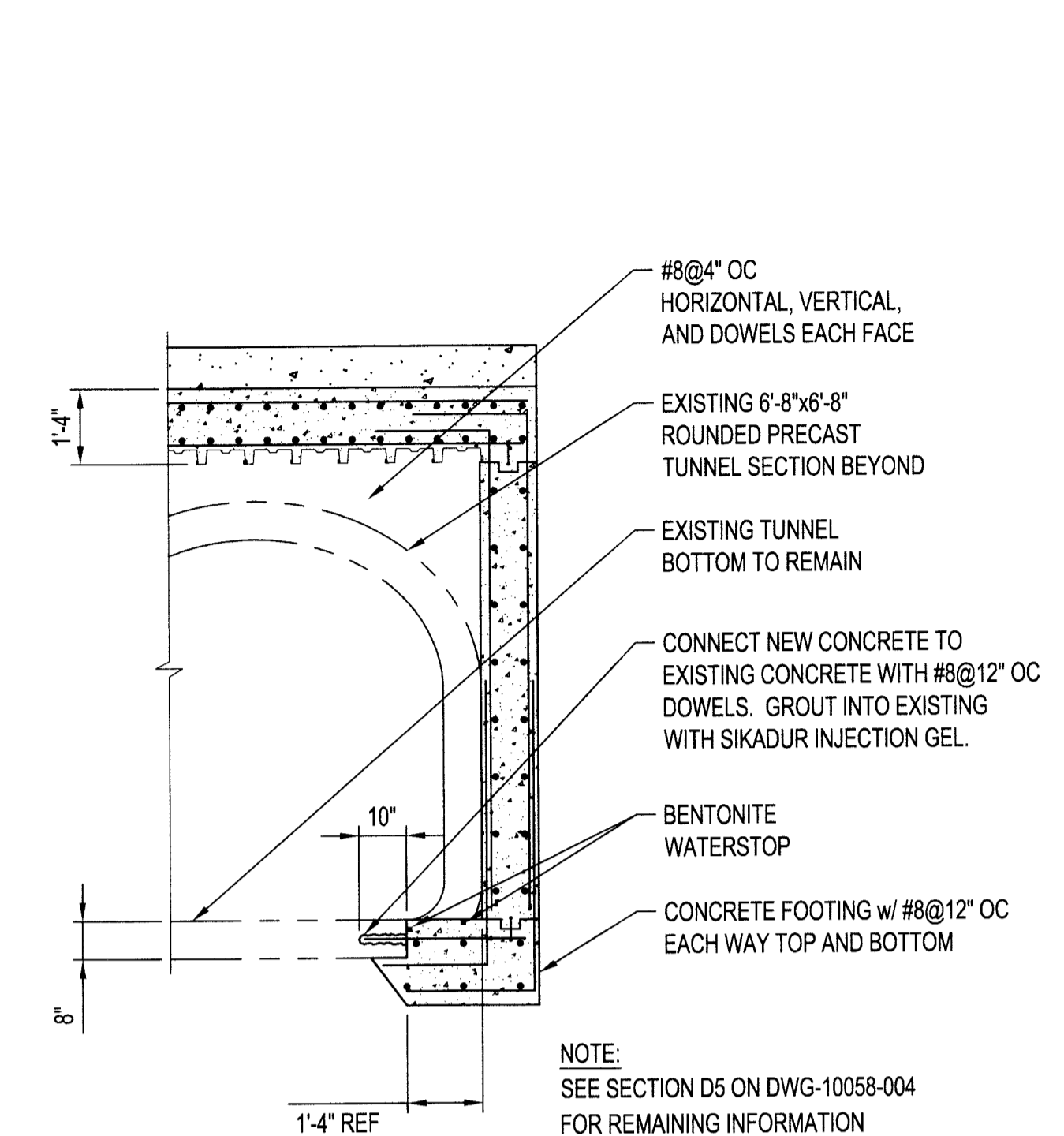


**D2 SECTION**  
DWG-10058-003  
SCALE: 3/8" = 1'-0"

NOTE:  
SEE SECTION D5 ON DWG-10058-004  
FOR REMAINING INFORMATION

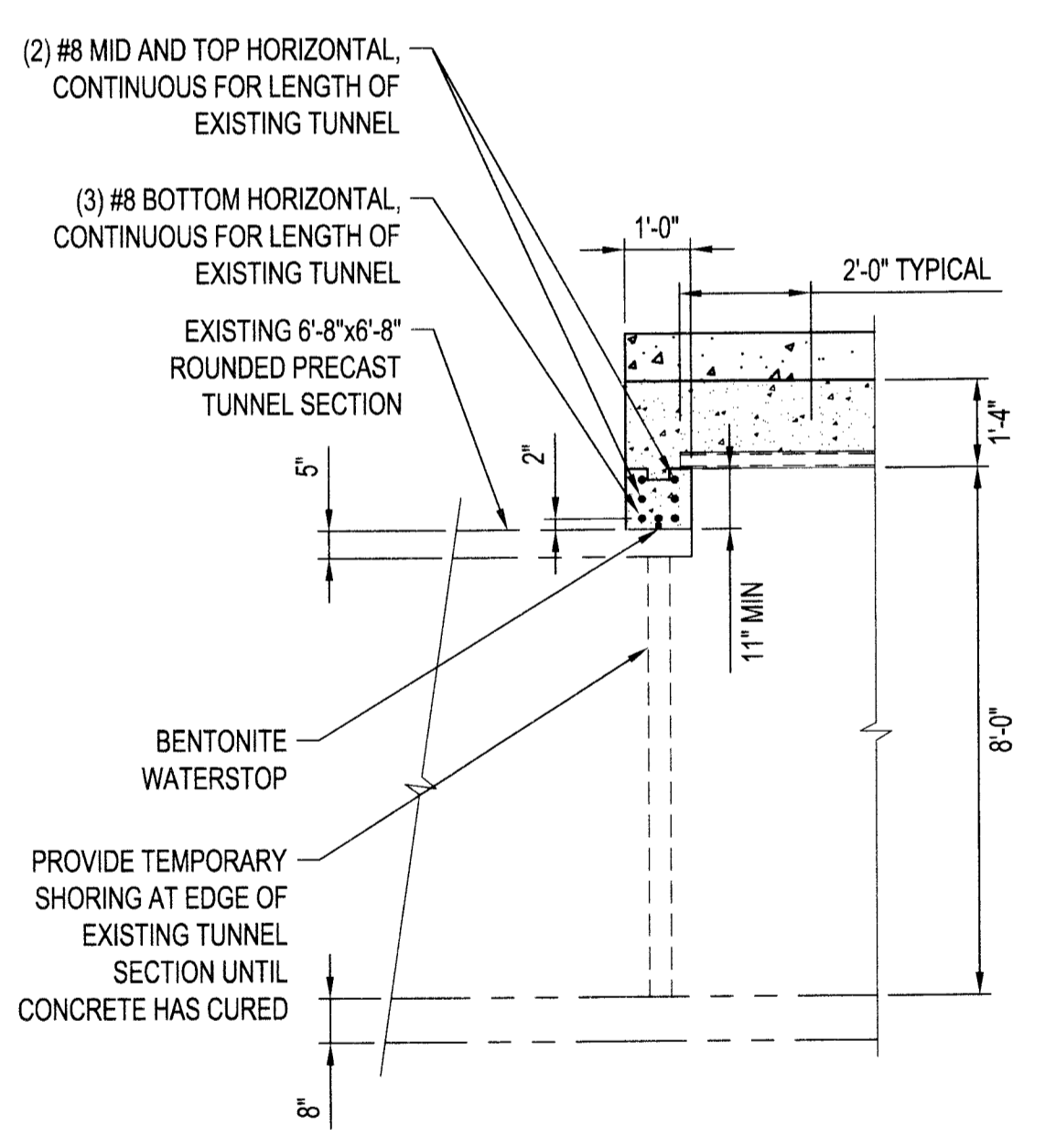


**D5 SECTION**  
DWG-10058-003  
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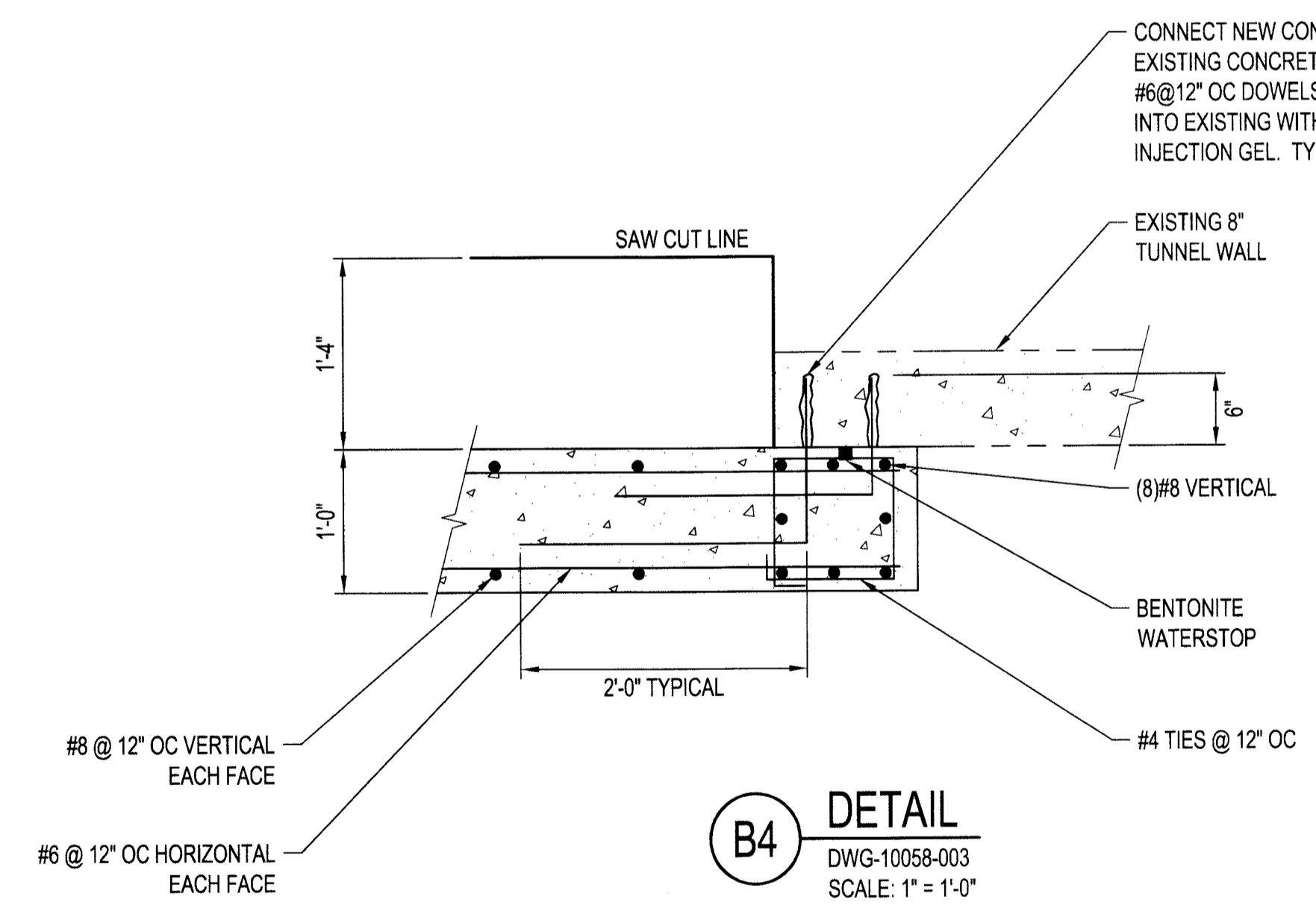


**D7 SECTION**  
DWG-10058-003  
SCALE: 3/8" = 1'-0"

NOTE:  
SEE SECTION D5 ON DWG-10058-004  
FOR REMAINING INFORMATION



**B2 SECTION**  
DWG-10058-003  
SCALE: 3/8" = 1'-0"



**B4 DETAIL**  
DWG-10058-003  
SCALE: 1" = 1'-0"

- NOTE:**
- FOR DRAWING LIST, REFER TO DWG-10060-001.
  - EVERY THIRD HORIZONTAL/VERTICAL WALL (NOT SLAB/COLUMN/BEAM) REBAR MAY BE CUT FOR PIPING/CONDUIT INSTALLATION.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TRP

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES	
MACHINED SURFACES	FATNESS -0.03
TOLERANCES	
FRACTION: 1/8	2 PLACE: ±.01
3 PLACE: ±.005	ANGLE: 0°:30'

