

PIP-II: SITE PREPERATION

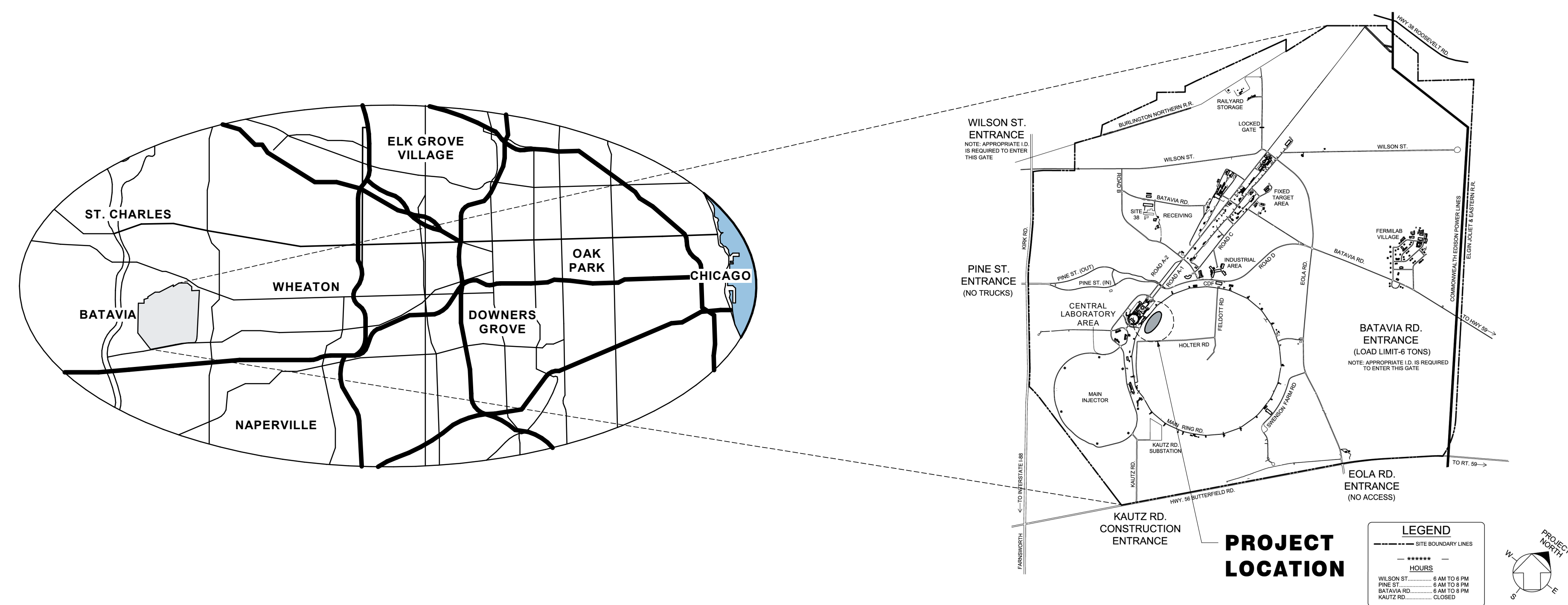
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08.17.2018



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PROJECT INFORMATION

PROJECT ADDRESS:
FERMI NATIONAL ACCELERATOR LABORATORY
PROTON IMPROVEMENT PLAN (PIP-II)
BATAVIA, IL 606510

PROJECT DESCRIPTION:
THE PROTON IMPROVEMENT PLAN (PIP-II) FACILITIES WILL HOUSE THE ACCELERATOR COMPONENTS AND SUPPORT THE EQUIPMENT REQUIRED TO INSTALL AND OPERATE THE PIP-II LINAC AND TRANSFER LINE. SPECIFICALLY, THE SITE PREPERATION PACKAGE CONSISTS OF THE CONVENTIONAL CONSTRUCTION REQUIRED TO EXTEND THE EXISTING FERMI LAB INFRASTRUCTURE TO THE PIP-II SITE AND PREPARE THE SITE. THE PROJECT SITE IS APPROXIMATELY 300,000 SF AND THE WORK WILL GENERALLY BE LOCATED INFIELD OF THE MAIN RING / TEVATRON PORTION OF THE FERMI LAB SITE. IN ADDITION, THE SITE PREPERATION WILL INCLUDE PROVISIONS TO ACCOMMODATE A POND AND INCORPORATE LANDSCAPING RESTORATION THAT WILL UTILIZE BOTH NATIVE PRAIRIE PLANTING AND WETLAND SPECIFIC PLANTINGS.

GENERAL NOTES

- PROTECT AREA OF WORK AND ADJACENT AREAS FROM DAMAGE.
- DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT.
- THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE STARTING WORK. IF CONDITIONS VARY FROM THOSE INDICATED ON THE DRAWINGS, THE FERMI LAB CONSTRUCTION COORDINATOR SHALL BE NOTIFIED AND NO WORK SHALL BE DONE IN THE AREA WITHOUT THEIR APPROVAL.
- SUBCONTRACTOR'S WORK ACTIVITIES SHALL BE RESTRICTED TO AREAS WITHIN THE LIMITS OF CONSTRUCTION AS NOTED ON THE DRAWINGS. SUBCONTRACTOR'S ACTIVITIES AND VEHICLES SHALL NOT BE ALLOWED OUTSIDE OF THESE LIMITS UNLESS APPROVED BY THE FERMI LAB CONSTRUCTION COORDINATOR.
- THE SUBCONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OTHER SUBCONTRACTORS ON ADJACENT AND CONCURRENT WORK.
- REFER TO EACH DISCIPLINE FOR ADDITIONAL NOTES AND REQUIREMENTS.

CODES

THESE PLANS & SPECIFICATIONS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING BUILDING CODES AND REGULATIONS:

CIVIL:	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
	ILLINOIS DEPARTMENT OF TRANSPORTATION (DOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - 2016 EDITION
MECHANICAL:	INTERNATIONAL MECHANICAL CODE (IMC) - 2009 EDITION ASHRAE STANDARDS: 15, 55, 62, 90.1 GUIDELINE 0, AEDG & HANDBOOK HVAC SYSTEMS AND EQUIPMENT NFPA 54 NATIONAL FUEL GAS CODE - 2012 EDITION
ELECTRICAL:	NATIONAL ELECTRICAL CODE - 2012 EDITION (NFPA 70-2012)
PLUMBING:	NATIONAL PLUMBING CODE - 2004 EDITION
ENERGY:	INTERNATIONAL ENERGY CONSERVATION CODE - 2009 EDITION GUIDING PRINCIPLES FOR FEDERAL LEADERSHIP IN HIGH PERFORMANCE AND SUSTAINABLE BUILDINGS (GUIDING PRINCIPLES)
BARRIER FREE:	ICC/ANSI 117.1 - 2003 STANDARD FOR ACCESSIBILITY AND USABLE BUILDINGS AND FACILITIES ILLINOIS ACCESSIBILITY CODE ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG) - 2004 EDITION

VACINITY MAP

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tyrk Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrenville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner

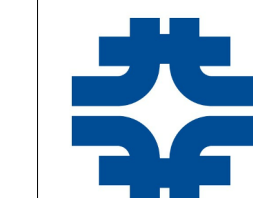
Contractor
55 East Manroe Street
Suite 1430
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	RG	07/18/18
DRAWN	AVA	07/18/18
CHECKED	PJA	07/18/18
APPROVED	BW	07/18/18
SUBMITTED		

SCALE: NOT TO SCALE

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY



PIP-II: SITE PREPERATION
COVER

DRAWING NO. 4-3-2

G-0 REV. 1

GENSLER NUMBER: 21.0137.004

17 AUG 2018

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

CIVIL - OVERALL

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX



CIVIL	OVERALL
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C-2	GEOTECHNICAL PLAN
C-3	EXISTING SITE & GRADING PLAN
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C-25	NEW UTILITY PLAN I
C-26	NEW UTILITY PLAN II

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1	08.17.2018	60% DESIGN DOCUMENTS	

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyra Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 HOERR SCHAUDT
 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

Turner
 Contractor
 55 East Manroe Street
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

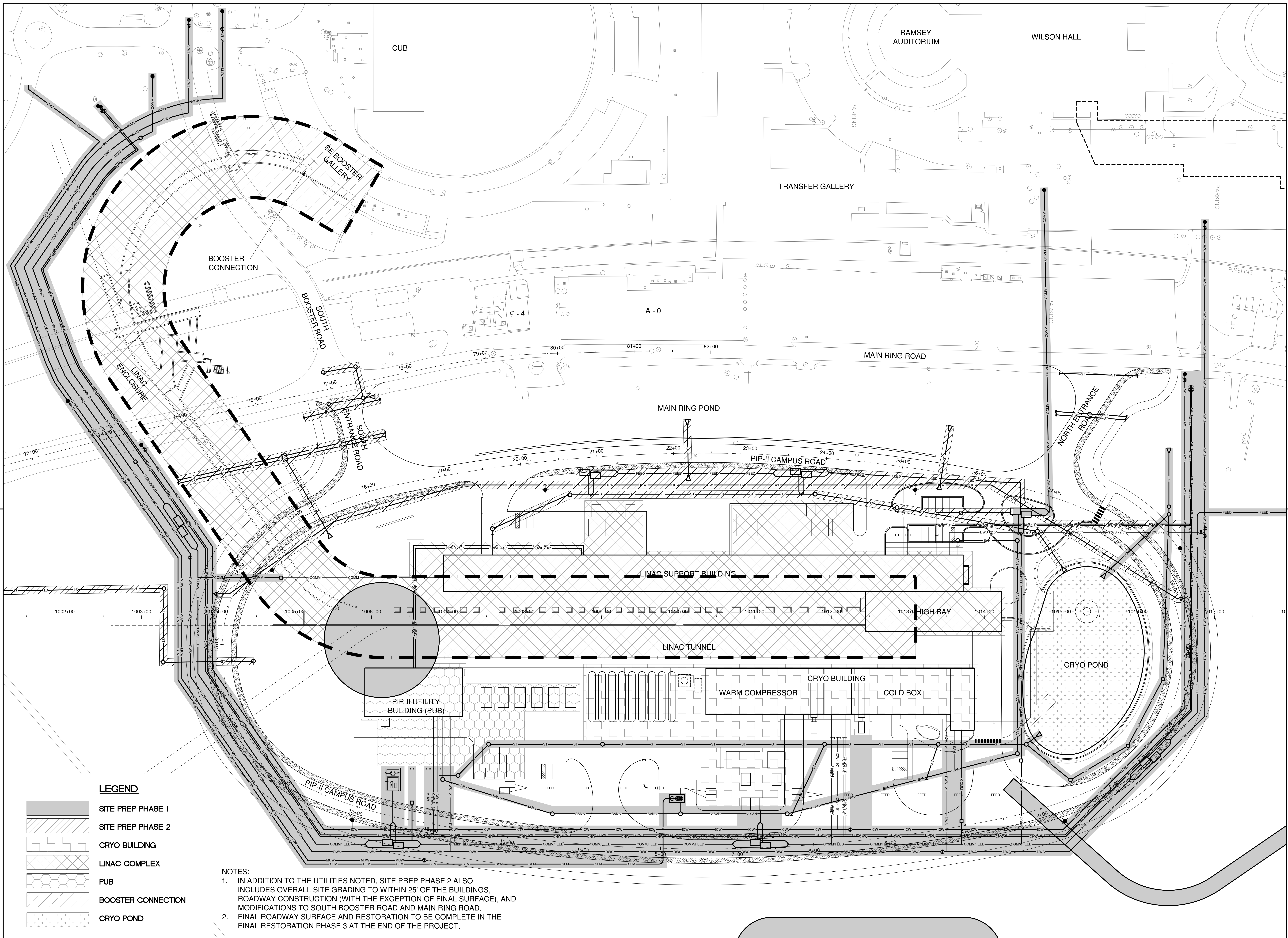
Turner
 Landscape Architects
 850 West Jackson Blvd.
 Suite 800
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	RG	07/18/18
DRAWN	AVA	07/18/18
CHECKED	PJA	07/18/18
APPROVED	BW	07/18/18
SUBMITTED		



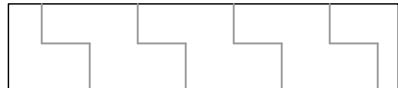



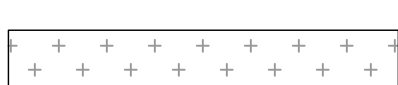
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PIP-II: SITE PREPERATION
COVER
 DRAWING NO. **4-3-2** **C-0** REV. 1
 GENSLER NUMBER: 21.0137.004



LEGEND

-  SITE PREP PHASE 1
-  SITE PREP PHASE 2
-  CRYO BUILDING
-  LINAC COMPLEX
-  PUB
-  BOOSTER CONNECTION
-  CRYO POND

NOTES:

1. IN ADDITION TO THE UTILITIES NOTED, SITE PREP PHASE 2 ALSO INCLUDES OVERALL SITE GRADING TO WITHIN 25' OF THE BUILDINGS, ROADWAY CONSTRUCTION (WITH THE EXCEPTION OF FINAL SURFACE), AND MODIFICATIONS TO SOUTH BOOSTER ROAD AND MAIN RING ROAD.
2. FINAL ROADWAY SURFACE AND RESTORATION TO BE COMPLETE IN THE FINAL RESTORATION PHASE 3 AT THE END OF THE PROJECT.

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60604
 Tel: 630.820.1022
 Fax: 630.820.0350

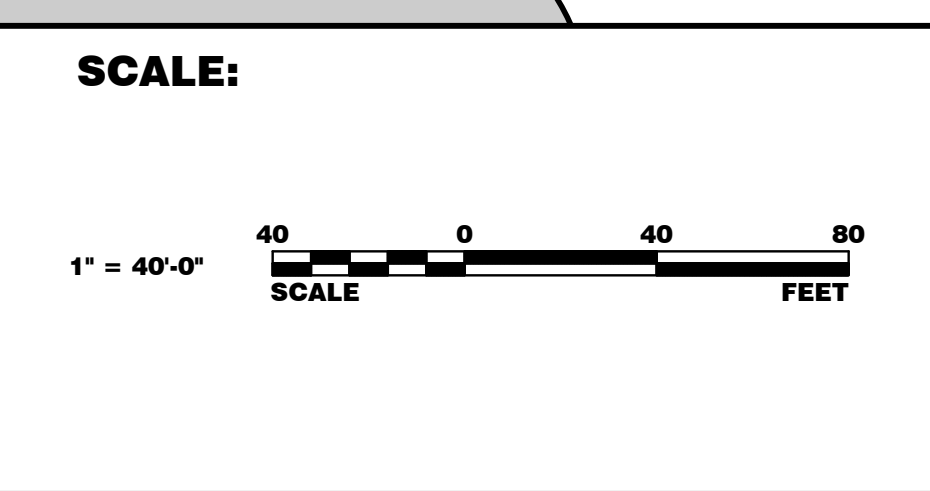
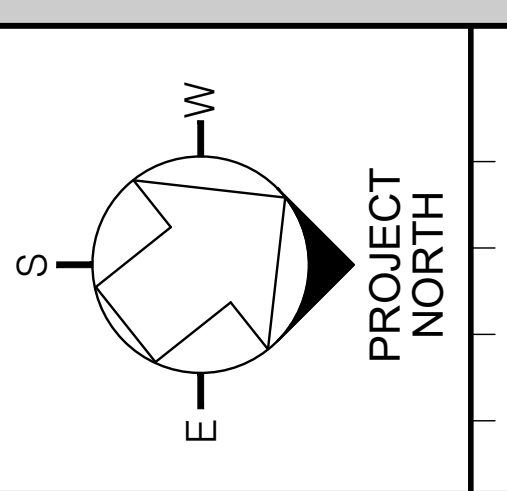
TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warrenville Rd.
 Suite 900
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

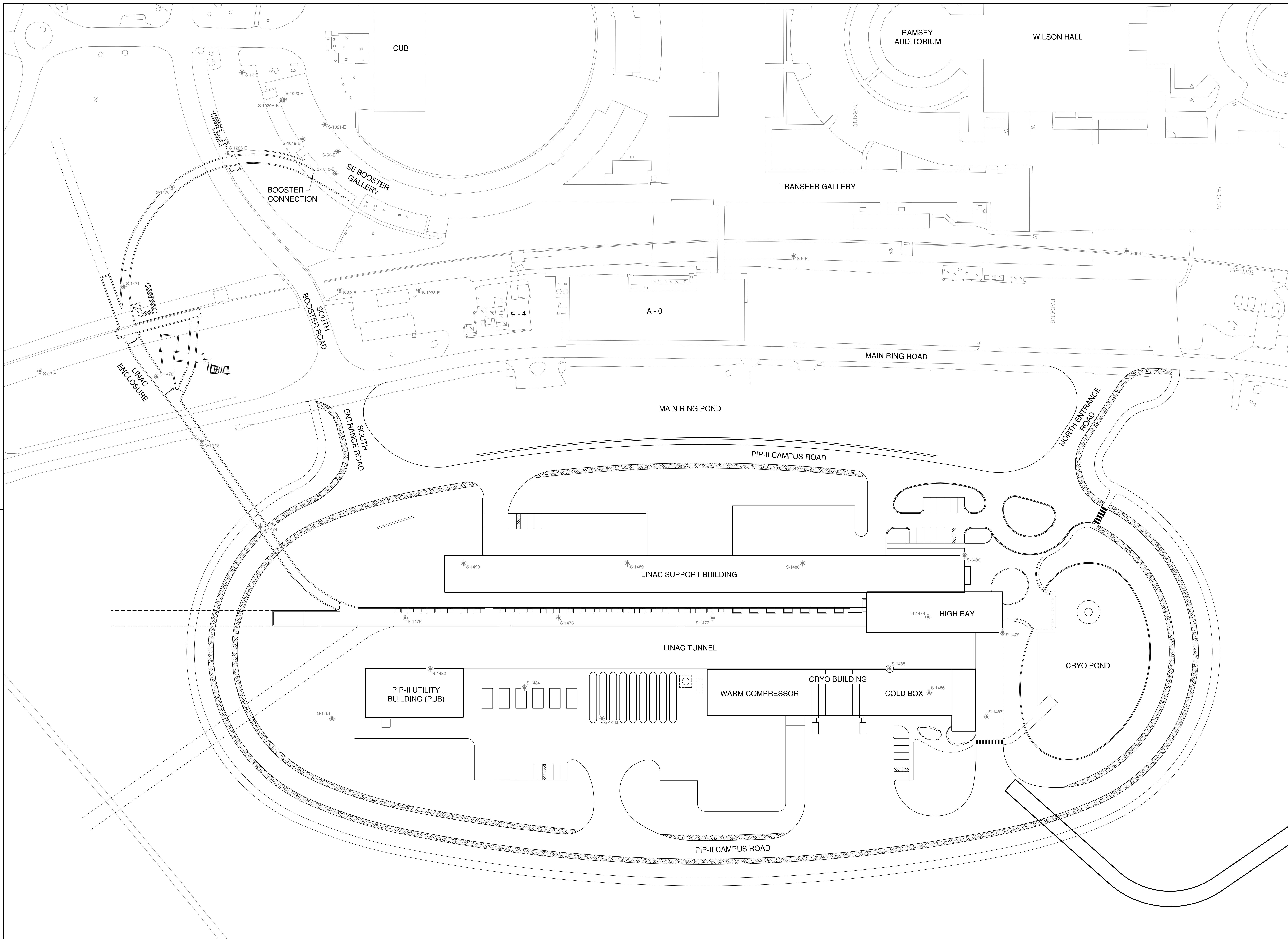
Turner
 General Contractor
 55 East Marroe St.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	T. O'GRADY	08.16.2018
DRAWN	J. OHSE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED	----	
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
OVERALL PIP II PROJECT PHASING PLAN
 DRAWING NO. **4-3-2** **C-1** REV. 1 **08-17-2018**



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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

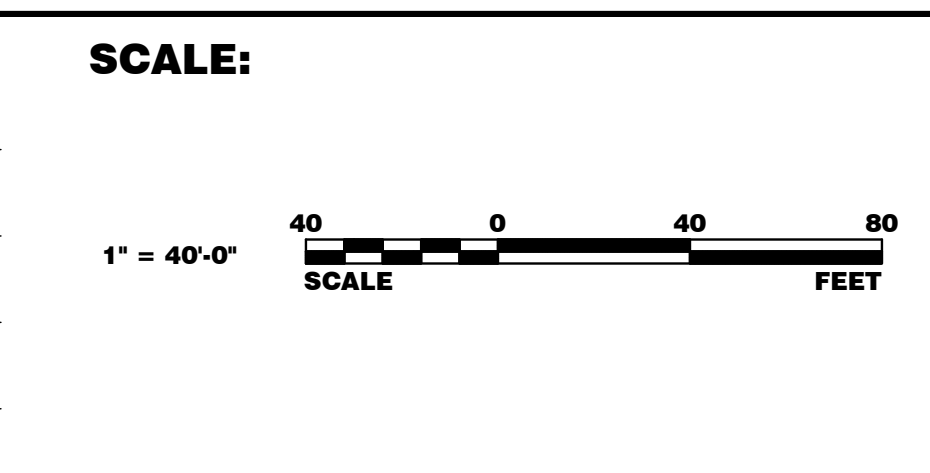
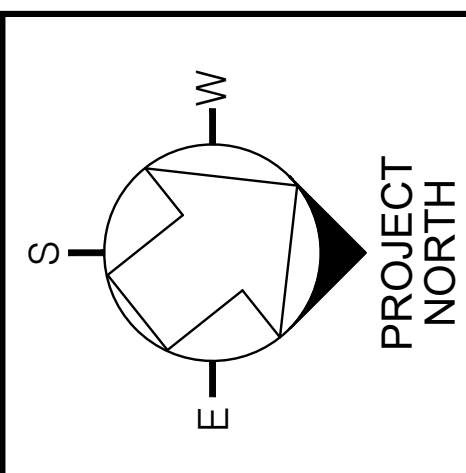
TGRWA
 Tyk, Gustafson, Reckers, Wilson, Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East marion St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

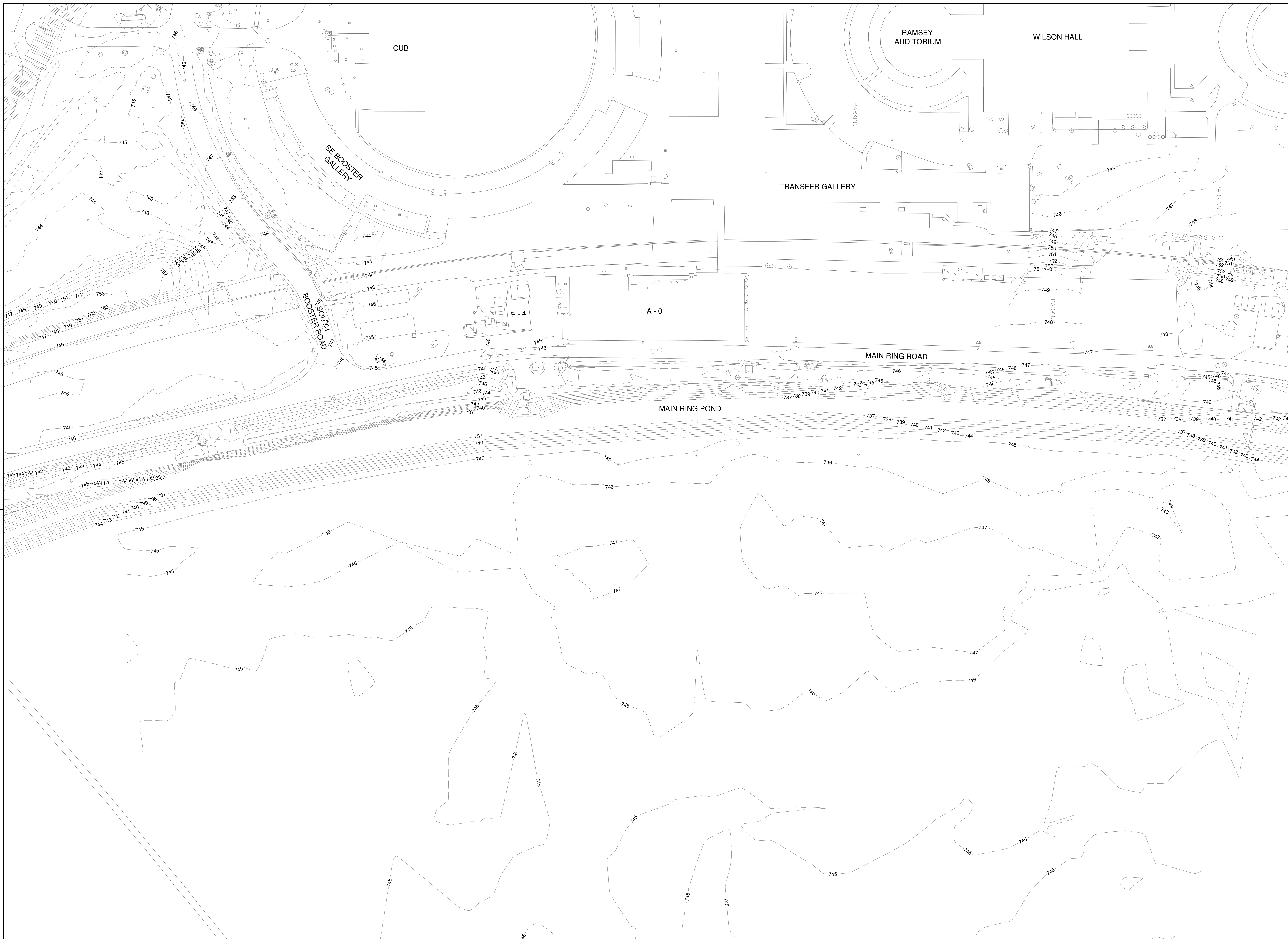
	NAME	DATE
DESIGNED	C.DAGIANTIS	08.16.2018
DRAWN	J.VAREE	08.16.2018
CHECKED	T.O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



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PIP II SITE PREPARATION
GEOTECHNICAL PLAN
 DRAWING NO. **4-3-2** **C-2** REV. 1

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

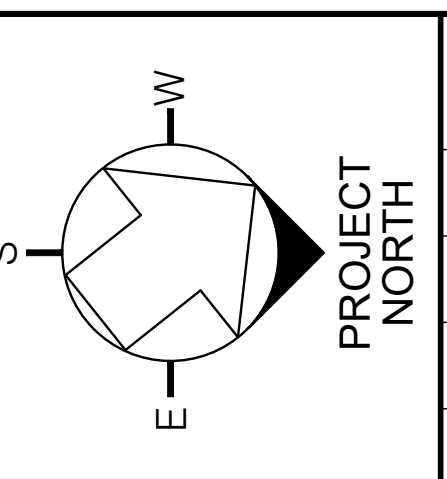
TGRWA
 TyR. Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wienerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	C. DAGIANTIS	08.16.2018
CHECKED	T. OGRADY	08.16.2018
APPROVED		
SUBMITTED		



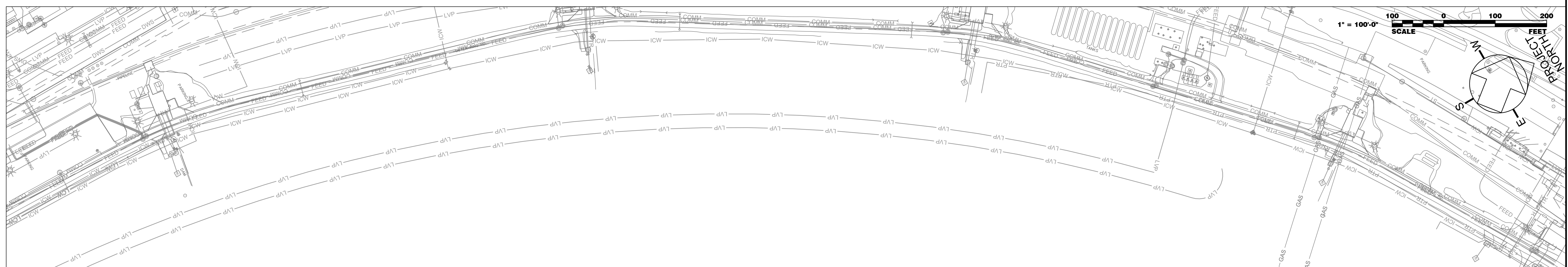
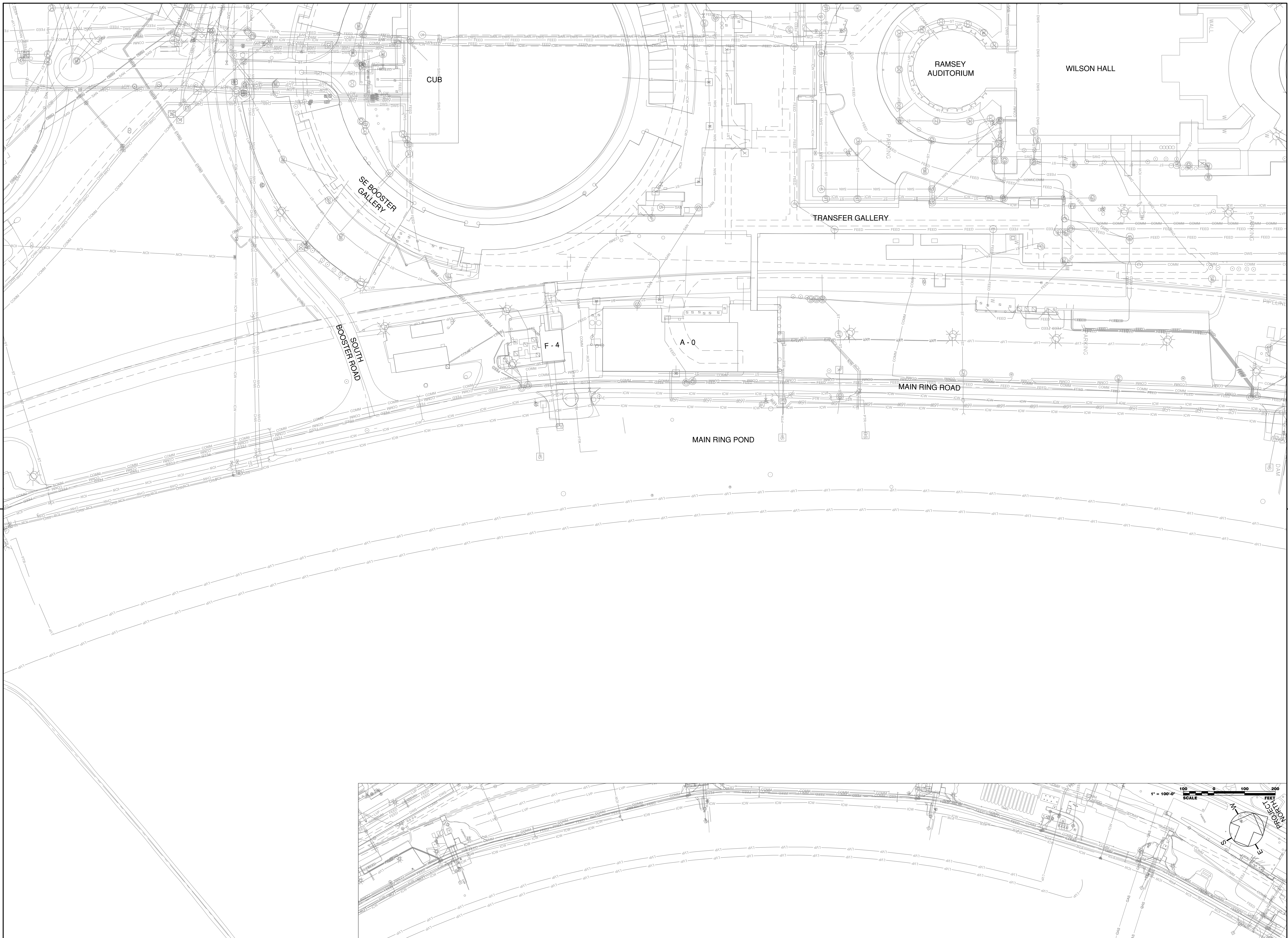
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PIP II SITE PREPARATION
EXISTING SITE & GRADING PLAN
 DRAWING NO. **4-3-2** **C-3** REV. 1

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

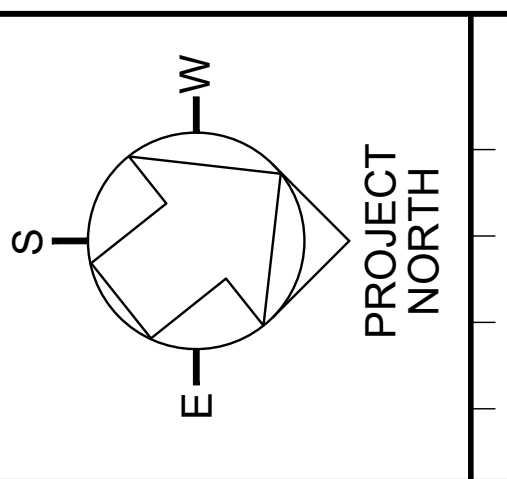
TGRWA
 Tysk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warrville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 1500
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