DRAFTER: MEK  
CHECKER: XXX  
ENGINEER: RMC

MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

PROJECT #: 10058

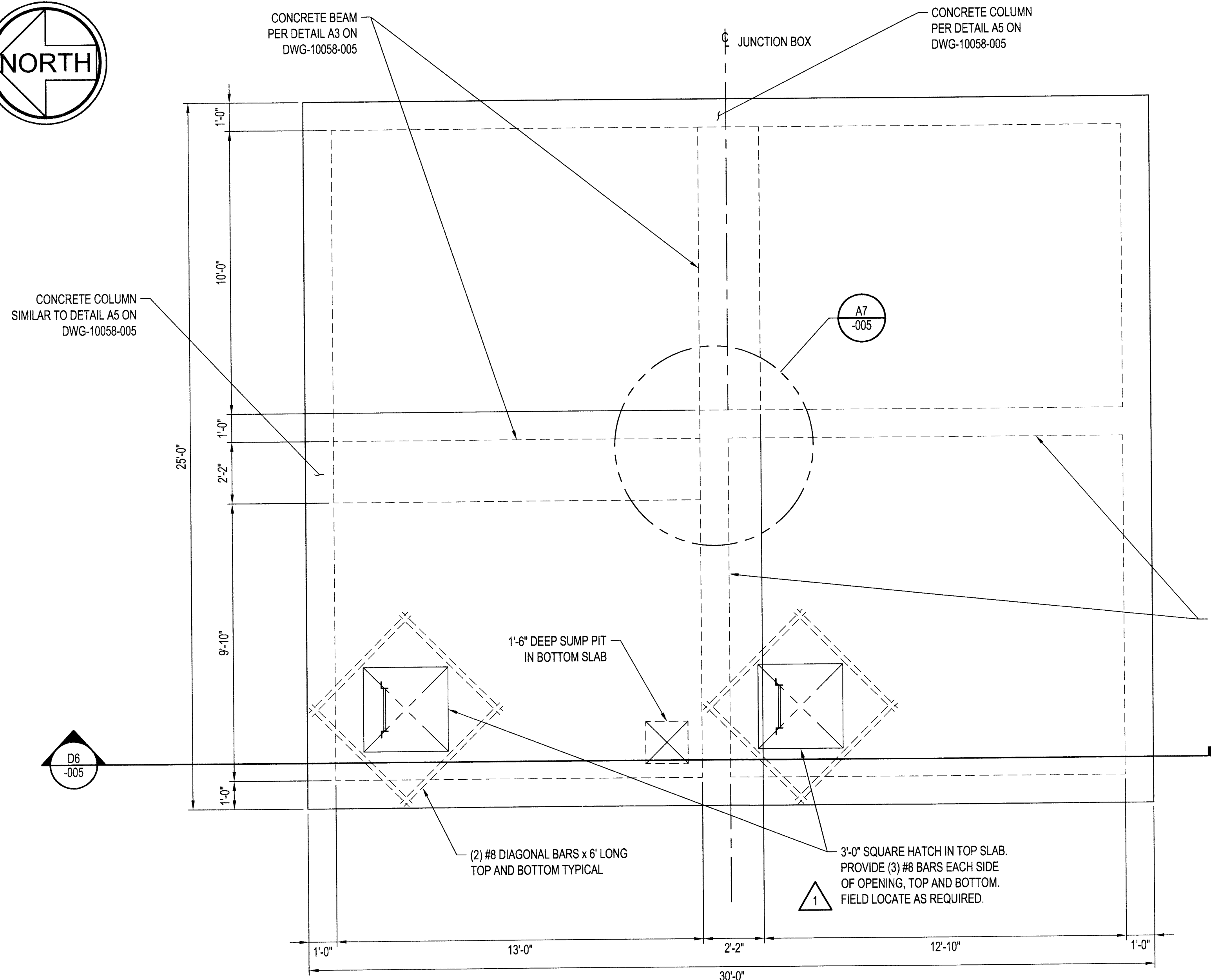
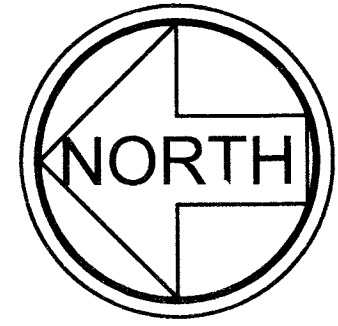
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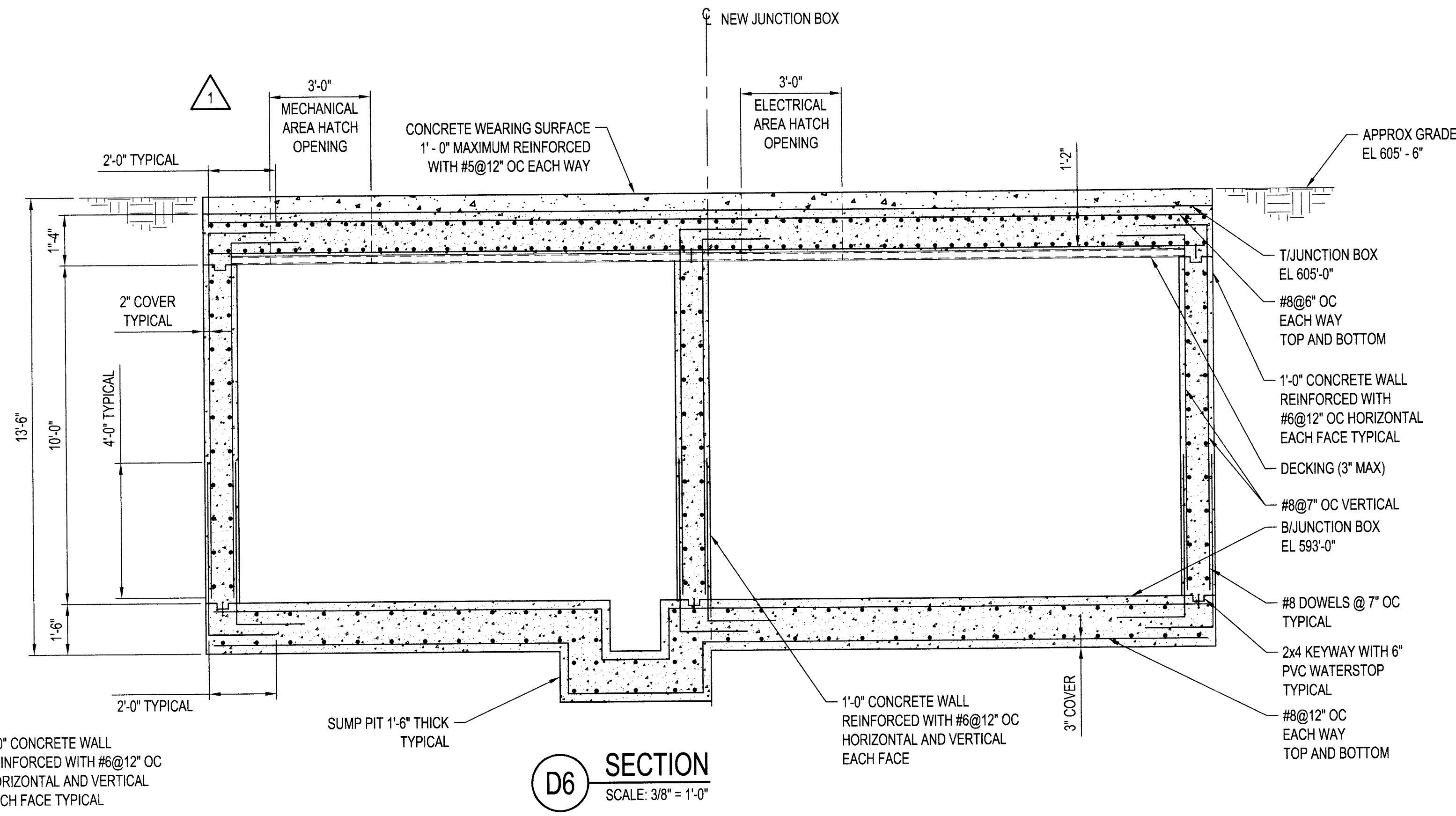
PROJECT: LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
SECTION: JUNCTION BOX 9A  
DETAILS: SECTIONS AND DETAILS

DWG NO: DWG-10058-004  
DWG SCALE: SEE DRAWING  
REV: 1  
SHEET SIZE: D

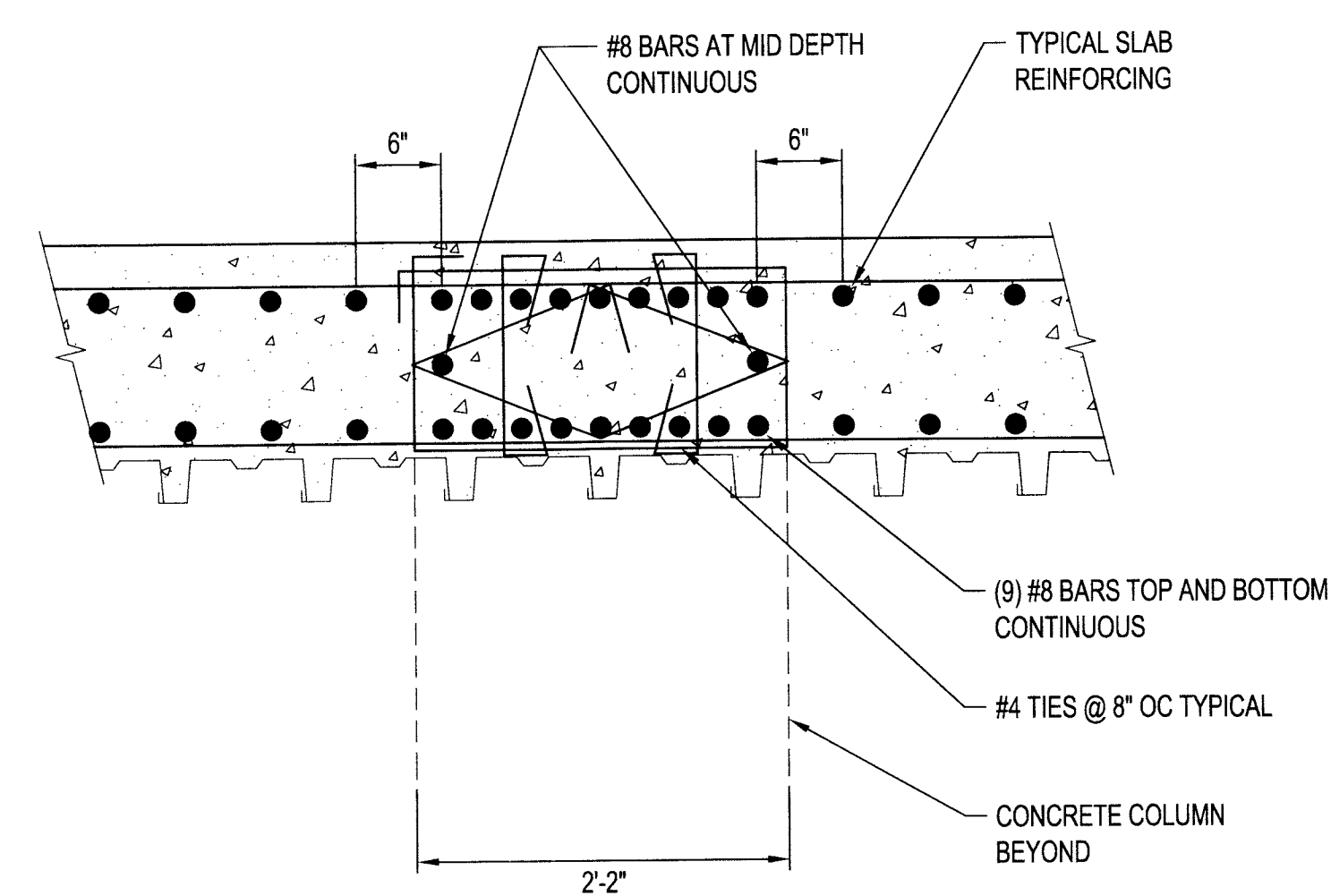




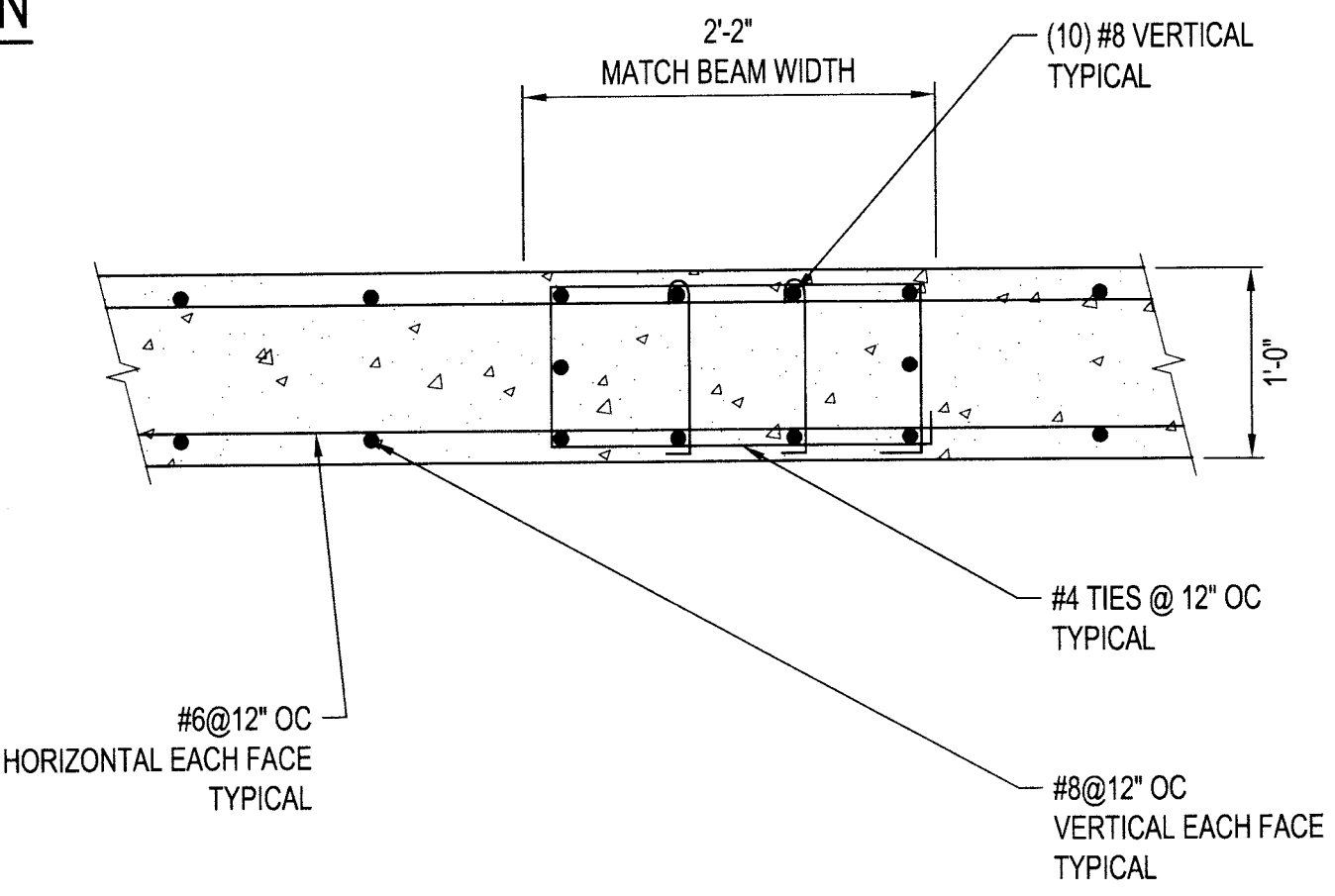
**B3 CAST IN PLACE JUNCTION BOX 7A - PLAN**  
SCALE: 3/8" = 1'-0"



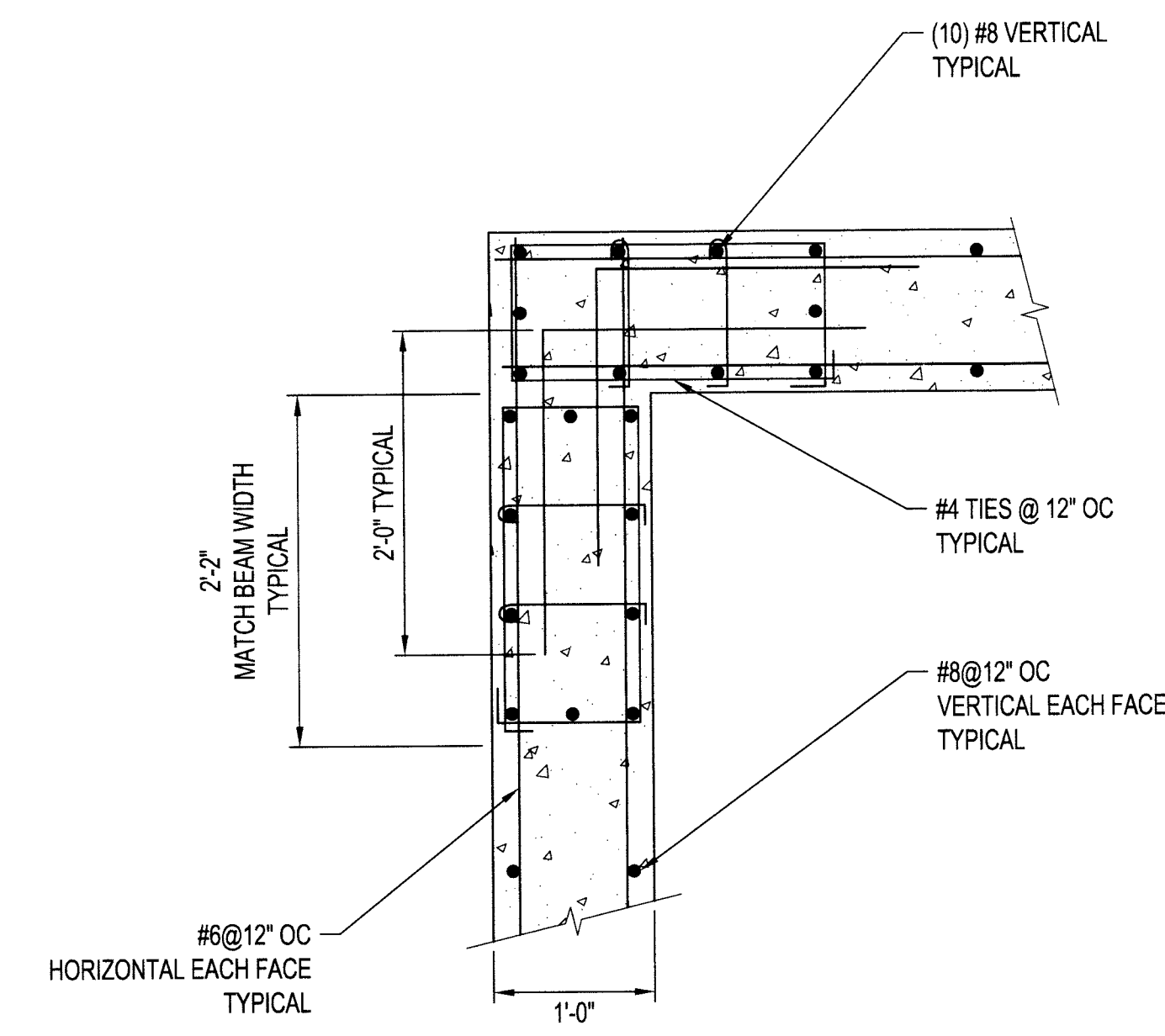
**D6 SECTION**  
SCALE: 3/8" = 1'-0"



**A3 CONCRETE BEAM**  
SCALE: 1" = 1'-0"



**A5 CONCRETE COLUMN**  
SCALE: 1" = 1'-0"



**A7 CONCRETE COLUMNS**  
SCALE: 1" = 1'-0"

- NOTE:**
- FOR DRAWING LIST, REFER TO DWG-10060-001.
  - EVERY THIRD HORIZONTAL/VERTICAL WALL (NOT SLAB/COLUMN/BEAM) REBAR MAY BE CUT FOR PIPING/CONDUIT INSTALLATION.



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REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP

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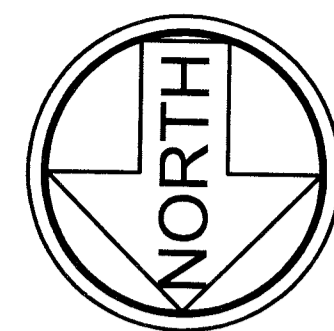
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MACHINED SURFACES FLATNESS .003 FINISH  
TOLERANCES  
FRACTION: 1/8 2 PLACE: ±.01  
3 PLACE: ±.005 ANGLE: 0°±30'

DRAWN: MEK  
CHECKED: XXX  
ENGINEER: RMC  
PROJECT #: 10058

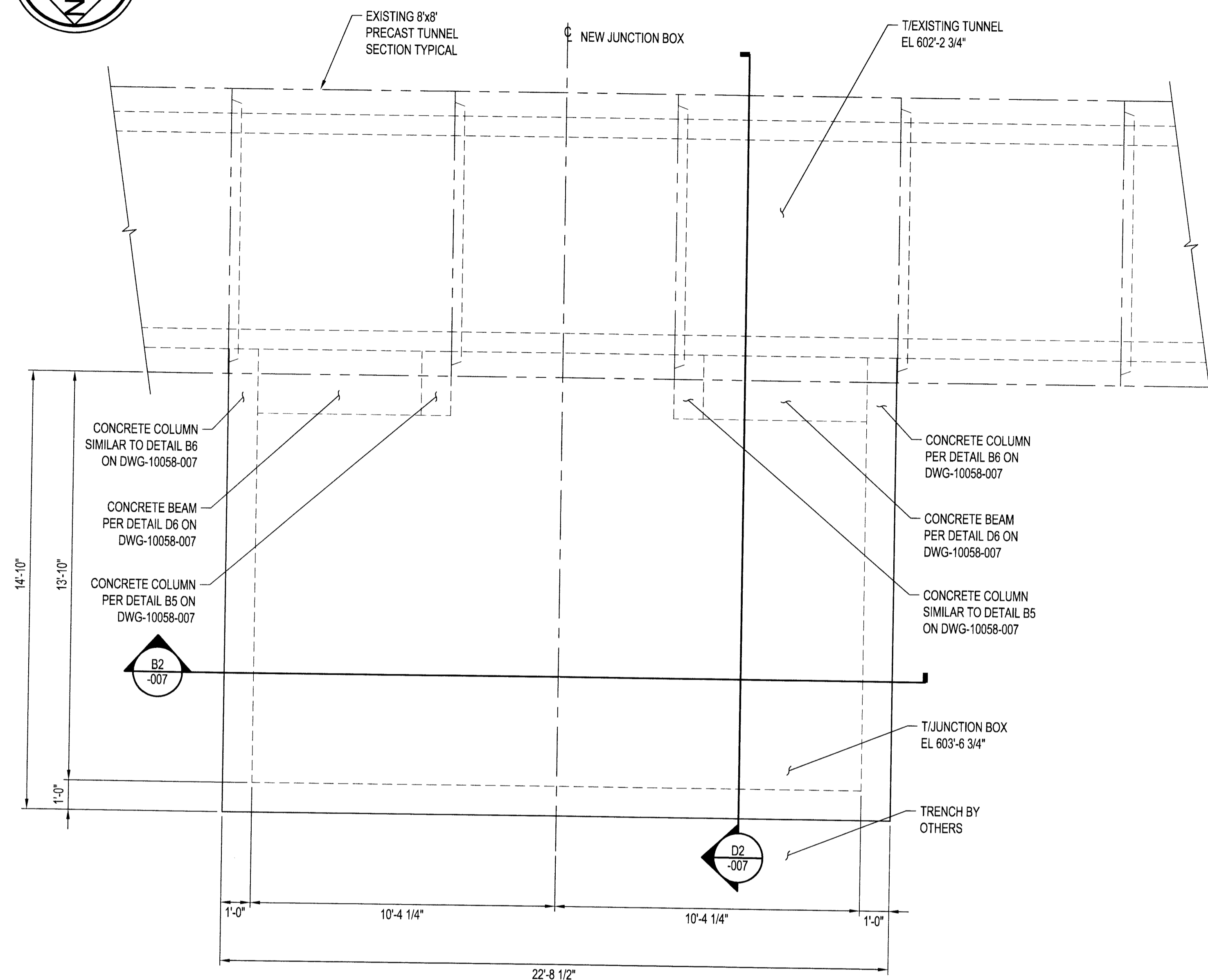
MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204  
LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
JUNCTION BOX 7A  
PLAN, SECTIONS AND DETAILS

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23 Mechanic Street - P.O. Box 344  
Springville, New York 14141-0344  
PH. (716)-592-3980 FAX. (716)-592-4216  
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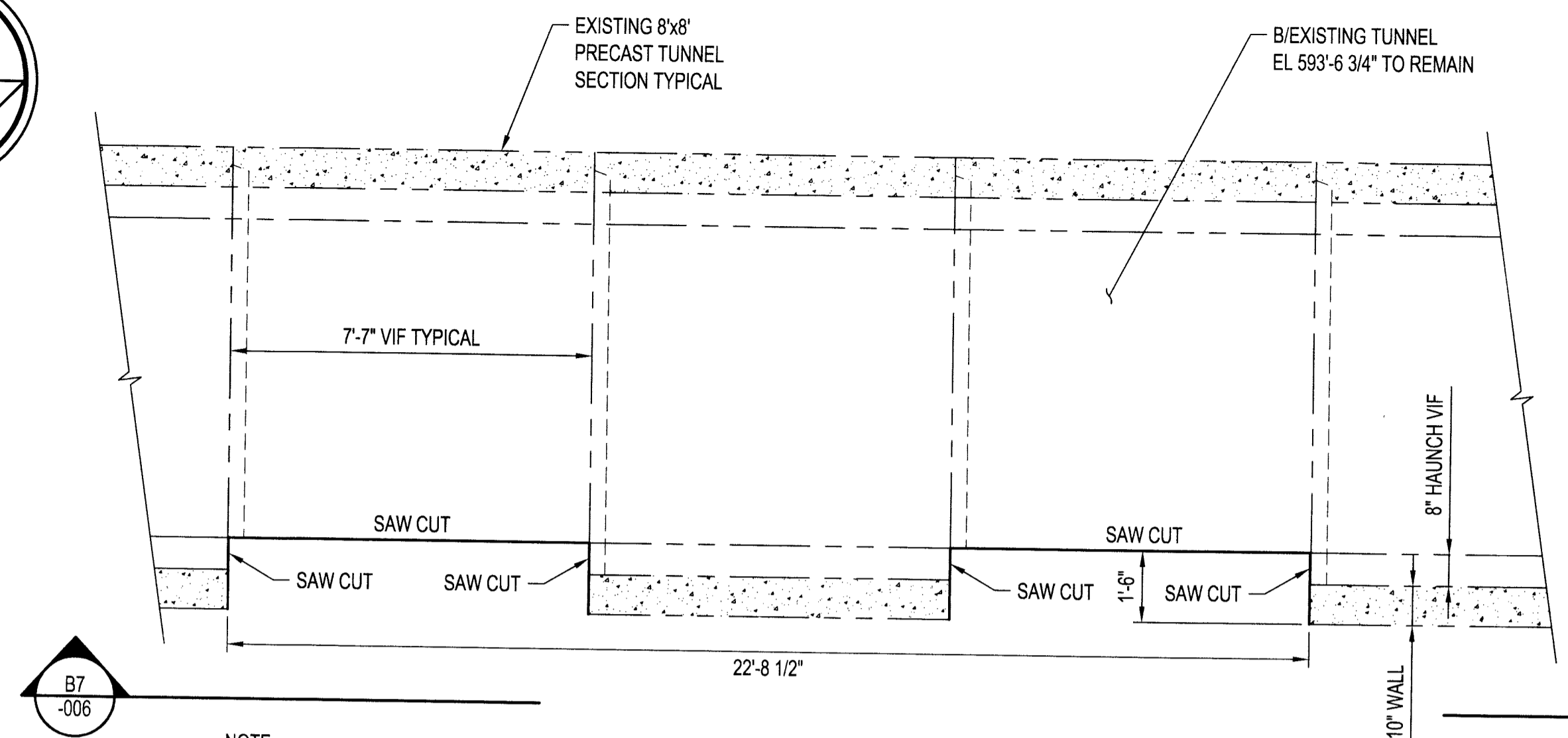
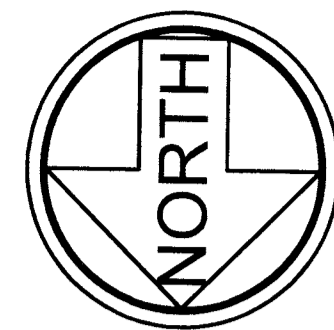
DWG NO.: DWG-10058-005  
SCALE: SEE DRAWING  
REV: 1



EXCAVATE ADJACENT TO EXISTING TUNNEL FOR SAME WIDTH AS REQUIRED (FOR 8A CONSTRUCTION) ON OPPOSITE SIDE OF EXISTING TUNNEL.