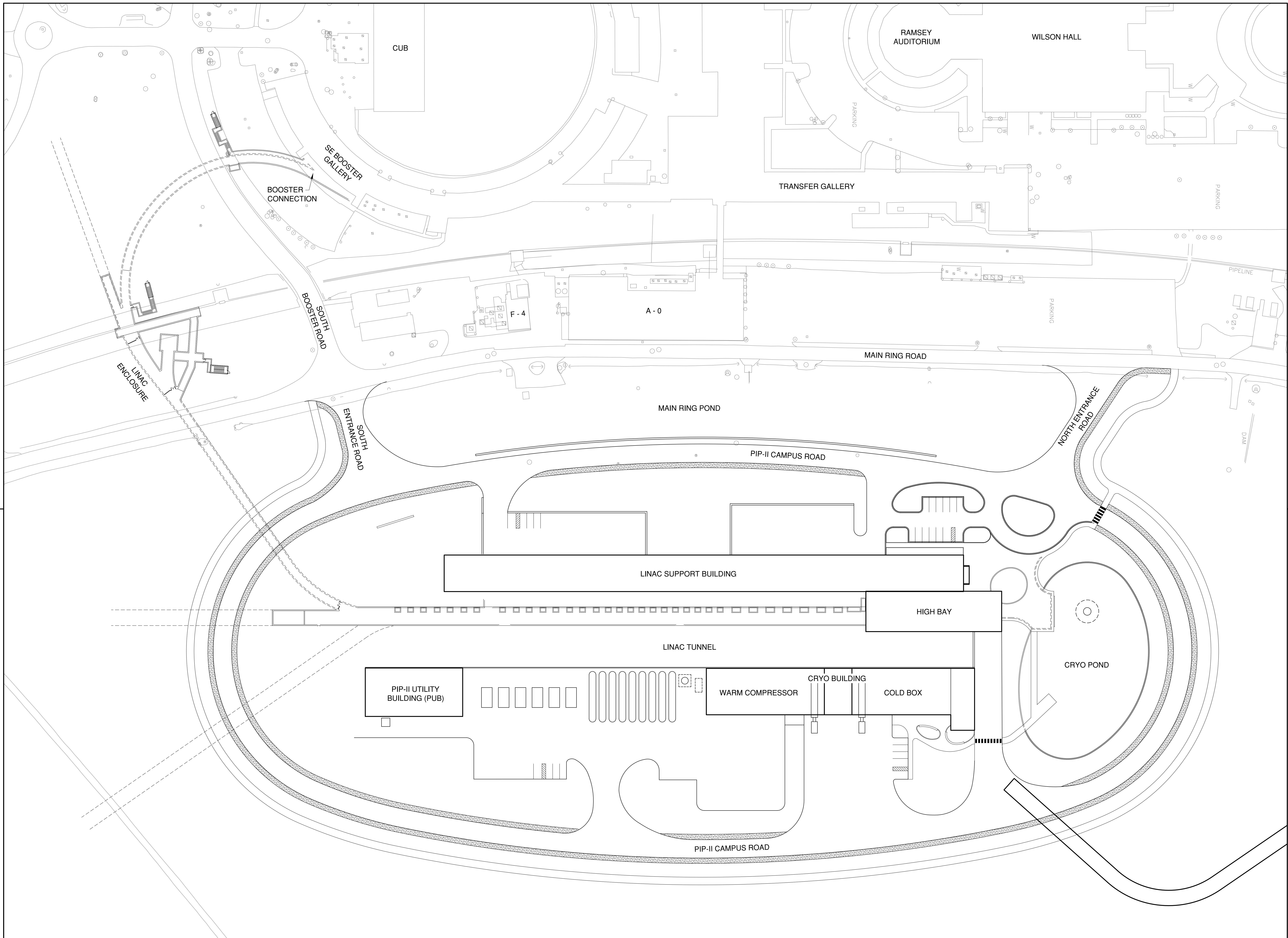
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 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
EXISTING UTILITY PLAN
 DRAWING NO. **4-3-2** **C-4** REV. 1

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

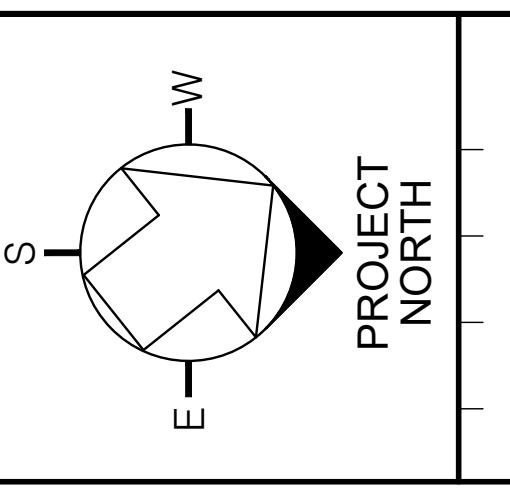
TGRWA
 Tyk, Gustafson, Reckers, Wilson, Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

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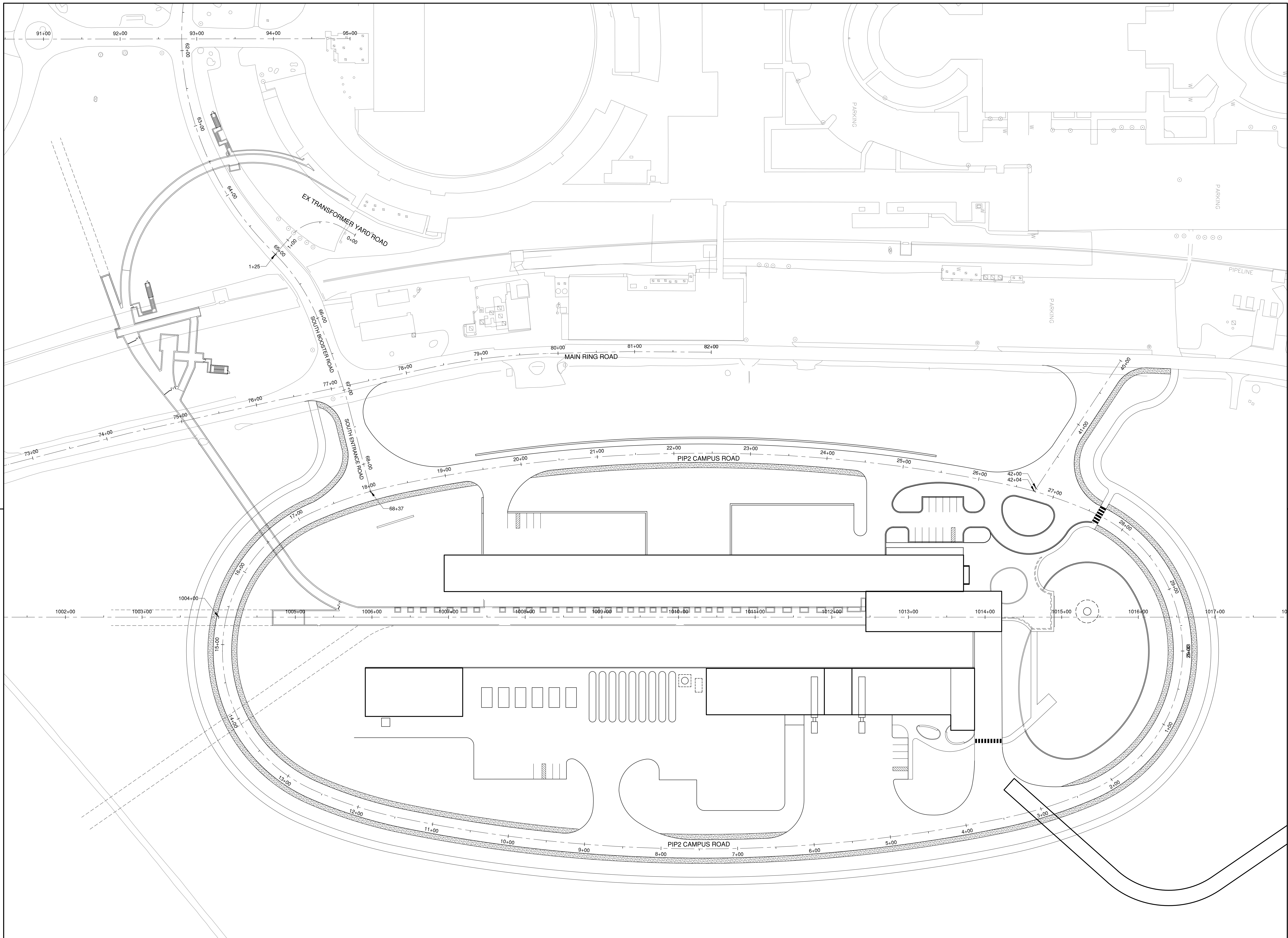
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FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW SITE PLAN
 DRAWING NO. **4-3-2** **C-5** REV. 1

Thursday, August 16, 2018 2:00:37 PM

08-17-2018



Thursday, August 16, 2018 12:03:05 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

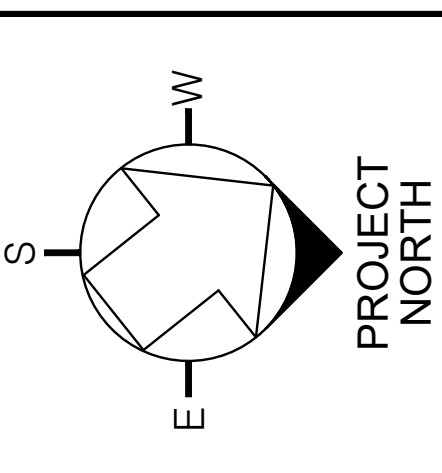
TGRWA
 Tyk, Gustafson, Reckers, Wilson, Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 650W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

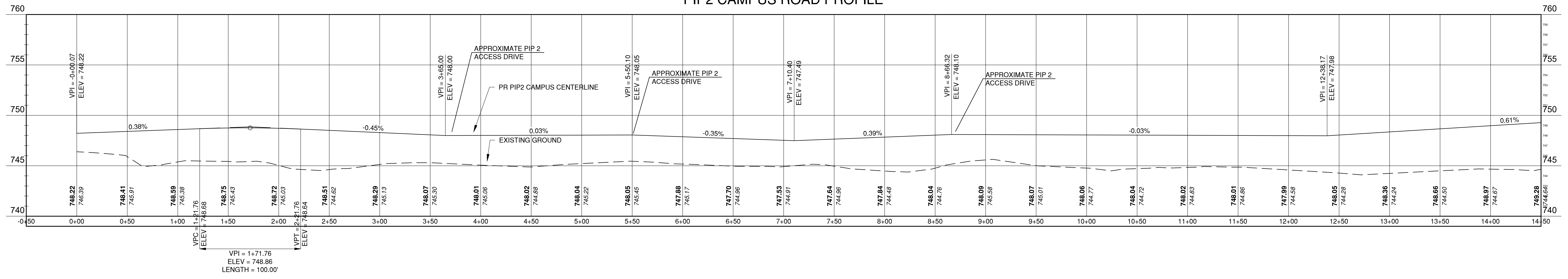


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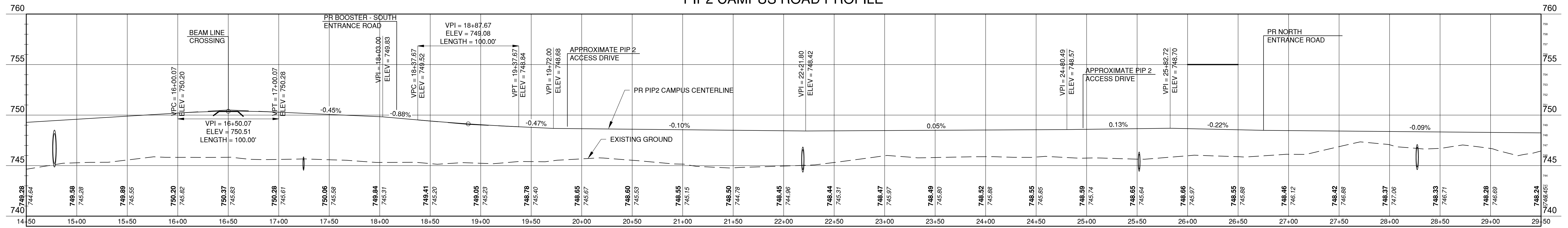
FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW ROADWAY ALIGNMENT PLAN
 DRAWING NO. **4-3-2** **C-6** REV. 1 **08-17-2018**

PIP2 CAMPUS ROAD PROFILE



PIP2 CAMPUS ROAD PROFILE



Thursday, August 16, 2018 12:48:09 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

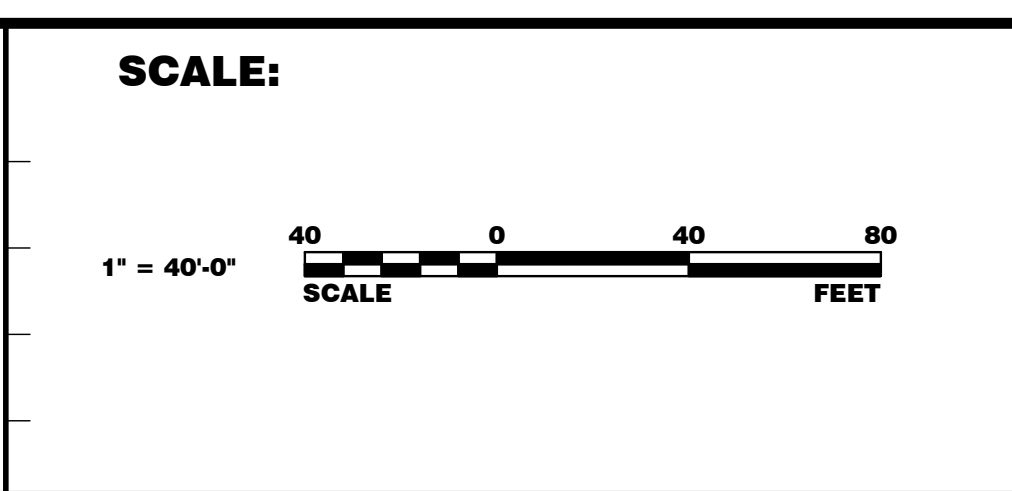
IMEG
 MEP Engineers
 1100 Wannerville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60603
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