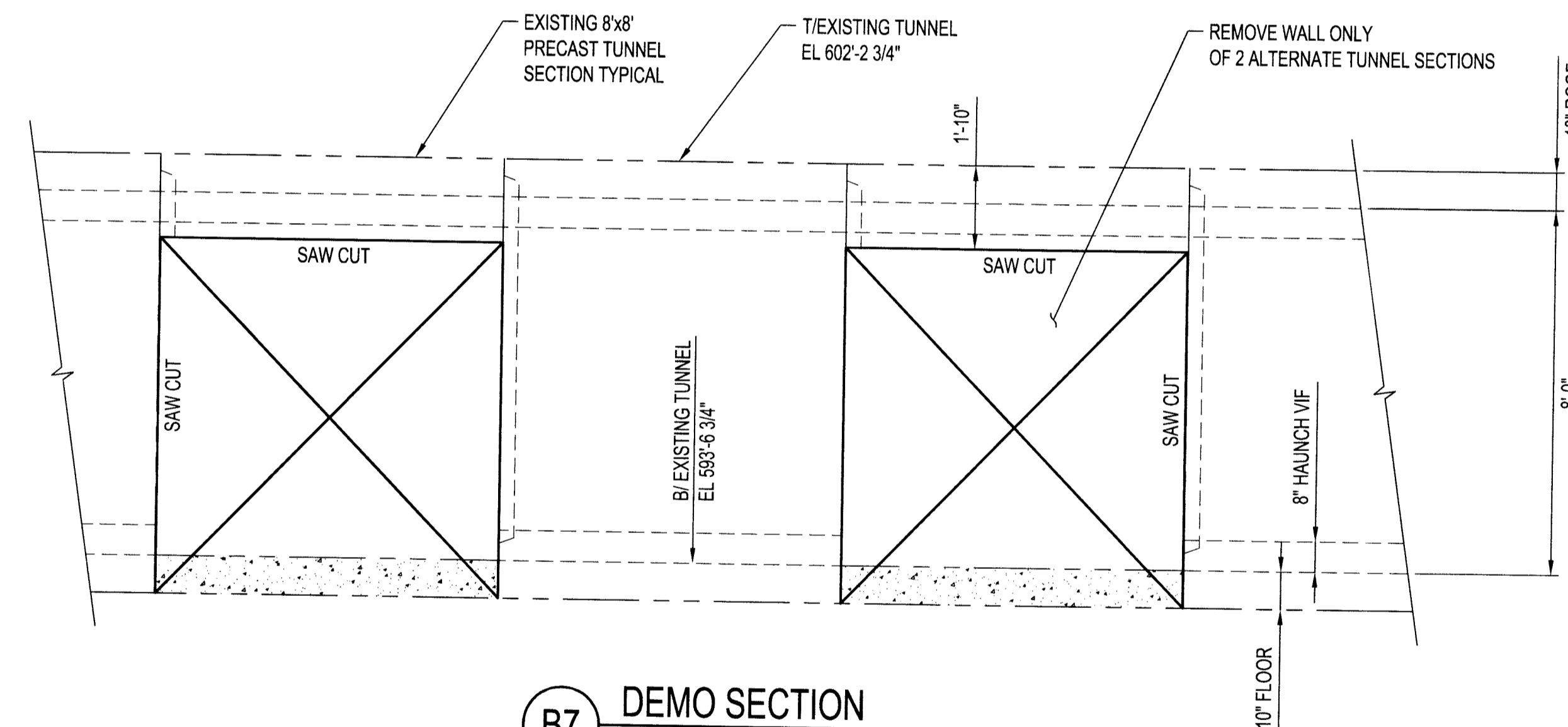


**B3** CAST IN PLACE JUNCTION BOX 8A - PLAN  
SCALE: 3/8" = 1'-0"



NOTE:  
FIELD TO VERIFY ACTUAL  
EXISTING TUNNEL SECTION  
LOCATION. LOCATION  
OF SAW CUT MAY VARY.

**D7** BOTTOM OF EXISTING TUNNEL DEMO PLAN  
SCALE: 3/8" = 1'-0"



**B7** DEMO SECTION  
SCALE: 3/8" = 1'-0"

**NOTE:**

- 1. FOR DRAWING LIST, REFER TO DWG-10060-001.
- 2. EVERY THIRD HORIZONTAL/VERTICAL WALL (NOT SLAB/COLUMN/BEAM) REBAR MAY BE CUT FOR PIPING/CONDUIT INSTALLATION.
- 3. DRAWING IS NOT TO SCALE. THIS WILL BE ADDRESSED IN FUTURE SUBMISSIONS.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP

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UNLESS OTHERWISE SPECIFIED:  
ALL DIMENSIONS IN INCHES  
MACHINED SURFACES  
FLATNESS .003  
FINISH  
TOLERANCES  
FRACTION: 1/8 2 PLACE: ±.01  
3 PLACE: ±.005 ANGLE: 0°:30'

DRAFTER: MEK  
CHECKER: XXX  
ENGINEER: RMC  
PROJECT #: 10058

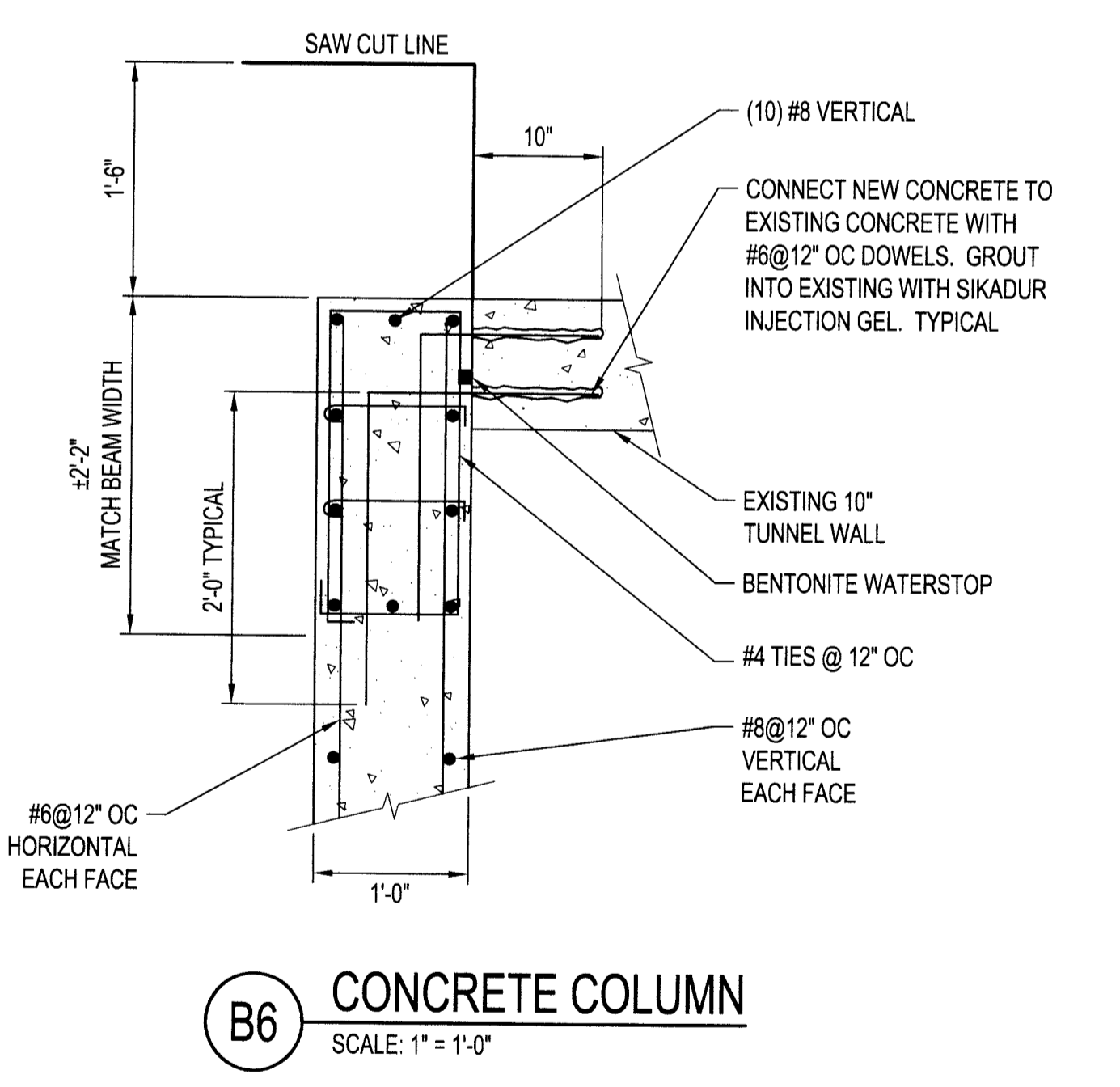
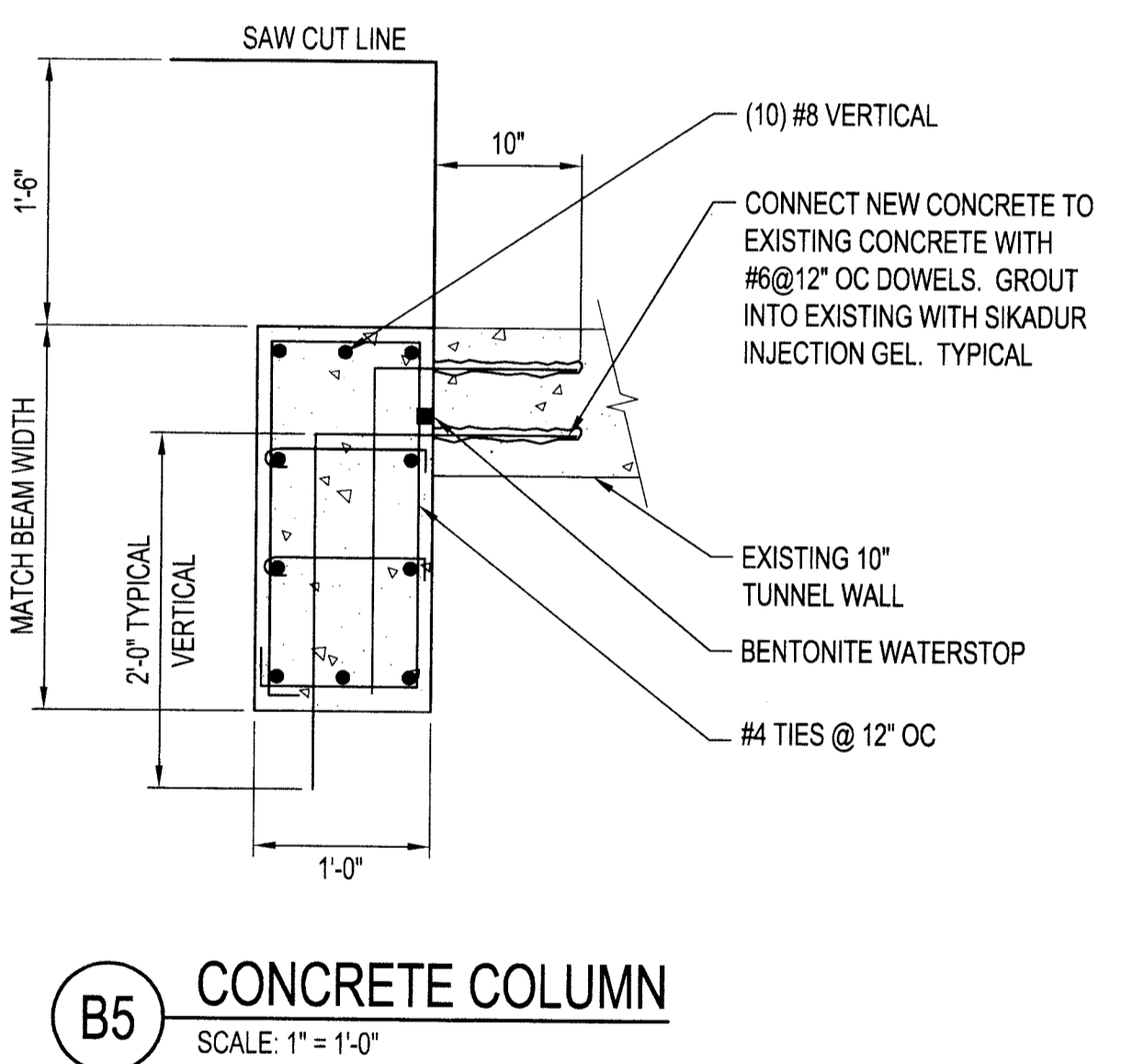
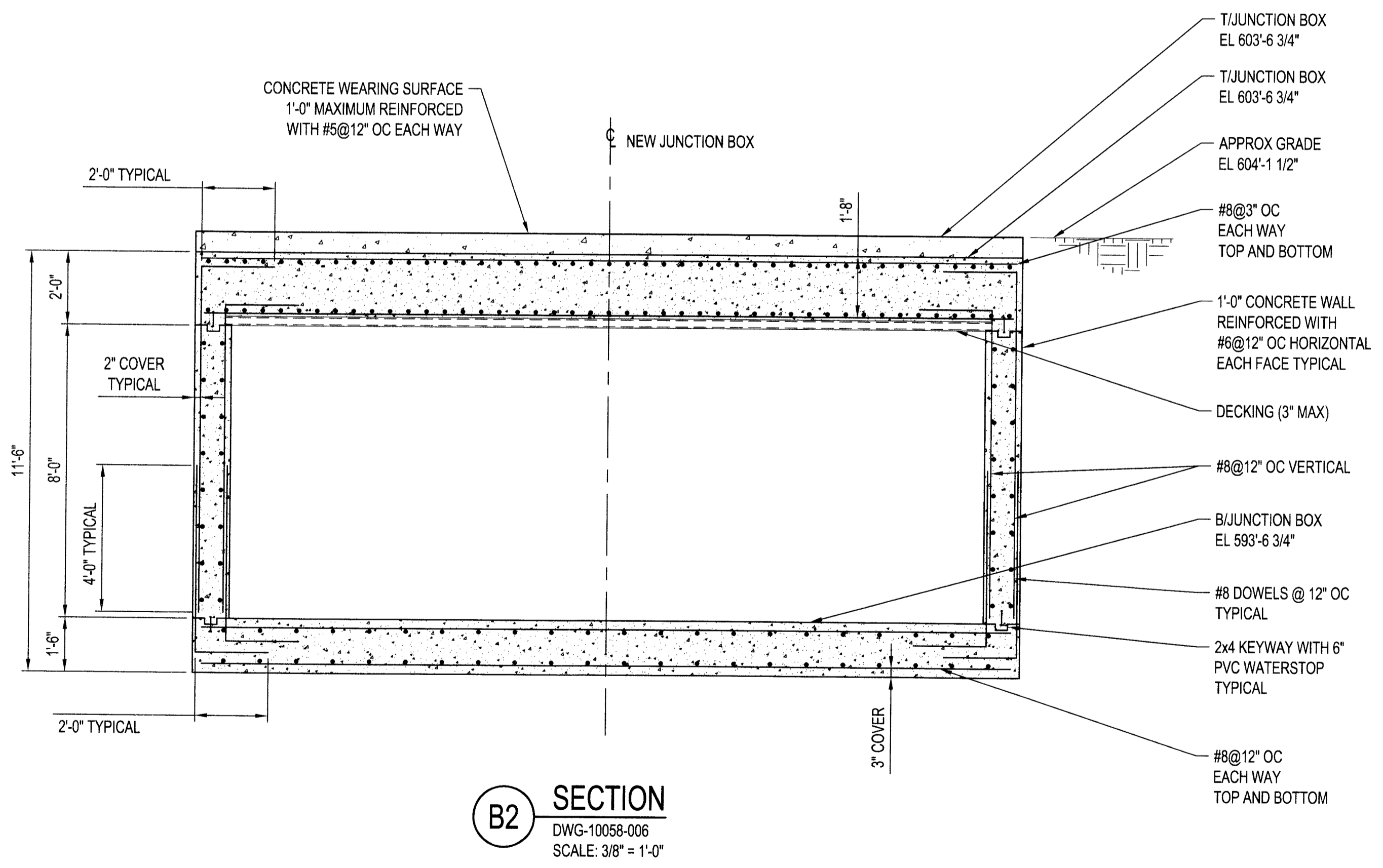
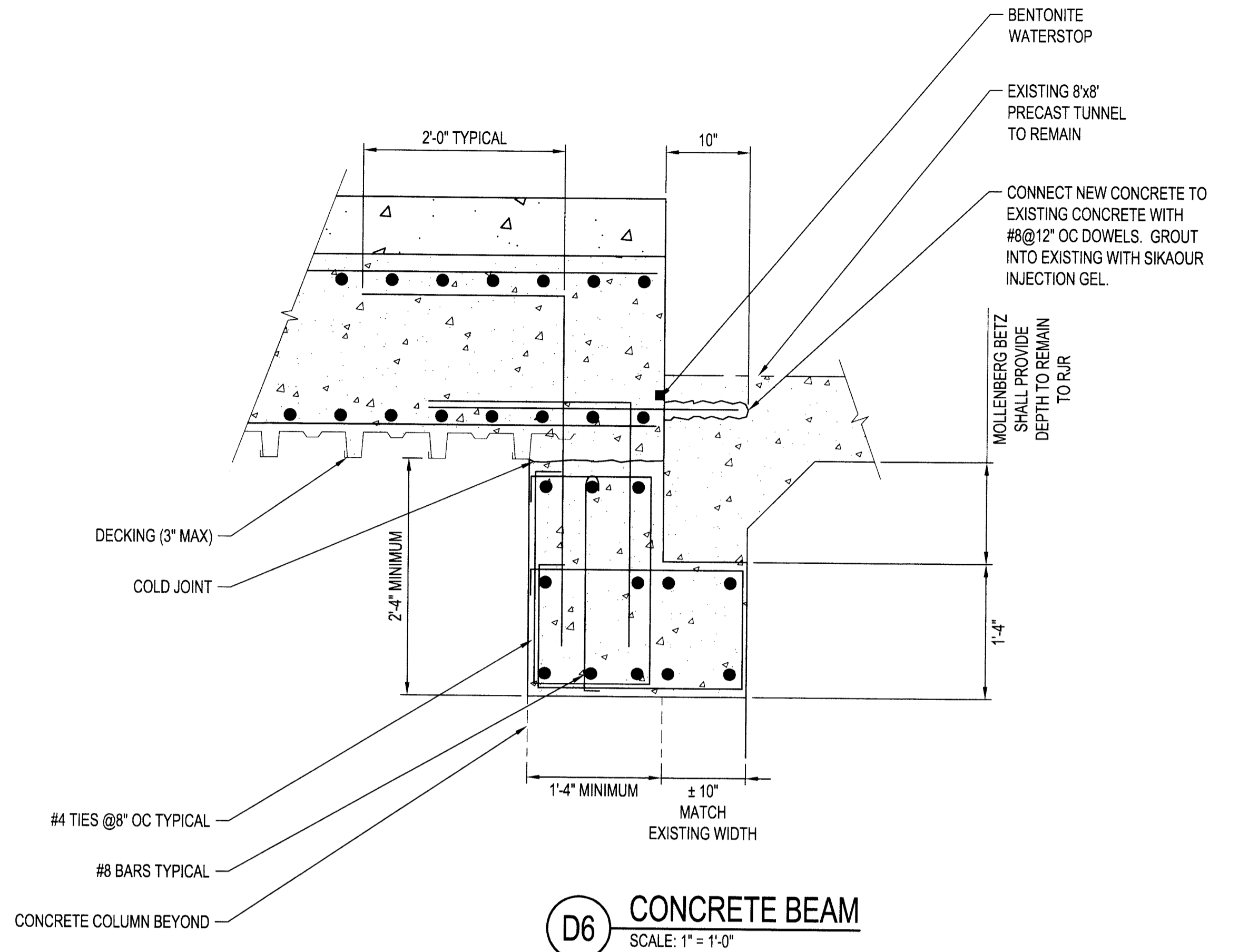
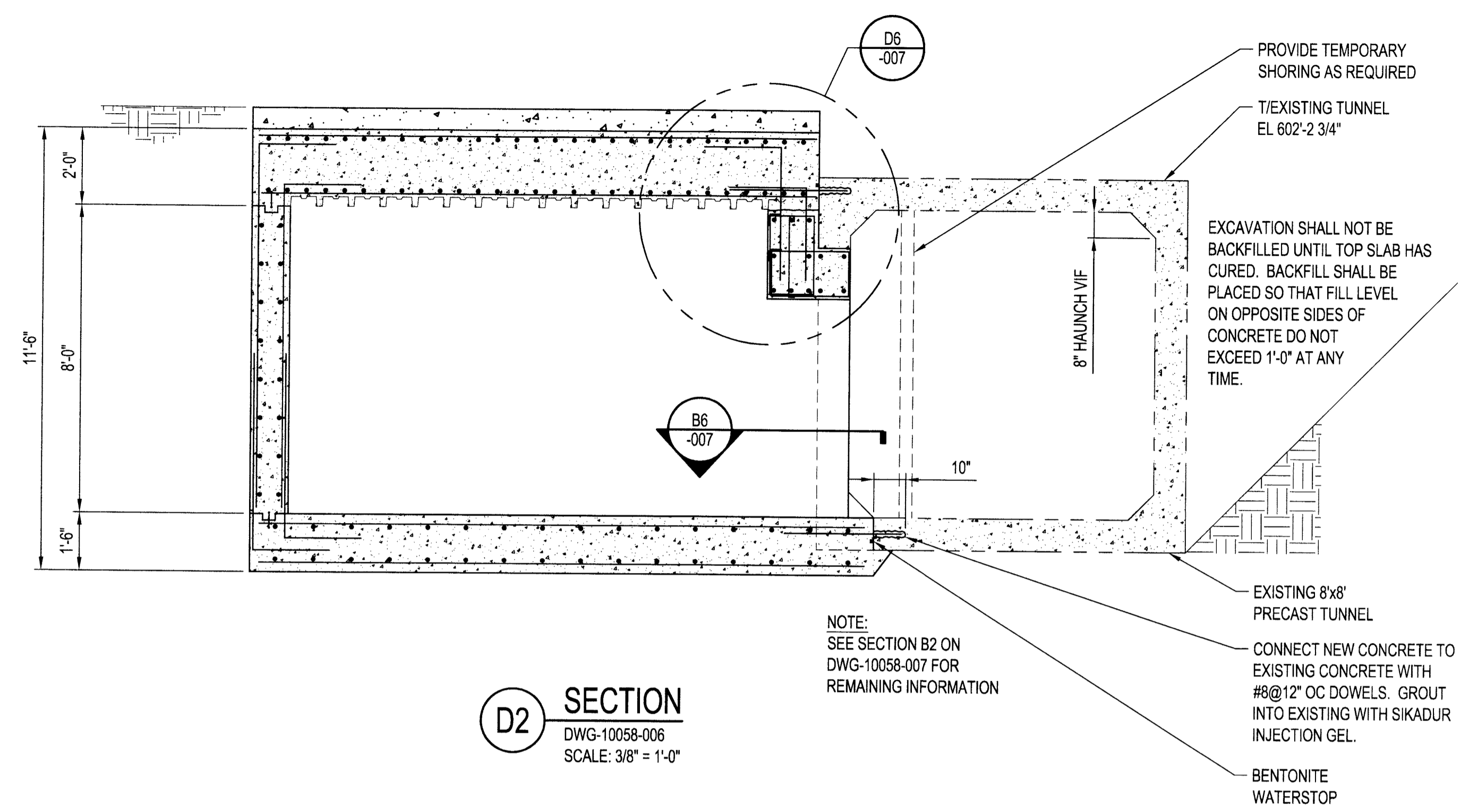
MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
JUNCTION BOX 8A  
PLAN AND SECTIONS

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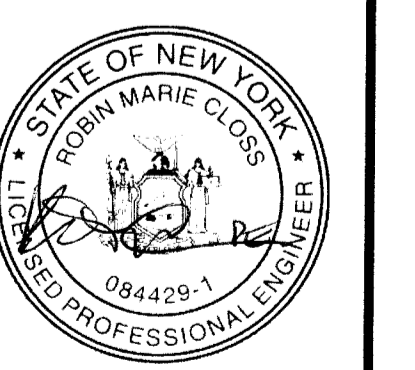
DWG NO. DWG-10058-006  
DWG SCALE: SEE DRAWING  
DWG SIZE: D  
REV: 1

E  
D  
C  
B  
A



**NOTE:**

- FOR DRAWING LIST, REFER TO DWG-10060-001.
- EVERY THIRD HORIZONTAL/VERTICAL WALL (NOT SLAB/COLUMN/BREAM) REBAR MAY BE CUT FOR PIPING/CONDUIT INSTALLATION.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
D	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES	
MACHINED SURFACES FINISH: .003	FINISH
TOLERANCES	
FRACTION: 1/8" ±	DECIMAL: 1.01
ANGLE: 0° ± 30'	

MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

DRAPFER: MEK  
CHECKER: XXX  
ENGINEER: RMC

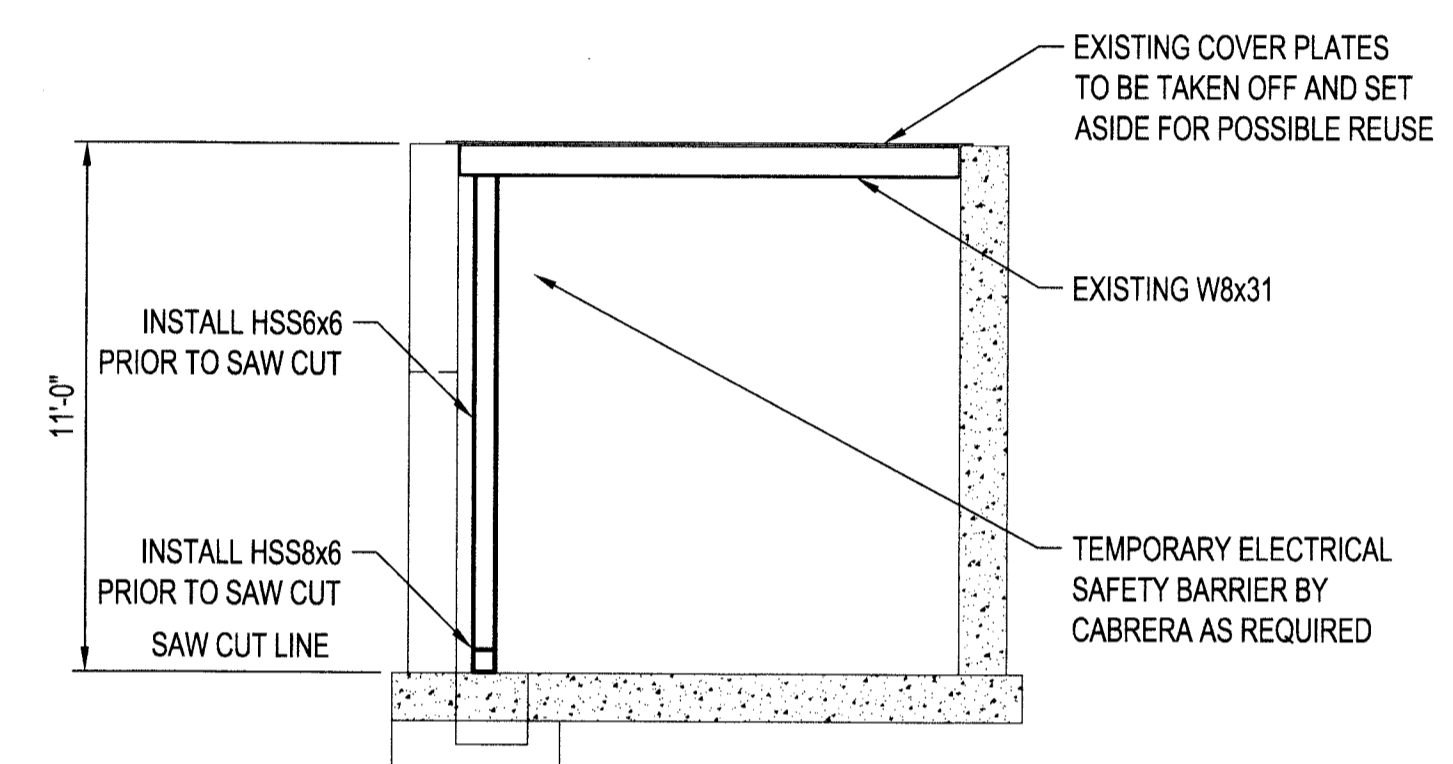
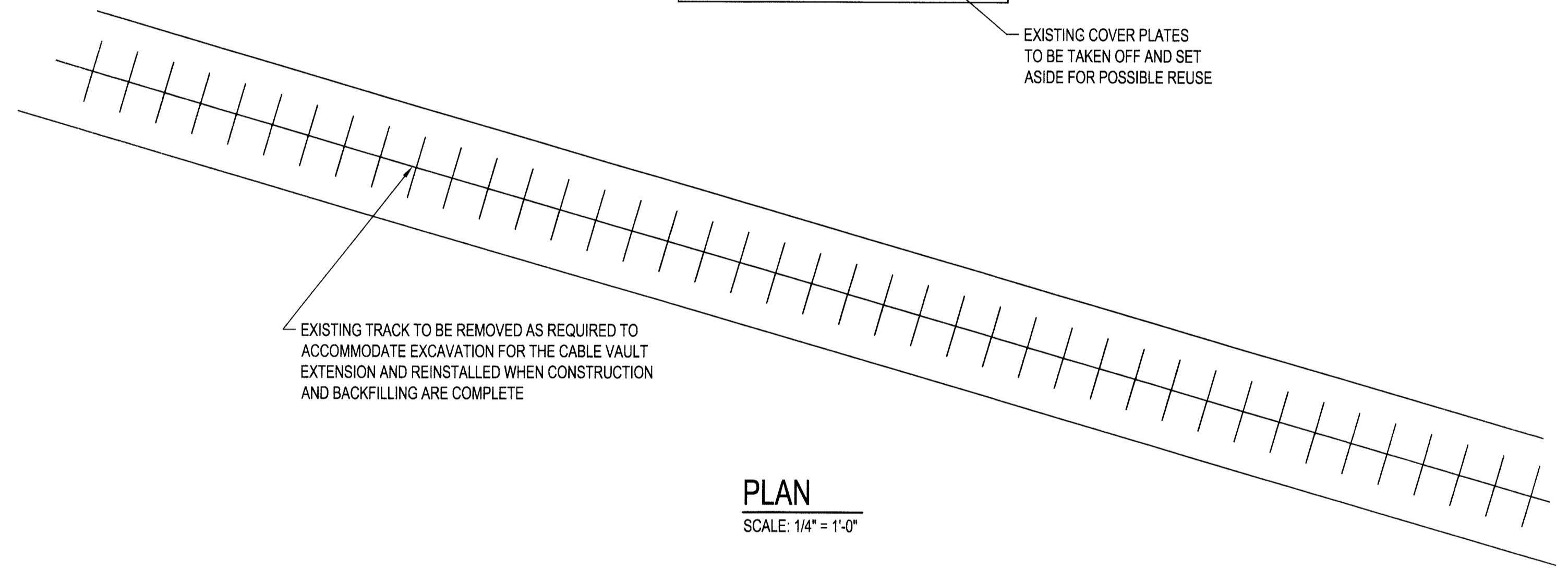
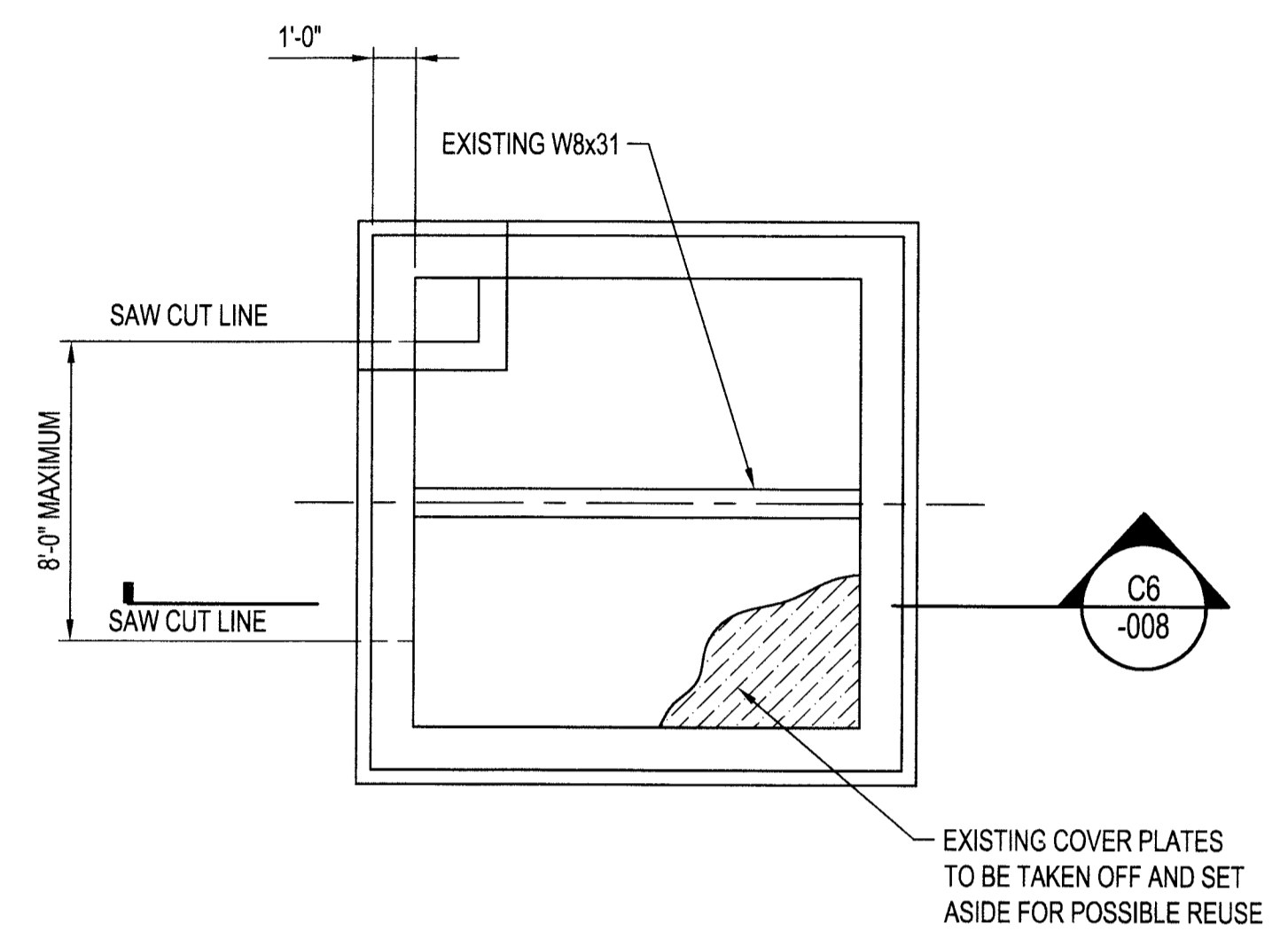
PROJECT #: 10058

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**LINDE FUSRAP UTILITY REPLACEMENT PROJECT**  
JUNCTION BOX 8A  
SECTIONS AND DETAILS

DWG NO.: DWG-10058-007  
DWG SCALE: SEE DRAWING  
REV: 1  
DWG SIZE: D





**C6** SECTION  
SCALE: 1/4" = 1'-0"

**NOTE:**

- FOR DRAWING LIST, REFER TO DWG-10060-001.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MDK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP
2	VAULT EXTENSION REDESIGN	10/03/11	ELK

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES	
MACHINED SURFACES FINISHES: .003 FINISH	125/
TOLERANCES	
FRACTION: 1/8 2 PLACE: 4.01	
3 PLACE: 4.005 ANGLE: 0°10'	