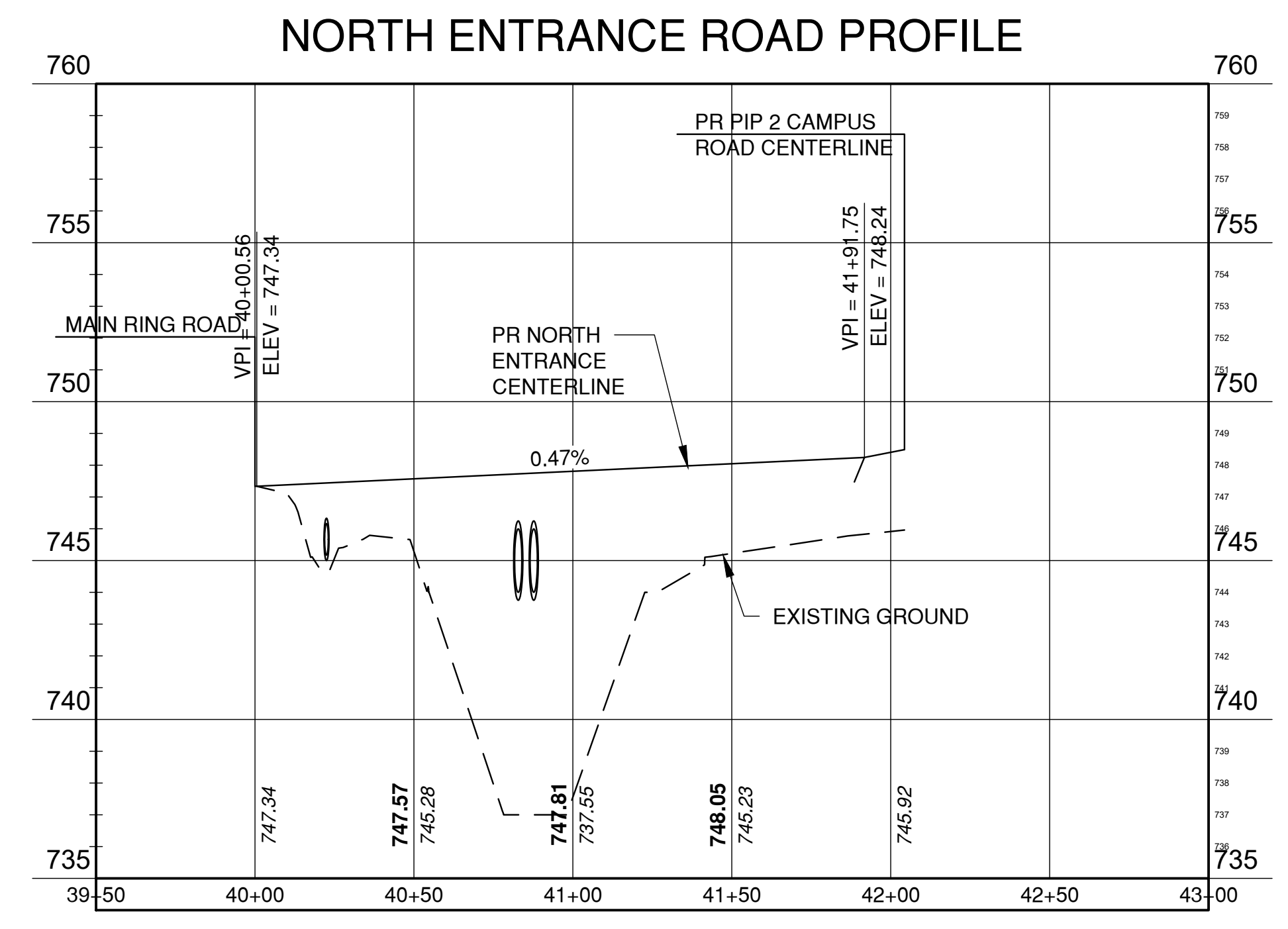
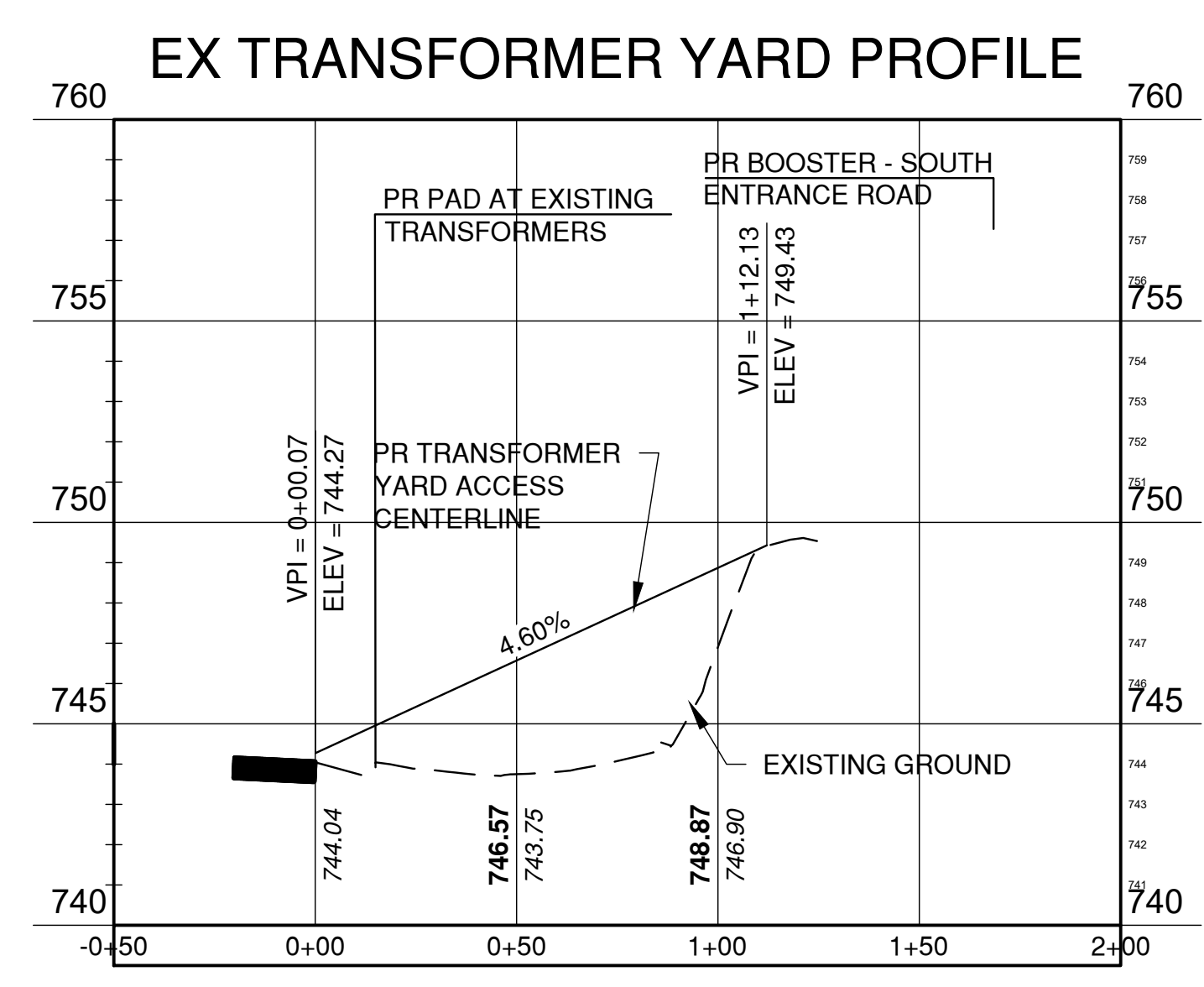
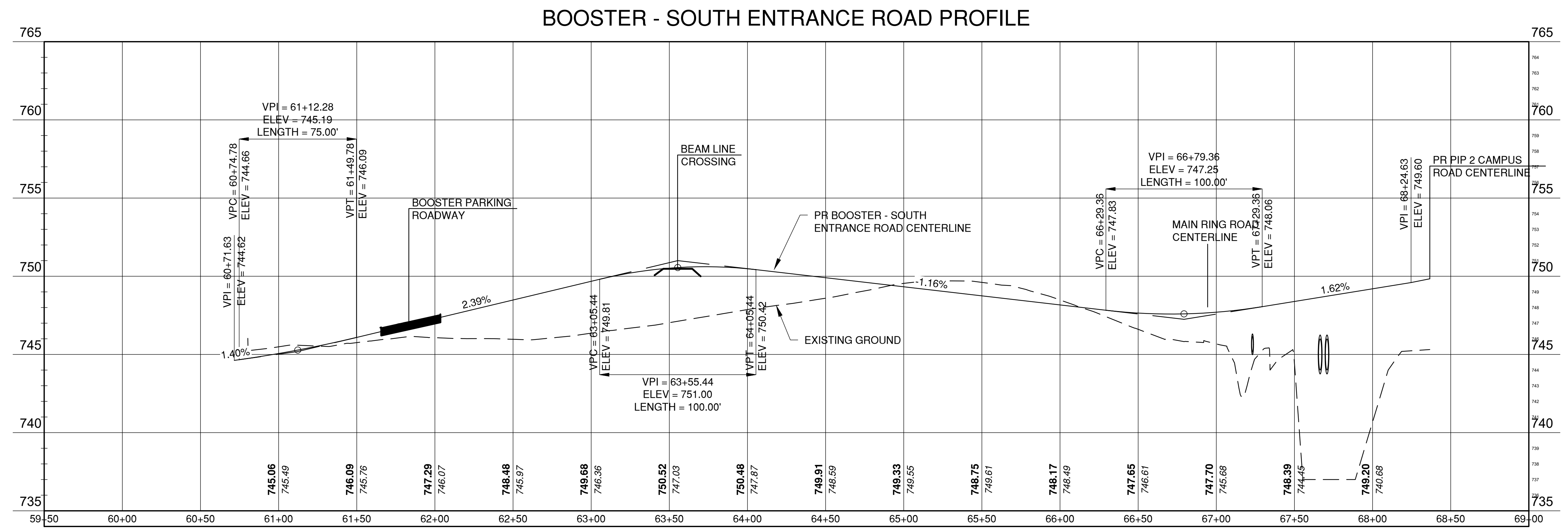
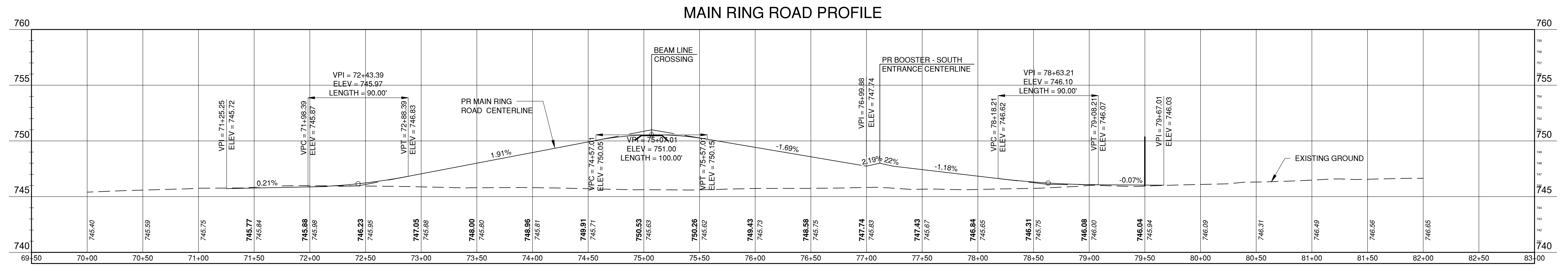
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 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW ROAD PROFILES I
 DRAWING NO. **4-3-2** **C-7** REV. 1

08-17-2018



Thursday, August 16, 2018 12:43:04 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

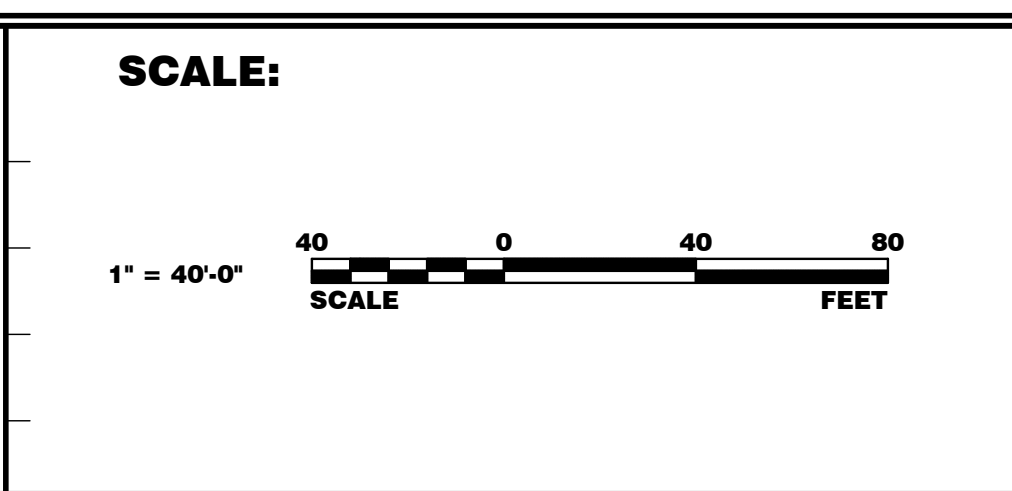
IMEG
 MEP Engineers
 1100 Warnerville Rd.
 Suite 400W
 Chicago, IL 60603
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

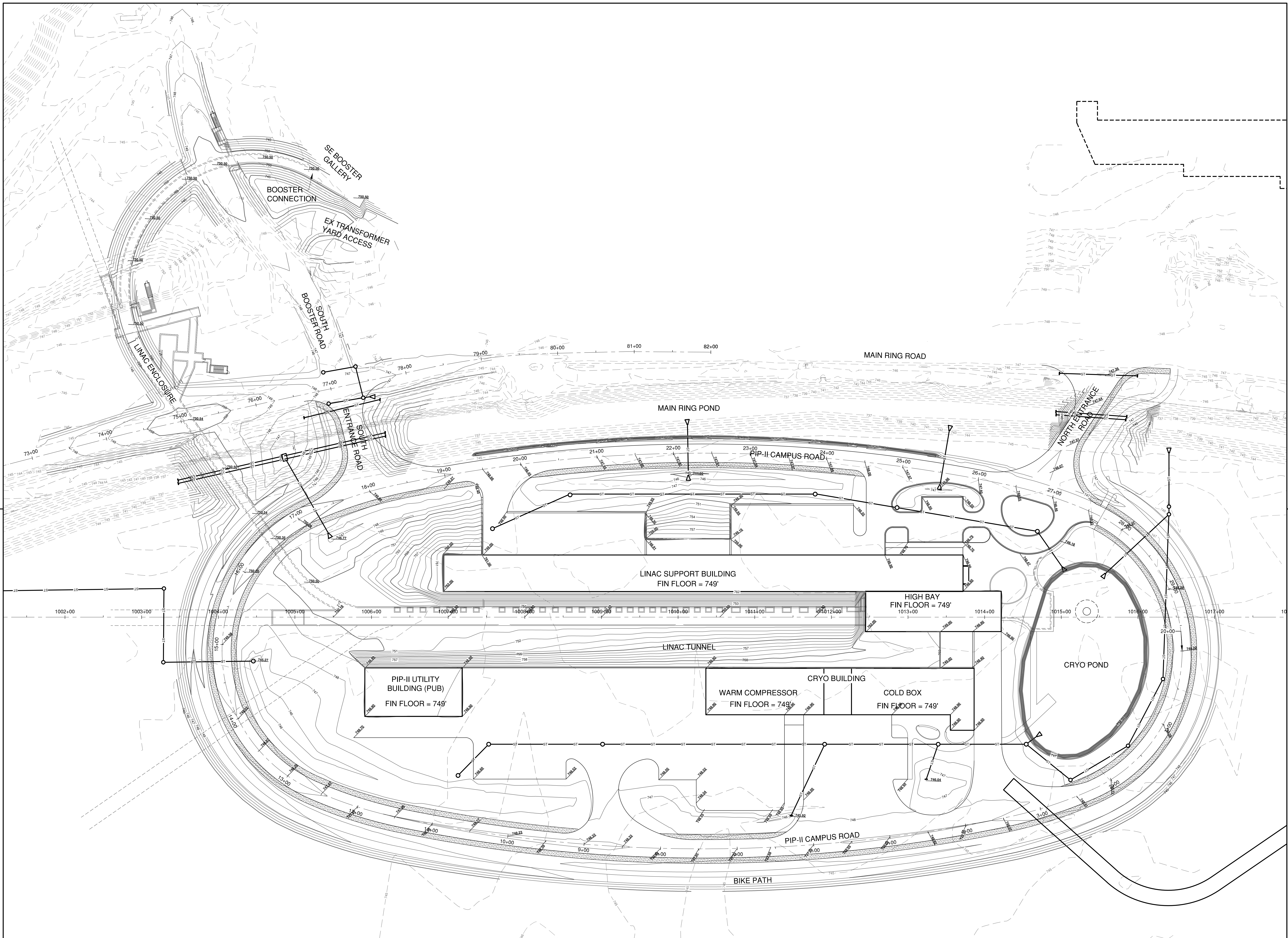
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FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW ROAD PROFILES II

DRAWING NO. **4-3-2** **C-8** REV. 1



Thursday, August 16, 2018 3:58:28 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

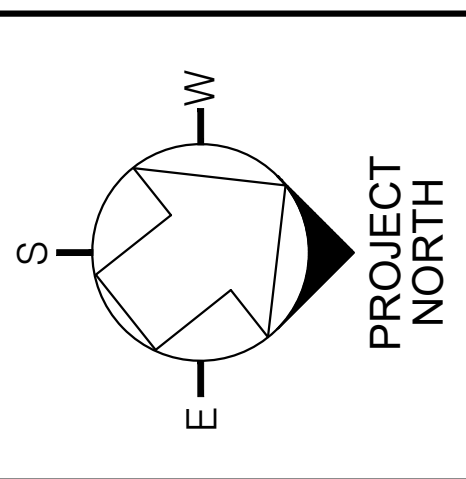
TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Marquette St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