DRAWER: JN
CHECKER: XXX
ENGINEER: RMC

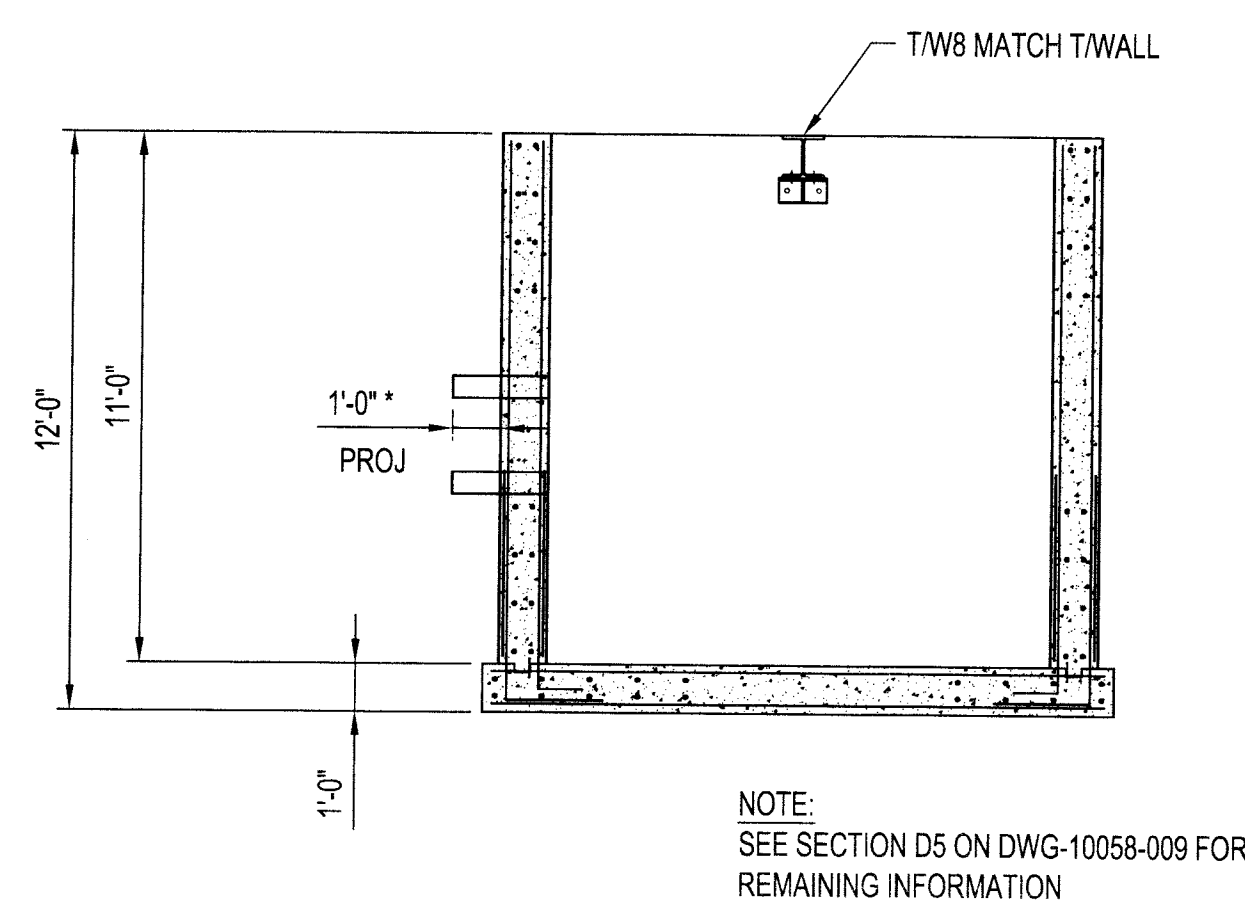
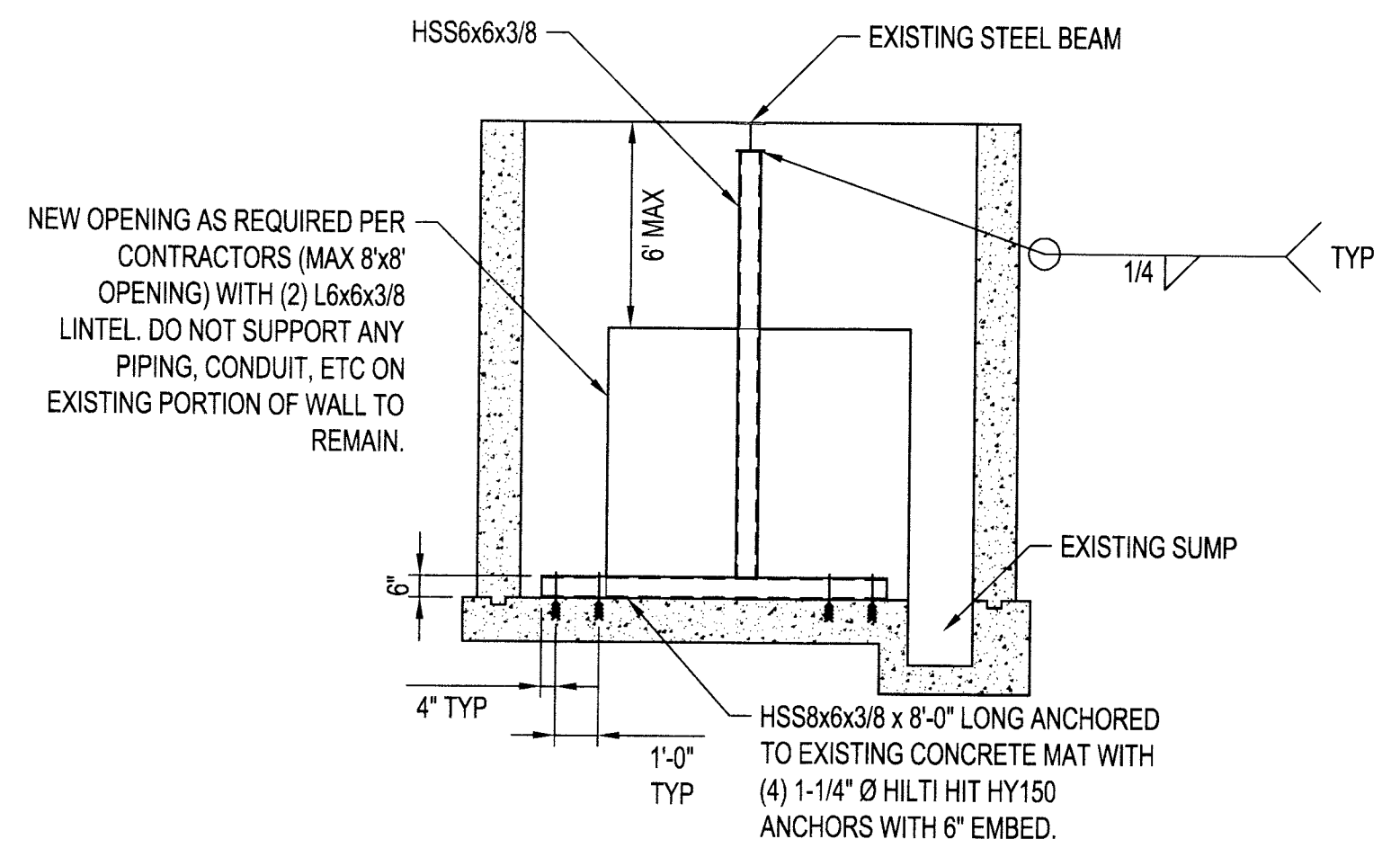
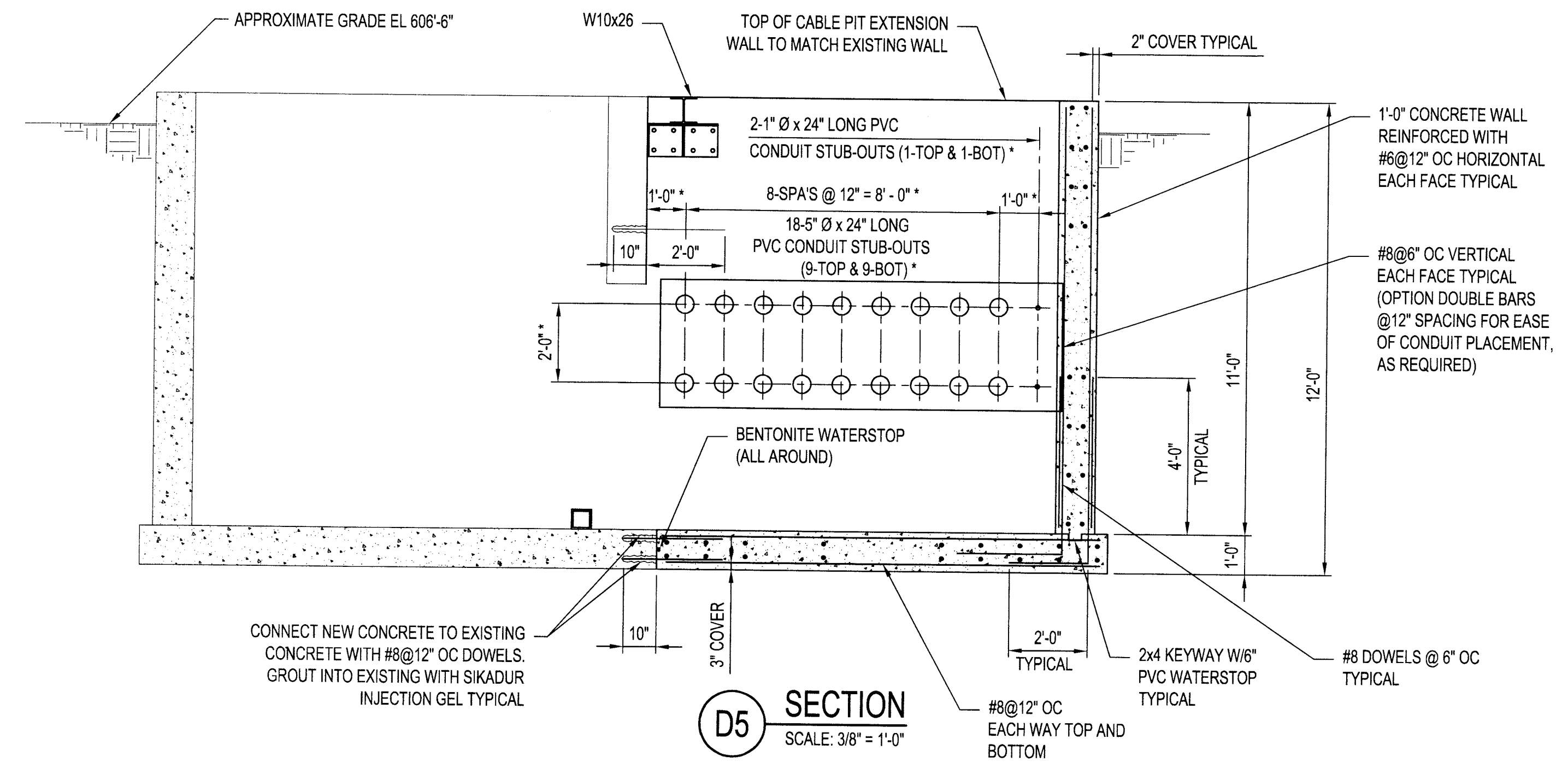
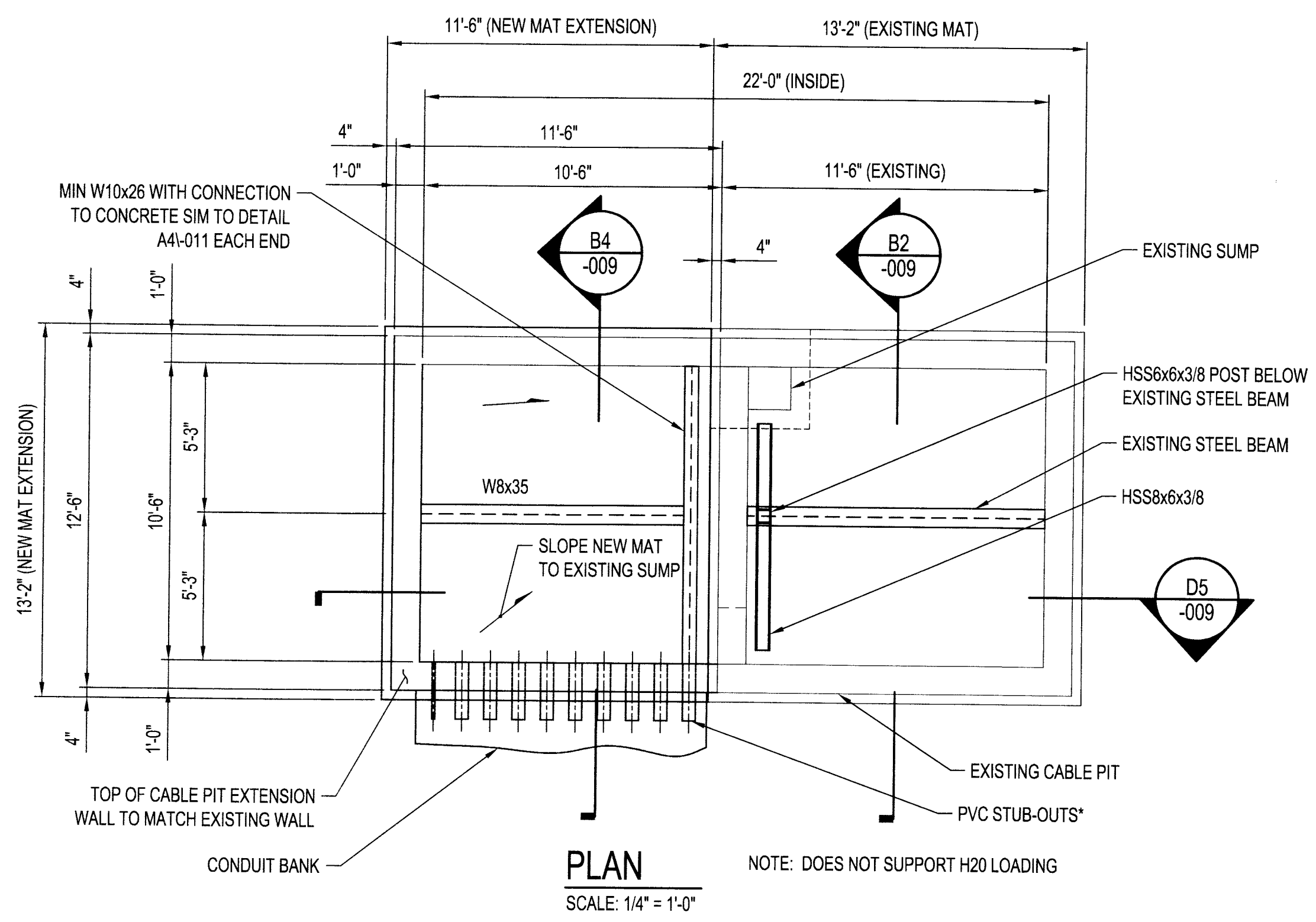
MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

PROJECT #: 10058

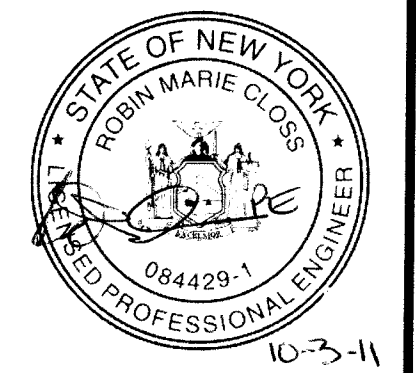
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DWG NO: DWG-10058-008  
DWG SCALE: SEE DRAWING  
REV: 2  
DWG SIZE: D





- NOTES:**
- FOR DRAWING LIST, REFER TO DWG-10060-001.
  - \* DENOTES COORDINATE WITH ELECTRICAL. DO NOT CUT REBAR FOR PIPING / CONDUIT INSTALLATION.