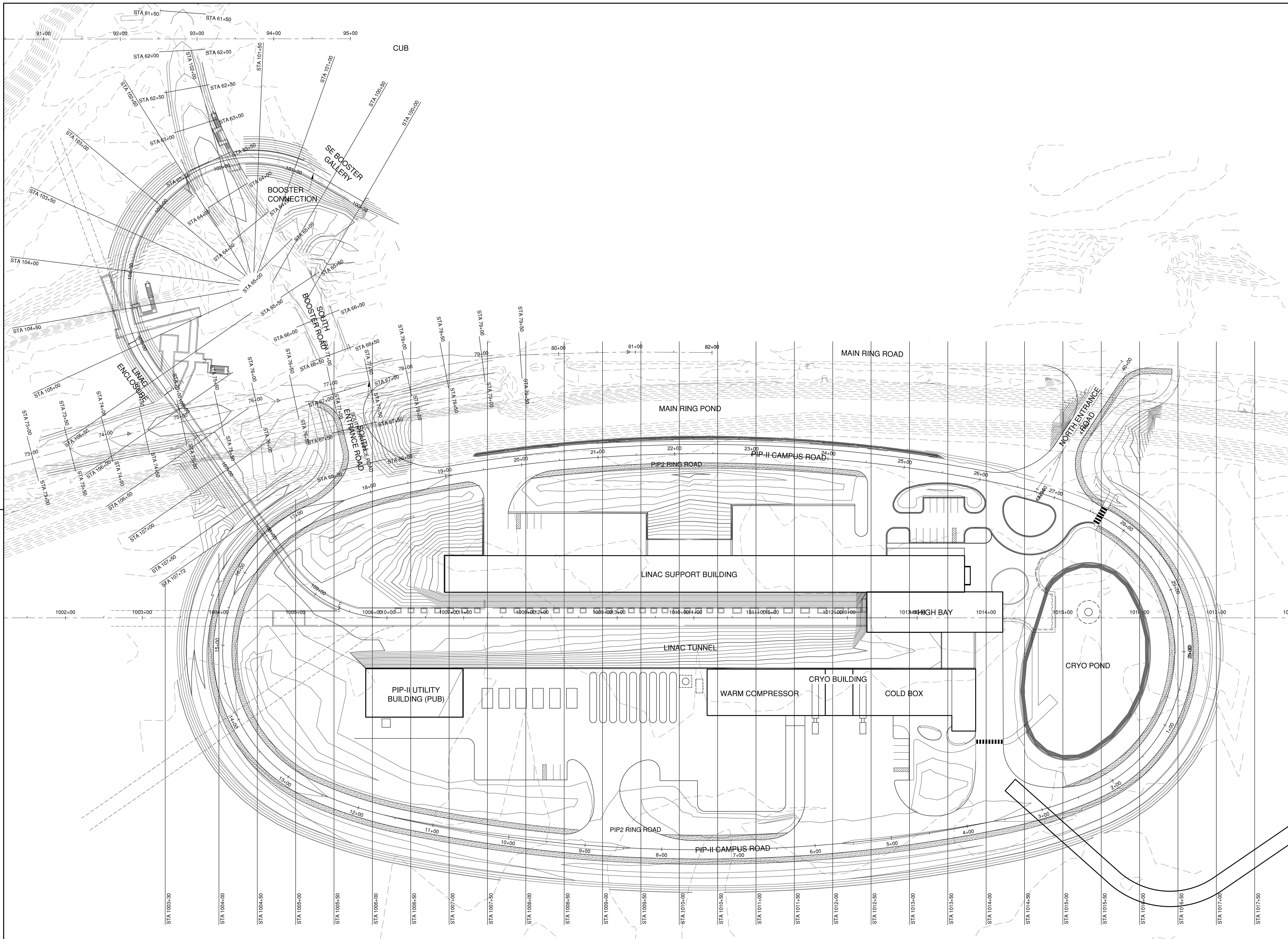


SCALE:

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 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW GRADING PLAN
 DRAWING NO. **4-3-2** **C-9** REV. 1

08-17-2018



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Van Buren
 Suite 502
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

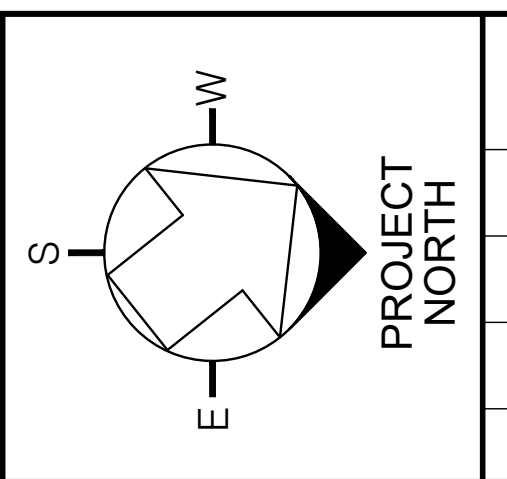
TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 502
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 500
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



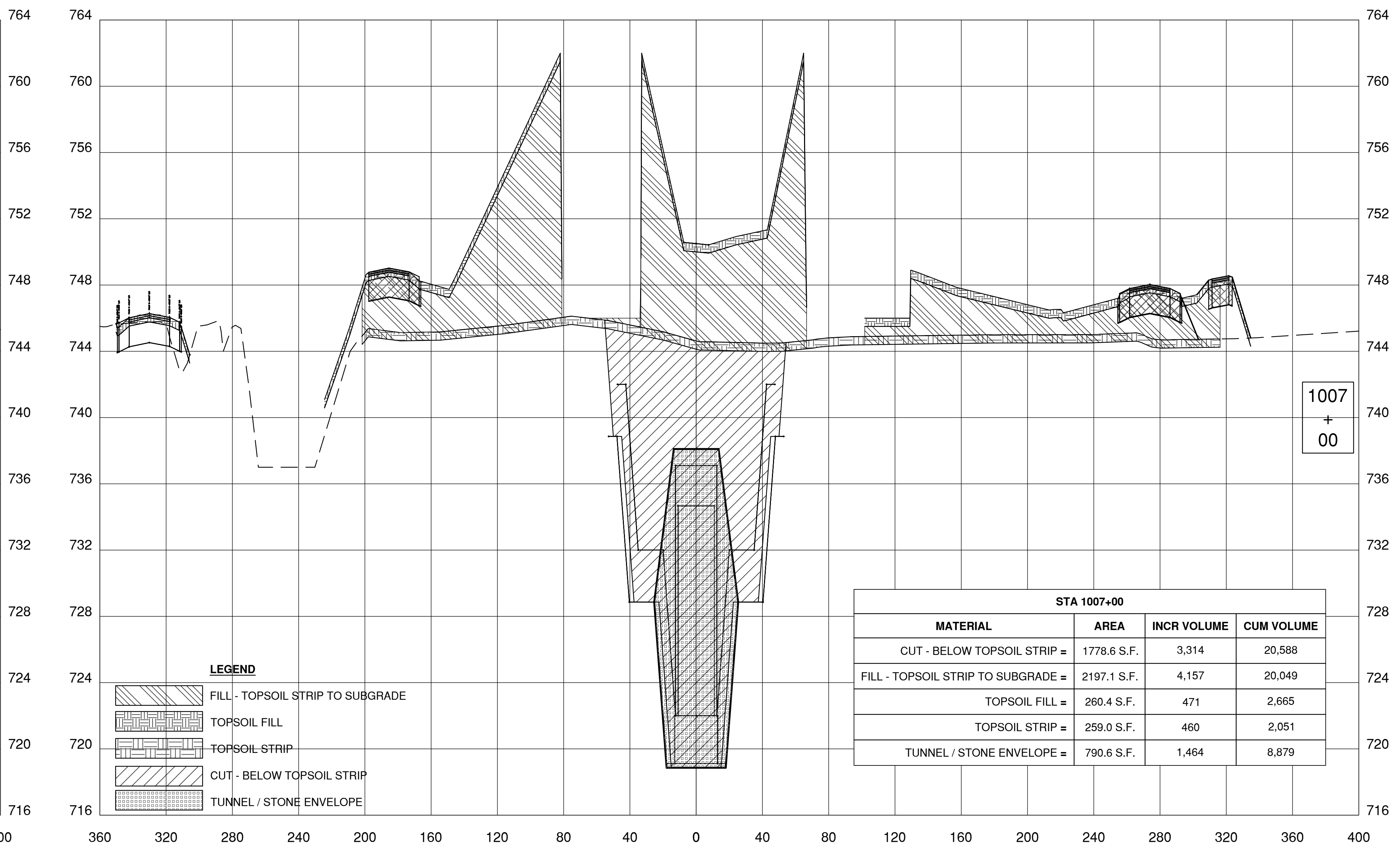
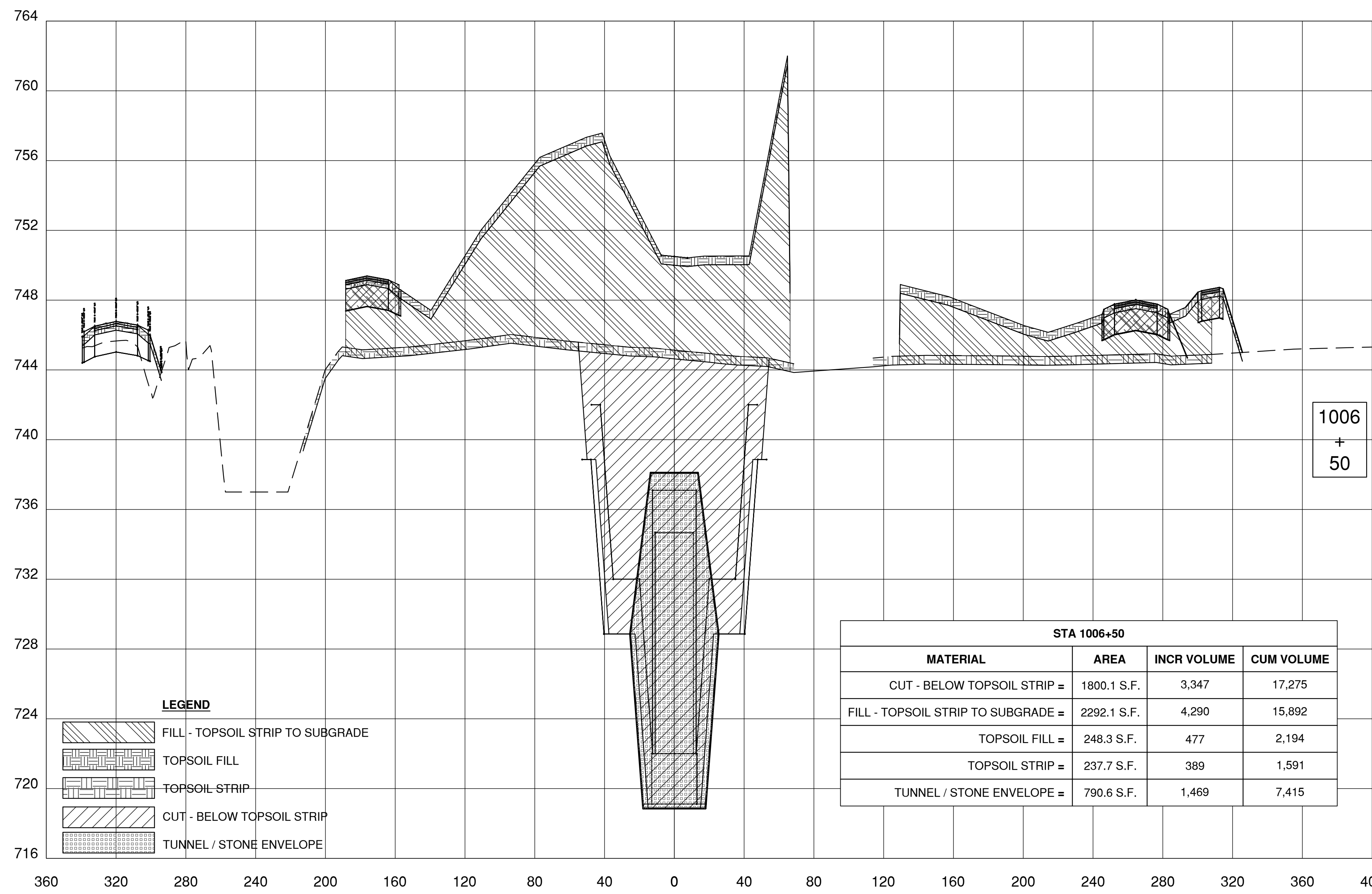
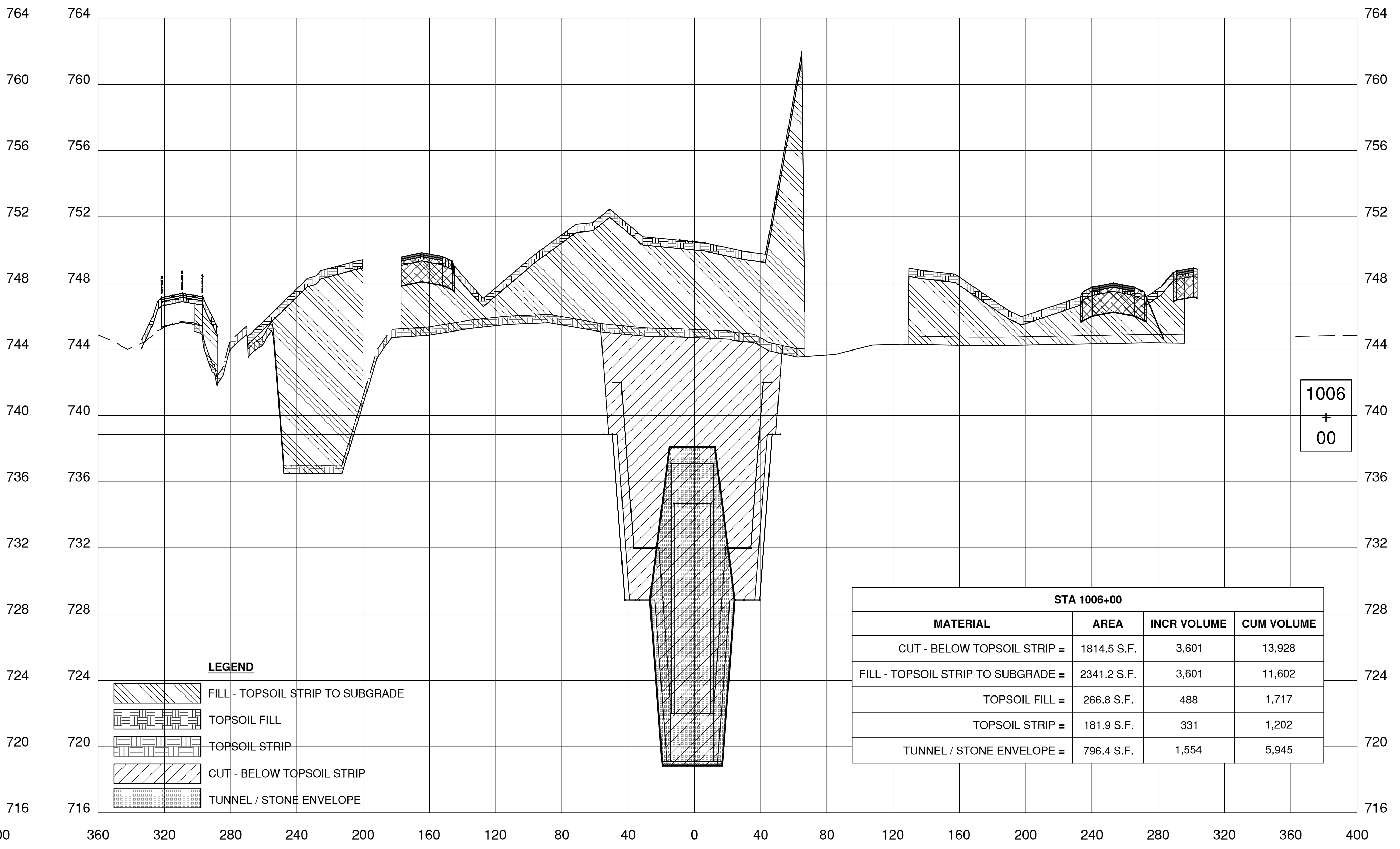
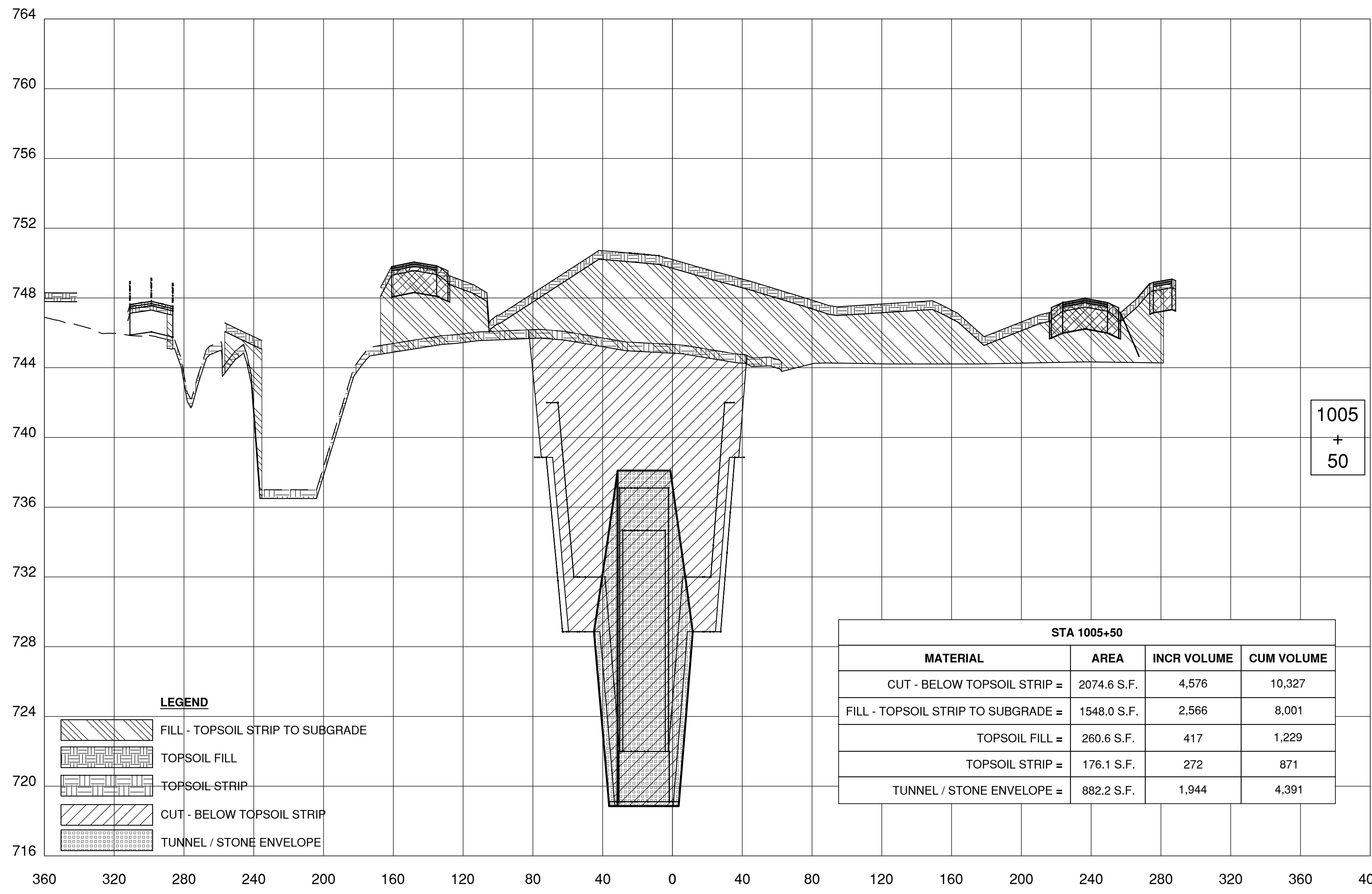
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FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW GRADING SITE CROSS SECTIONS PLAN
 DRAWING NO. **4-3-2** **C-10** REV. 1