REVISIONS			
REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP
2	VAULT EXTENSION REDESIGN	10/03/11	ELK

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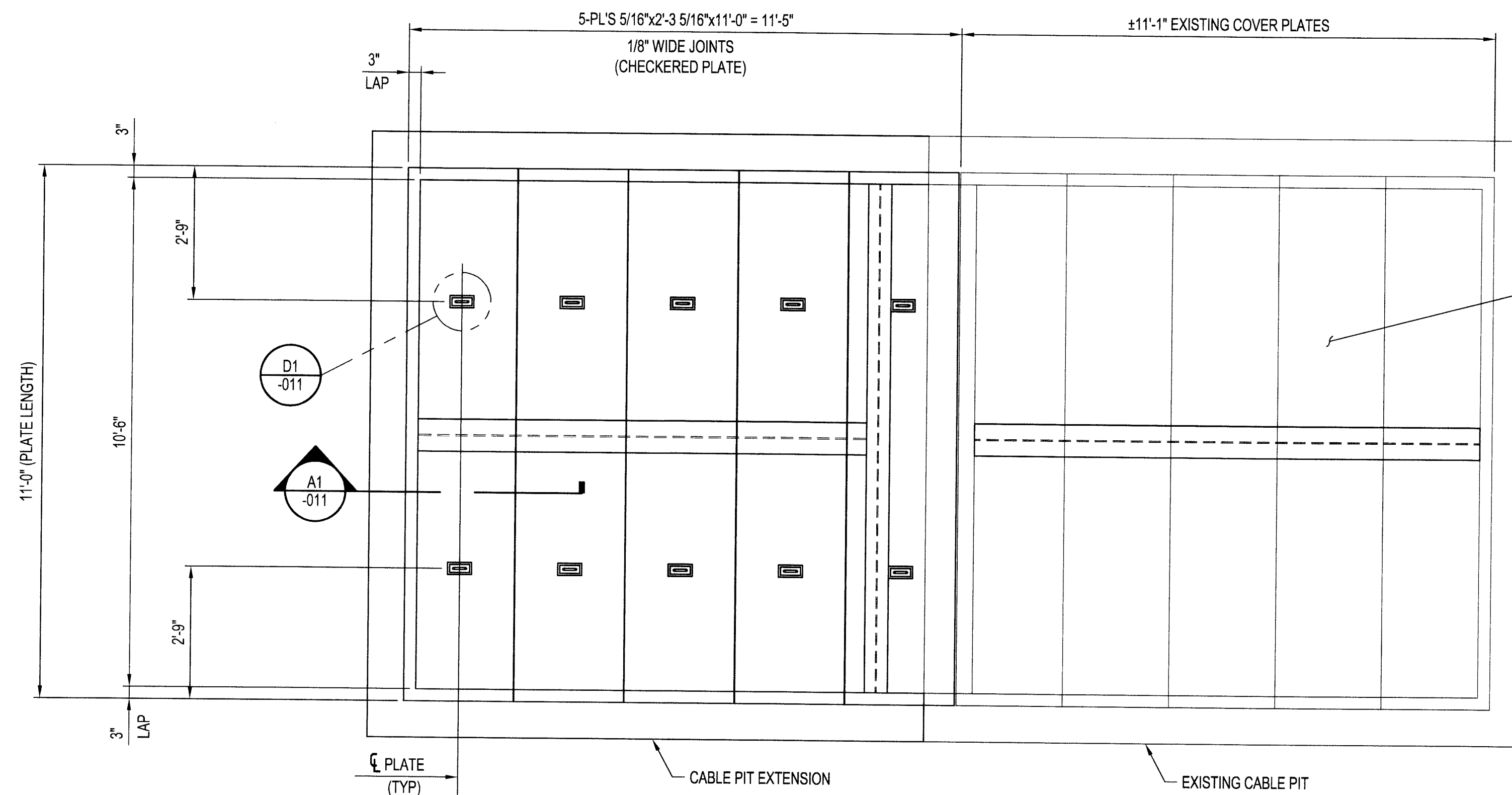
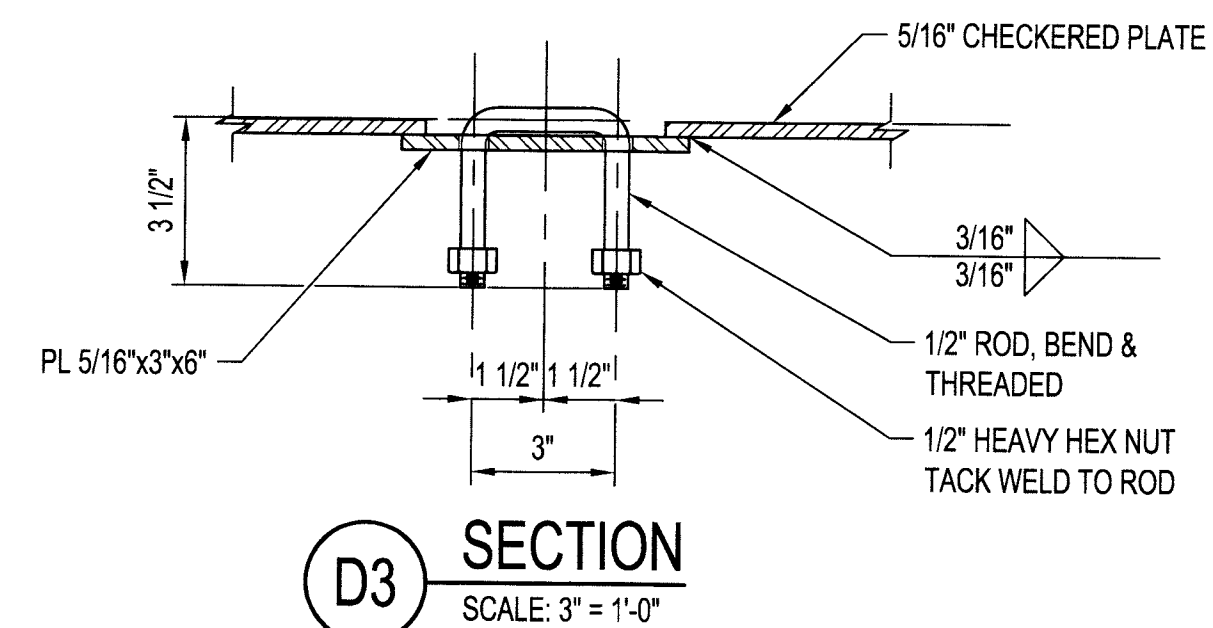
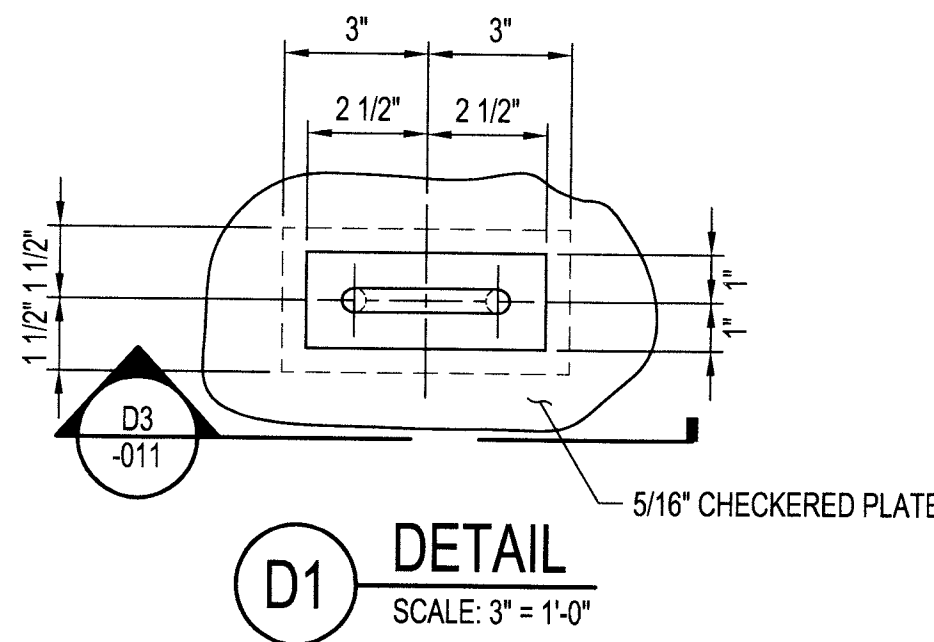
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES
MACHINED SURFACES FINISHES: 303 FINISH
TOLERANCES
FRACTION: 1/8 2 PLACES: ±.01
3 PLACES: ±.005 ANGLE: 0° ± 30'

DRAFTER: JN
CHECKER: XXX
ENGINEER: RMC
PROJECT #: 10058

MOLLENBERG-BETZ INC  
300 SCOTT STREET  
BUFFALO, NY 14204

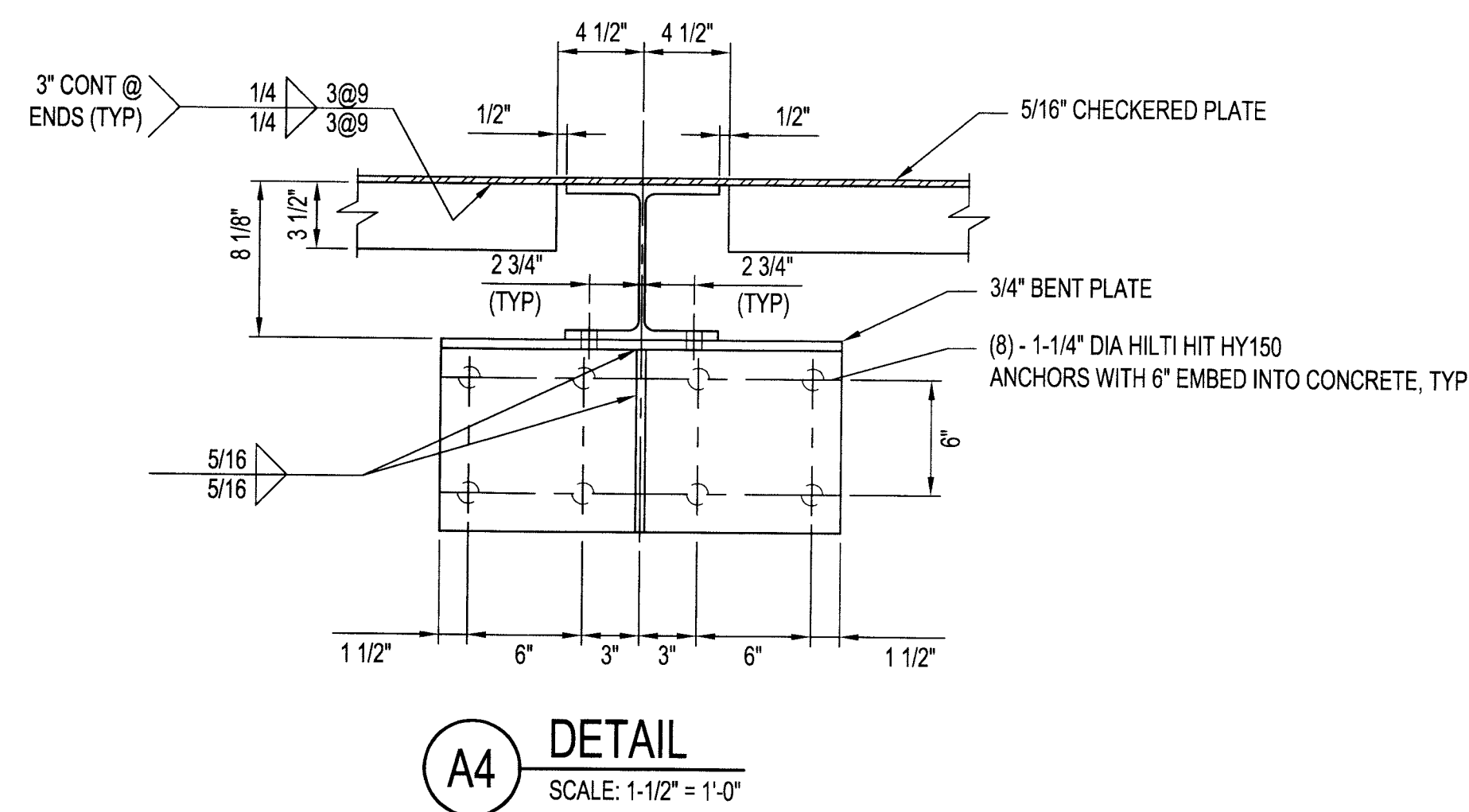
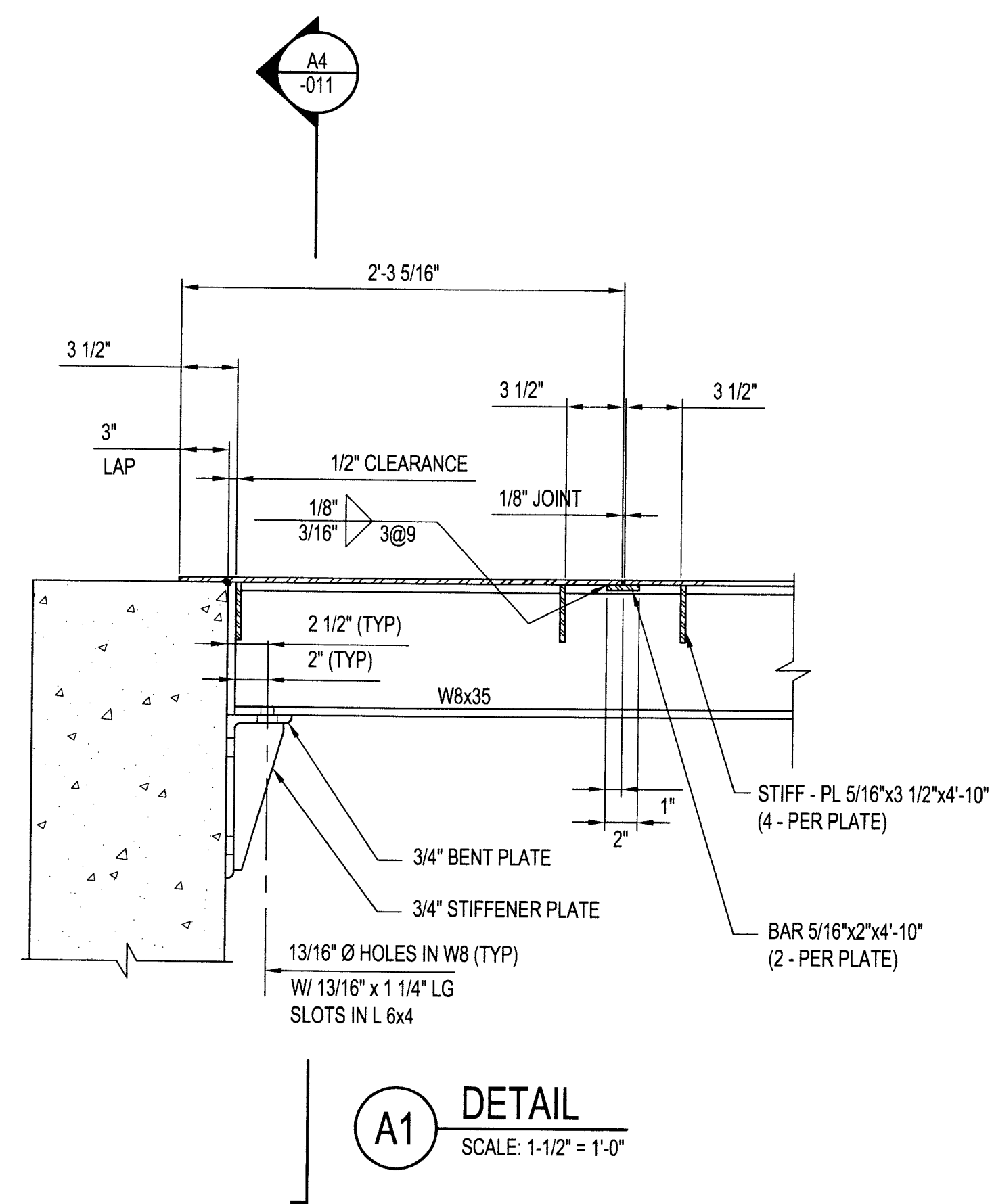
LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
CABLE VAULT EXTENSION  
PLAN AND SECTIONS

<b>RJR</b> RJR ENGINEERING, P.C. PROFESSIONAL ENGINEERS 23 Mechanic Street - P.O. Box 344 Springville, New York 14141-0344 PH. (716)-592-3980 FAX. (716)-592-4216 www.rjr.com	DWG NO: DWG-10058-009 DWG SCALE: SEE DRAWING REV: 2 DWG DATE: D
--	--



NOTE: DOES NOT SUPPORT H20 LOADING

VERIFY EXISTING PLATES ARE MINIMUM 5/16" THICK OR REPLACE



NOTE:

1. FOR DRAWING LIST, REFER TO DWG-10060-001.



REV	DESCRIPTION	DATE	INIT
0	FOR REVIEW	06/02/11	MEK
1	ISSUE FOR CONSTRUCTION	08/31/11	TPP
2	VAULT EXTENSION REDESIGN	10/03/11	ELK

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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES
MACHINED SURFACES FINISHES: .003 FINISH 125/
TOLERANCES: FRACTION: 1/8 2 PLACE: ±.01 3 PLACE: ±.005 ANGLE: 0°:30'

DRAWN: JN	CHECKER: XXX	ENGINEER: RMC
PROJECT #: 10058		

MOLLENBERG-BETZ INC 300 SCOTT STREET BUFFALO, NY 14204		RJR ENGINEERING, P.C. PROFESSIONAL ENGINEERS 23 Mechanic Street - P.O. Box 344 Springville, New York 14141-0344 PH. (716)-592-3980 FAX (716)-592-4216 www.rjr.com	
DWG NO.	DWG-10058-011	DWG SCALE:	SEE DRAWING
REV#	2	DWG SIZE:	D

LINDE FUSRAP UTILITY REPLACEMENT PROJECT  
CABLE VAULT EXTENSION DETAILS