Thursday, August 16, 2018 12:25:07 PM

08-17-2018



Thursday, August 16, 2018 12:05:02 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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11 East Madison Street
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Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

TyRk Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607

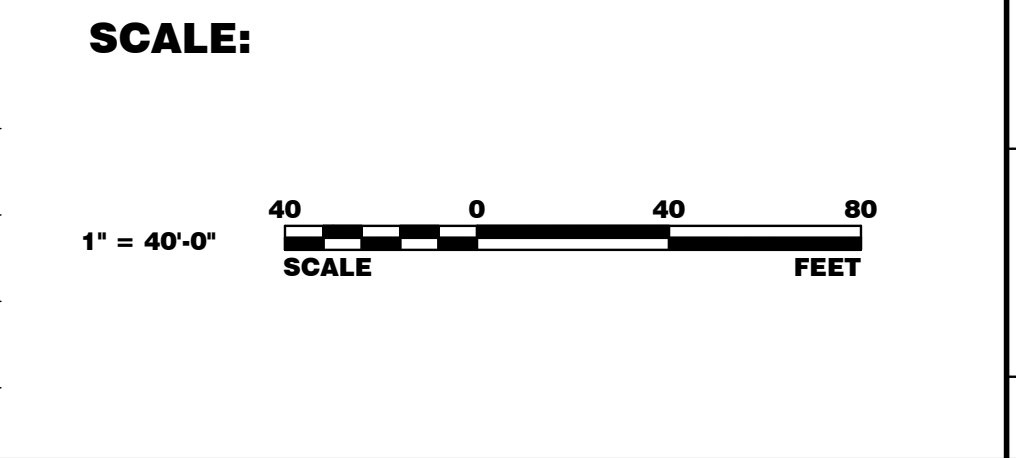
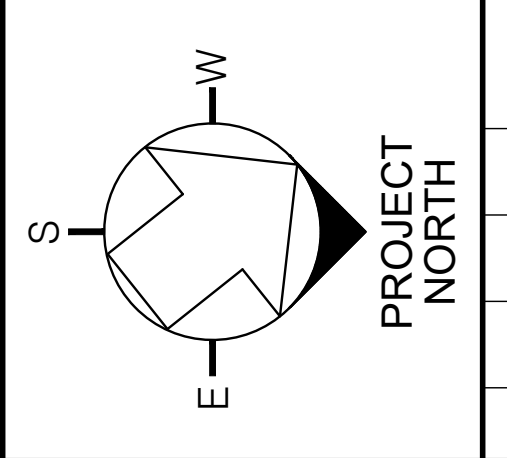
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

NAME	DATE
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
SUBMITTED	



FERMI NATIONAL ACCELERATOR LABORATORY

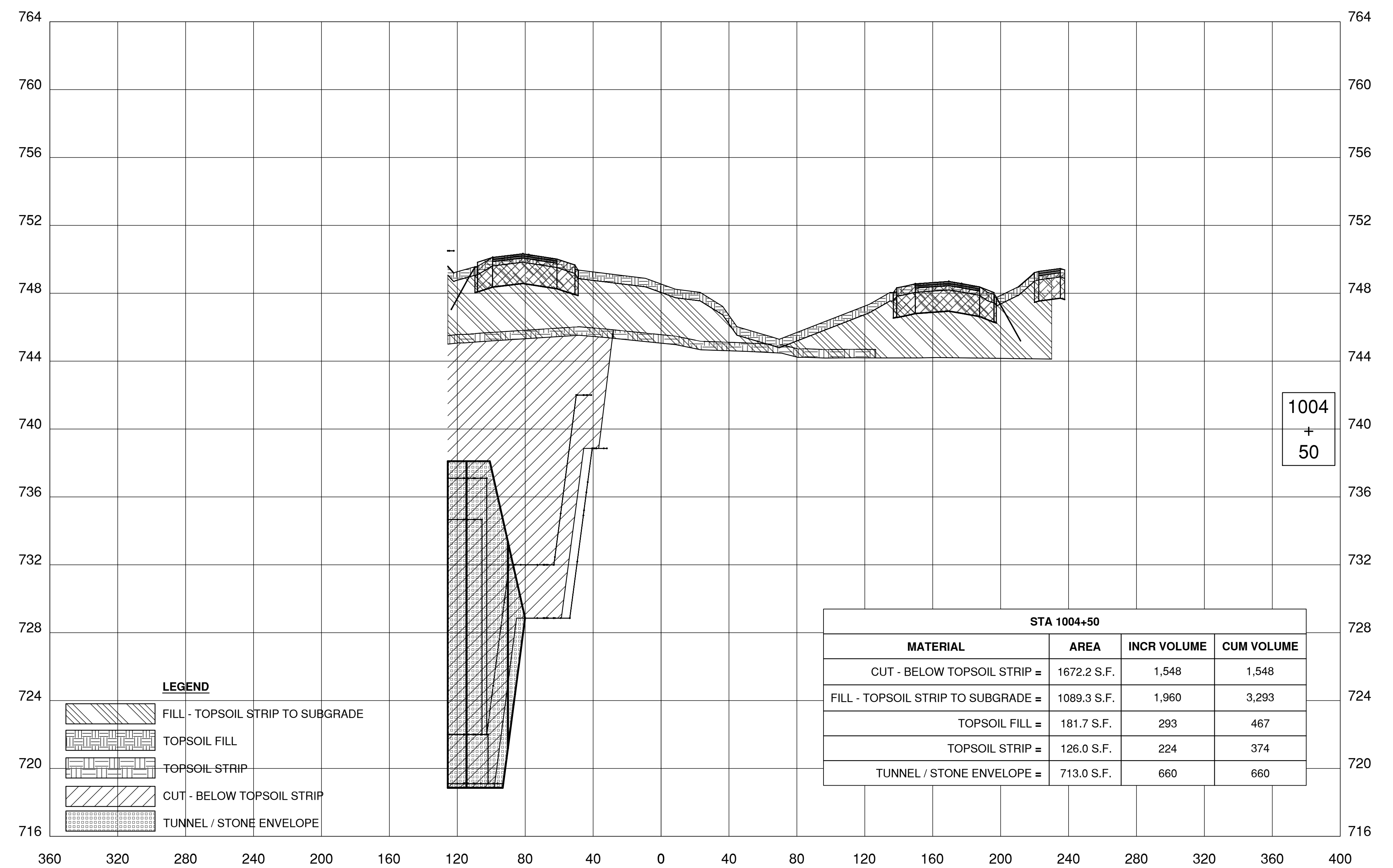
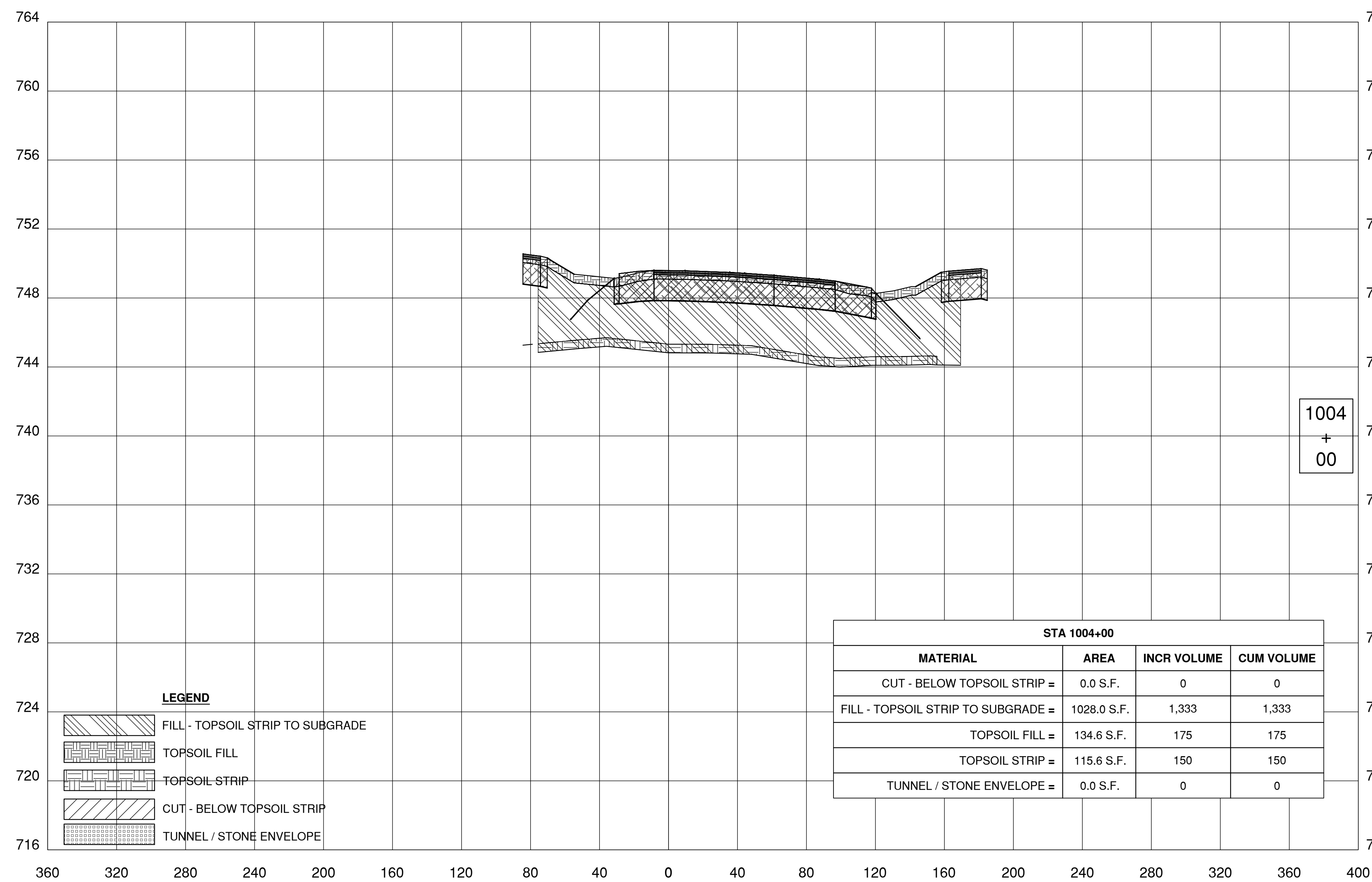
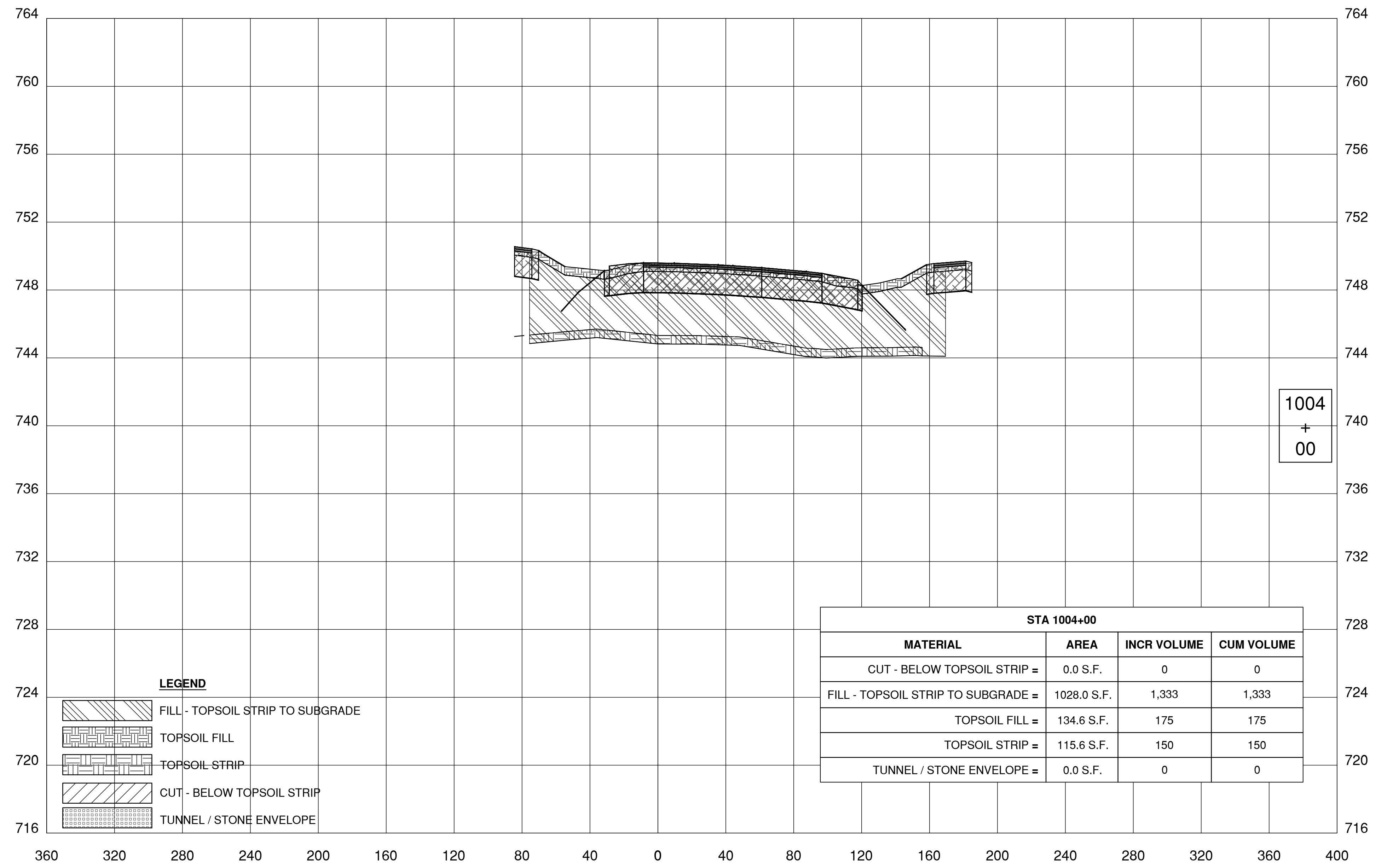
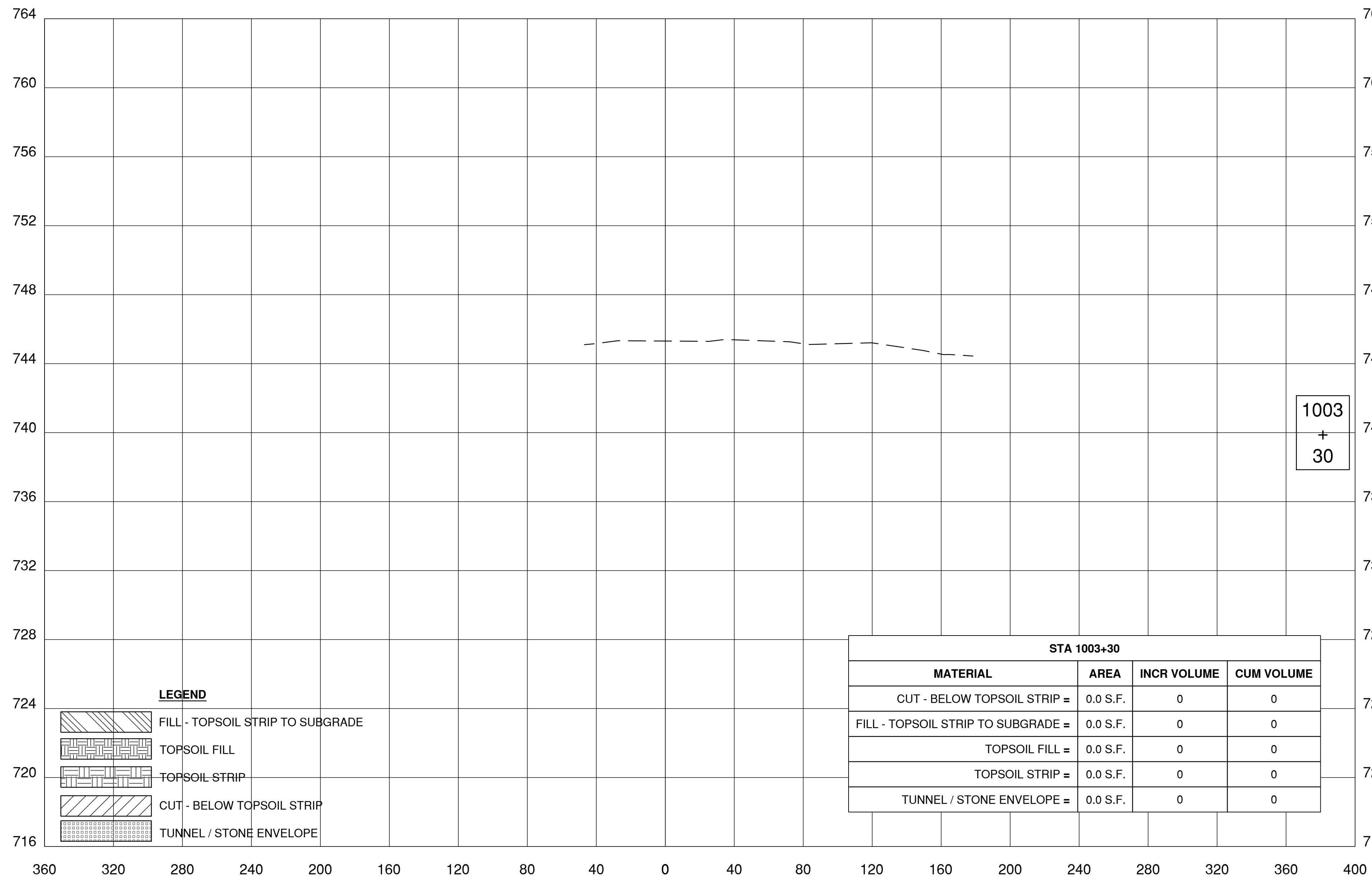
UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION

NEW PIP-II CAMPUS CROSS SECTIONS I

DRAWING NO. **4-3-2** **C-11** REV. 0

06-16-2018



Thursday, August 16, 2018 12:06:11 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

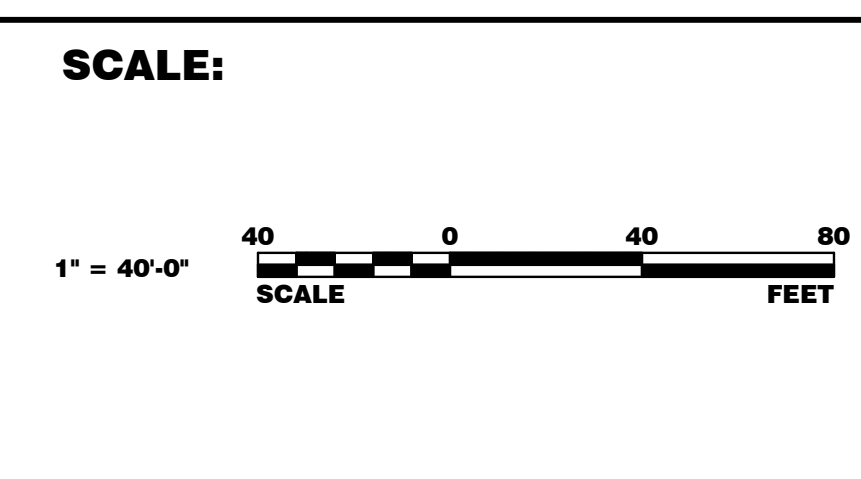
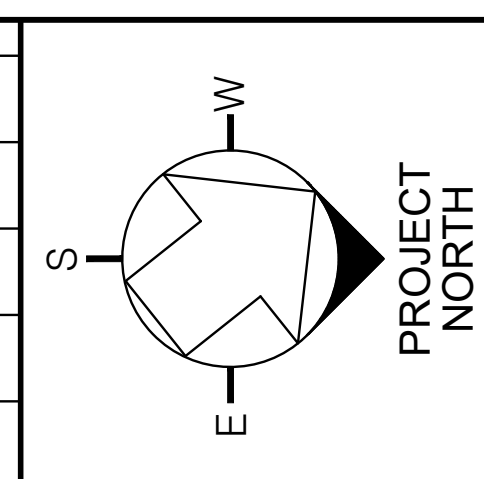
TGRWA
TyR, Gustafson, Reckers, Wilson, Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60603
Tel: 312.492.6501
Fax: 312.492.7101

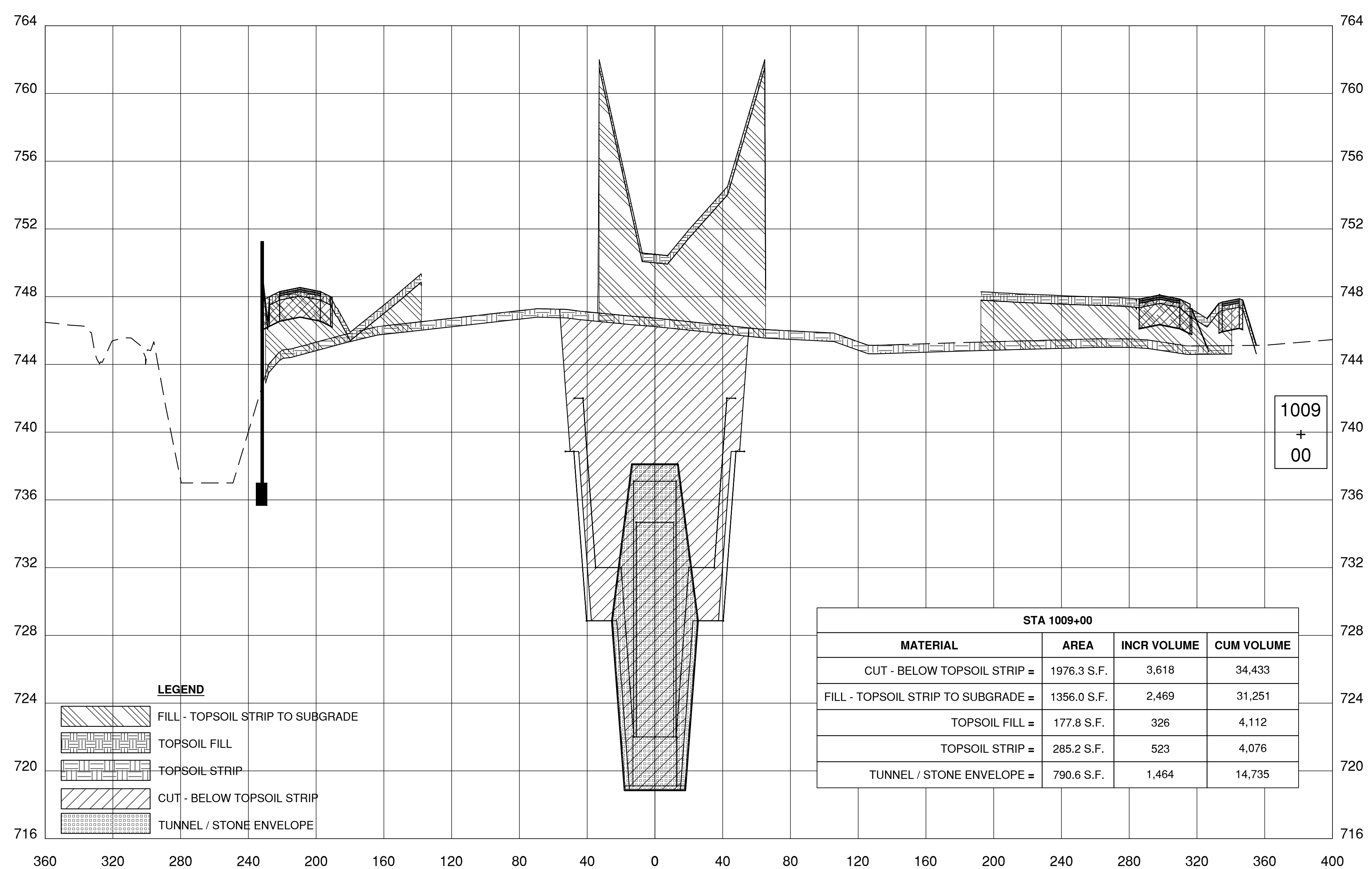
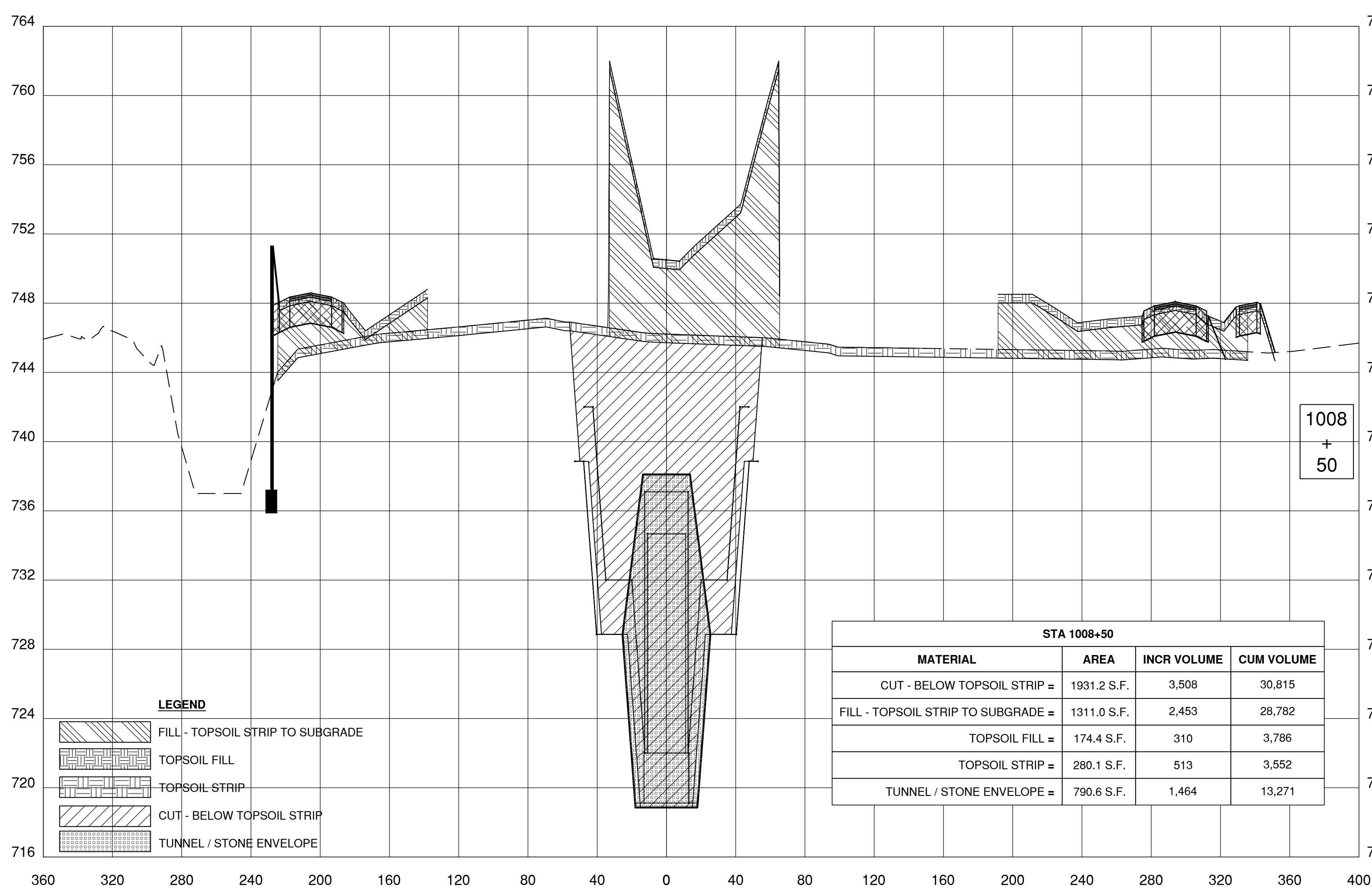
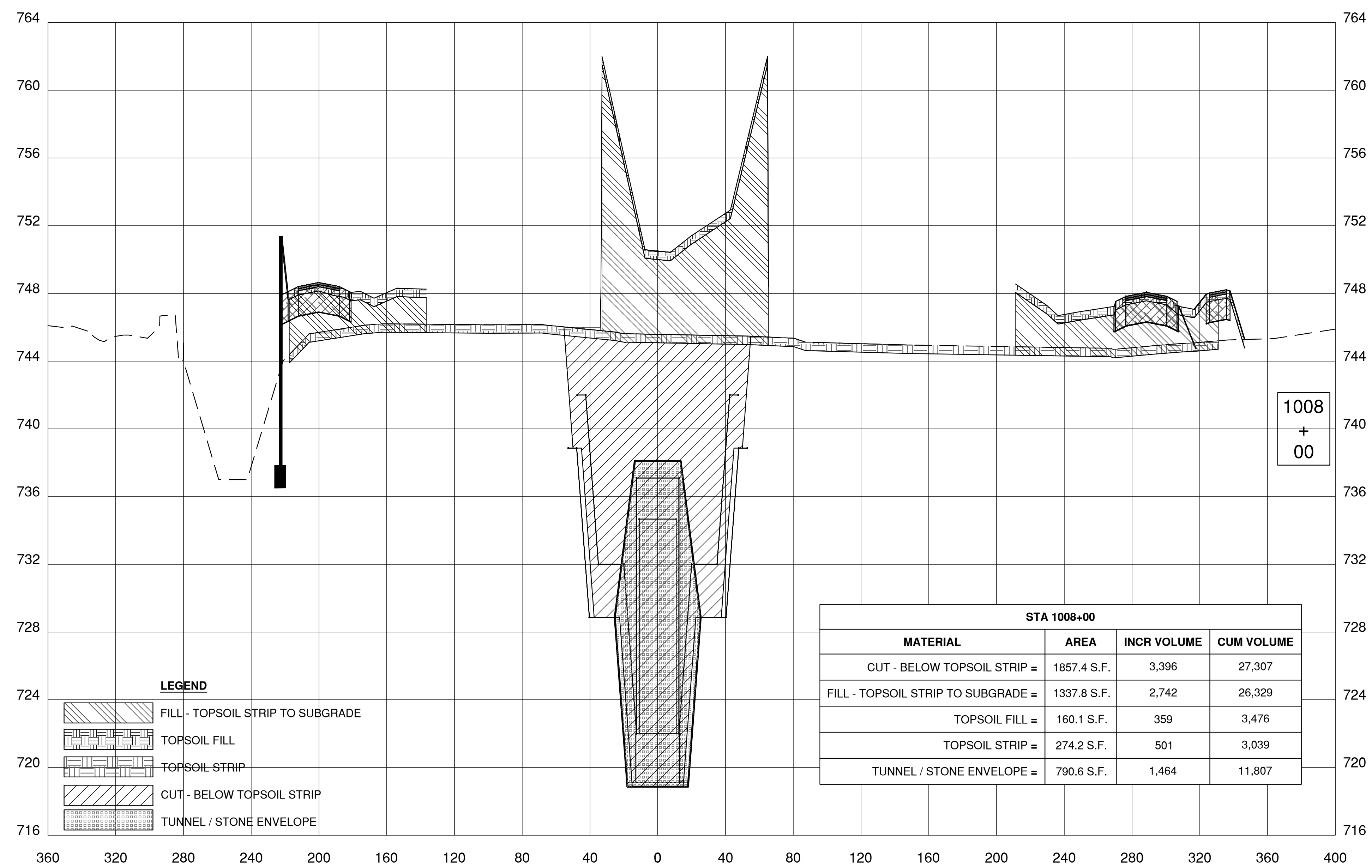
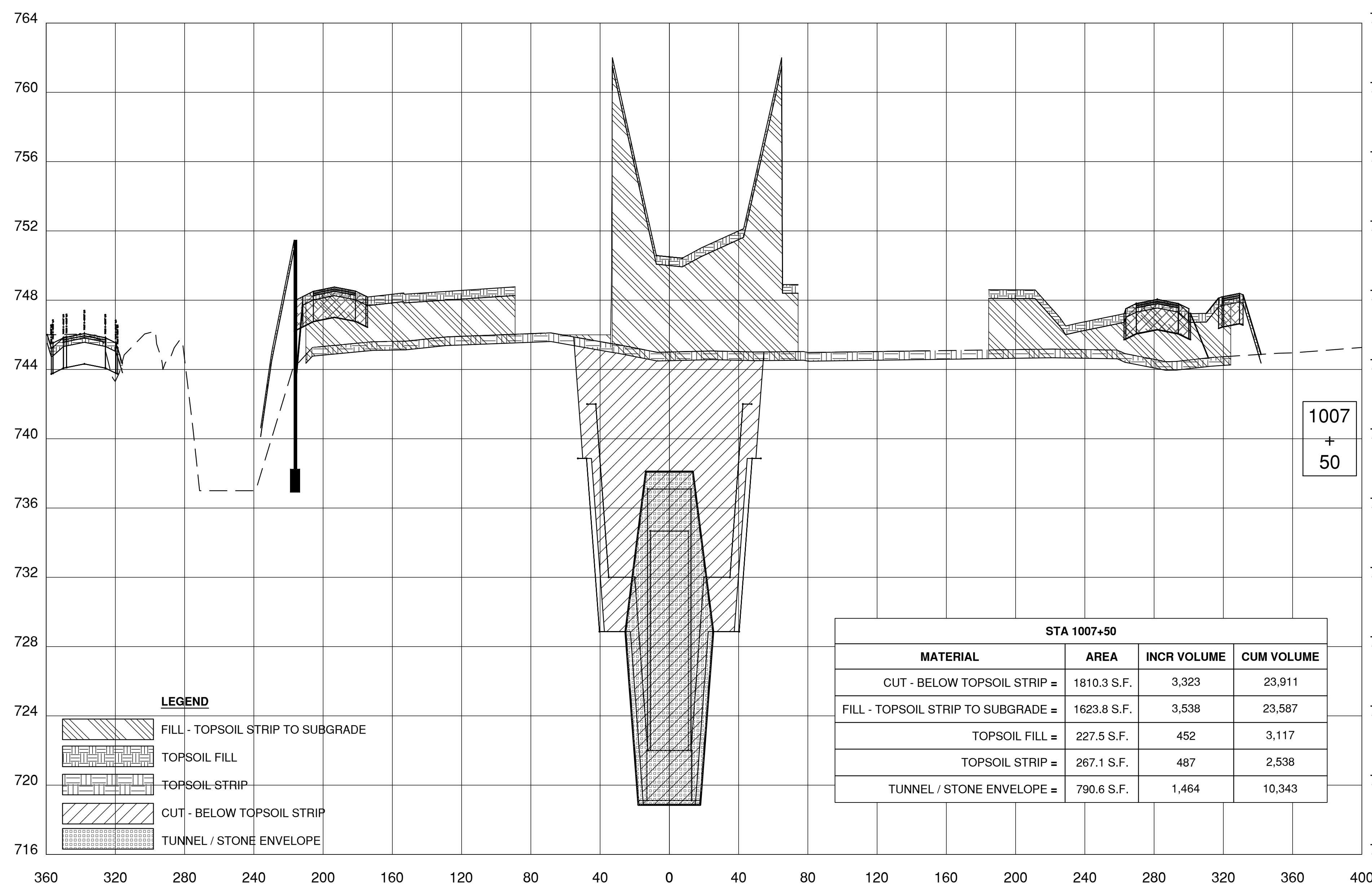
Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS II
DRAWING NO. **4-3-2** **C-12** REV. **0**

06-16-2018



Thursday, August 16, 2018 12:06:31 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60604
Tel: 630.820.1022
Fax: 630.820.0350

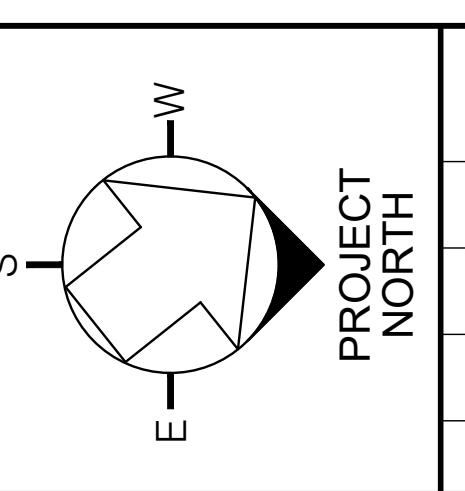
TGRWA
TyRk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607
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Fax: 312.492.7101

Turner
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55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

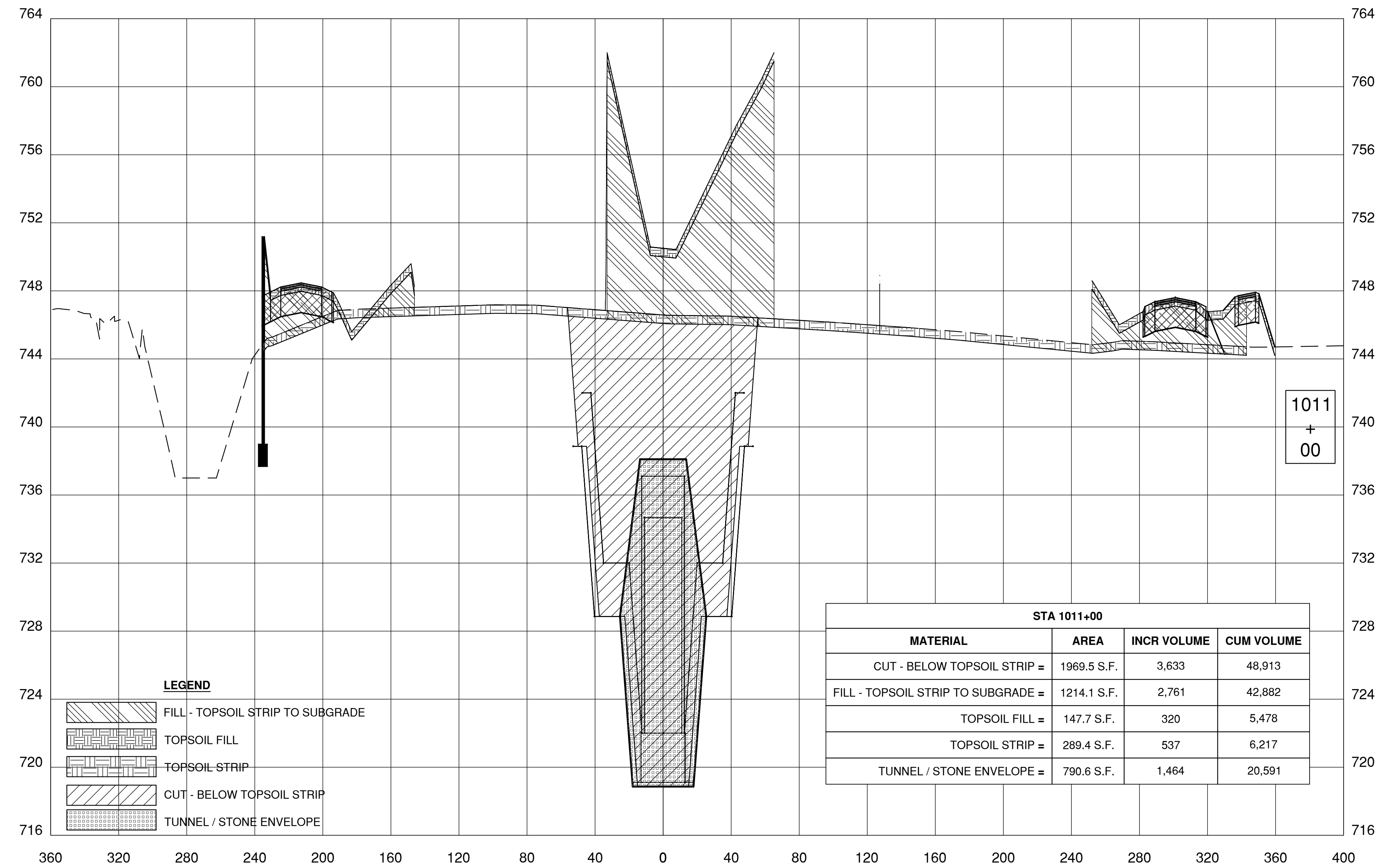
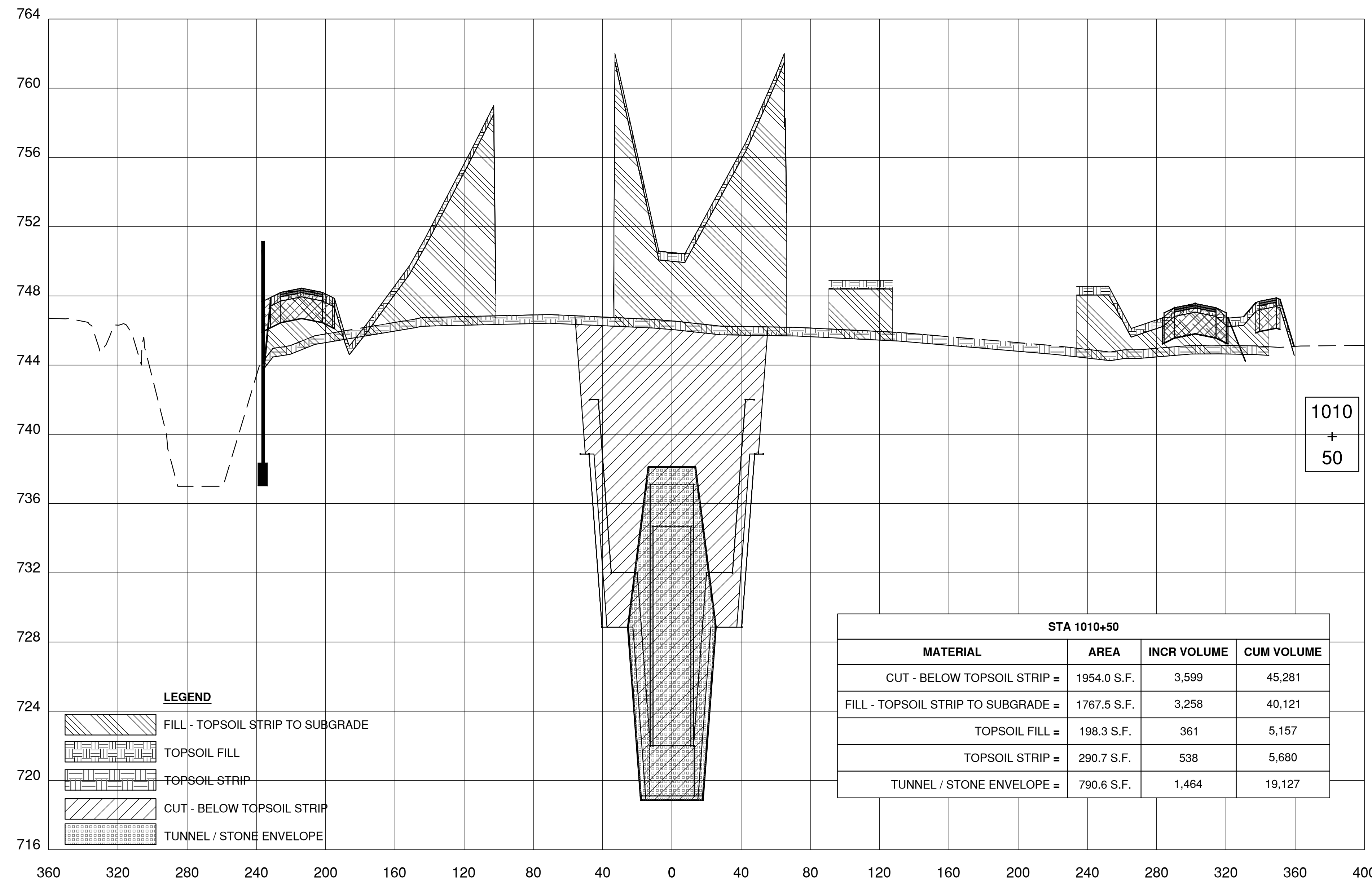
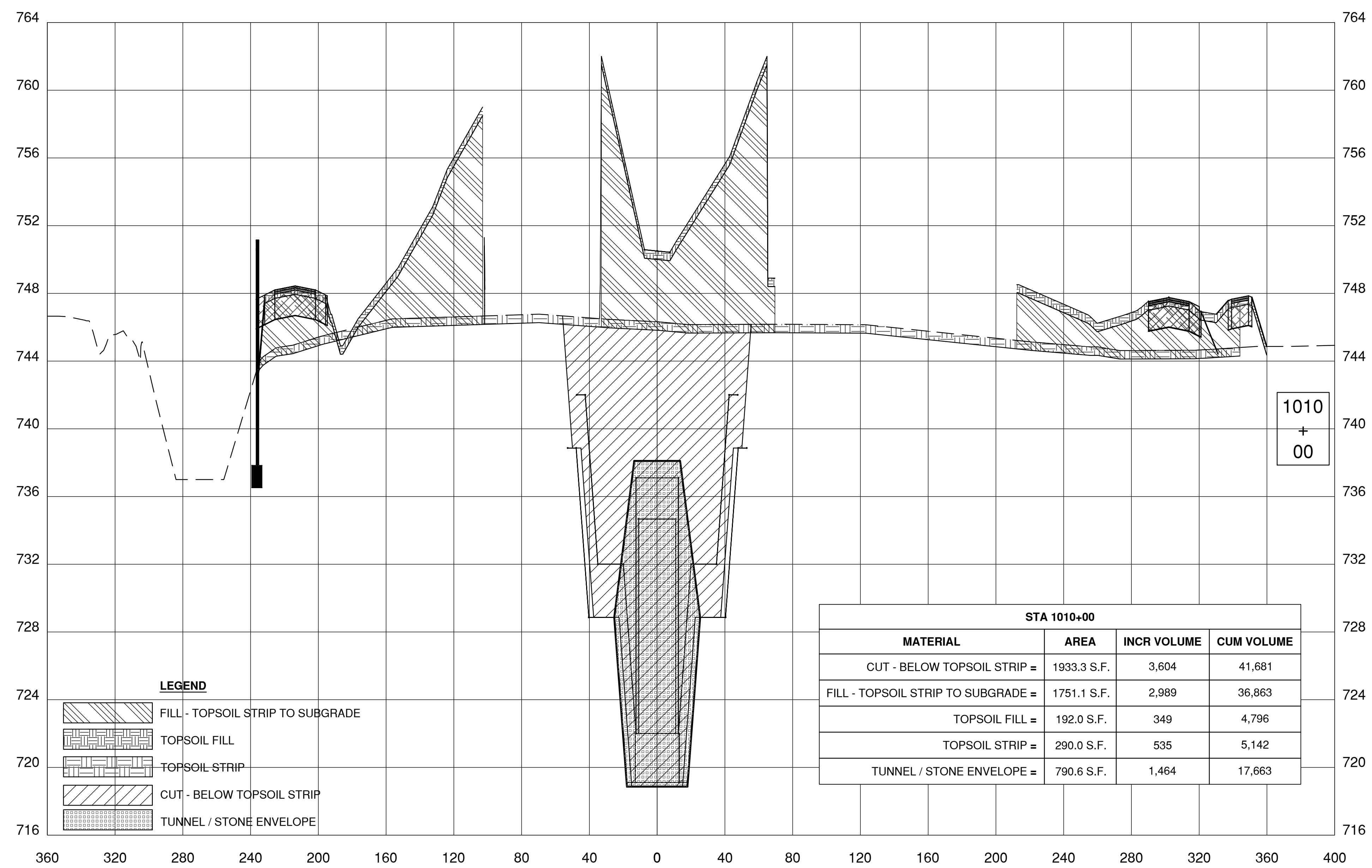
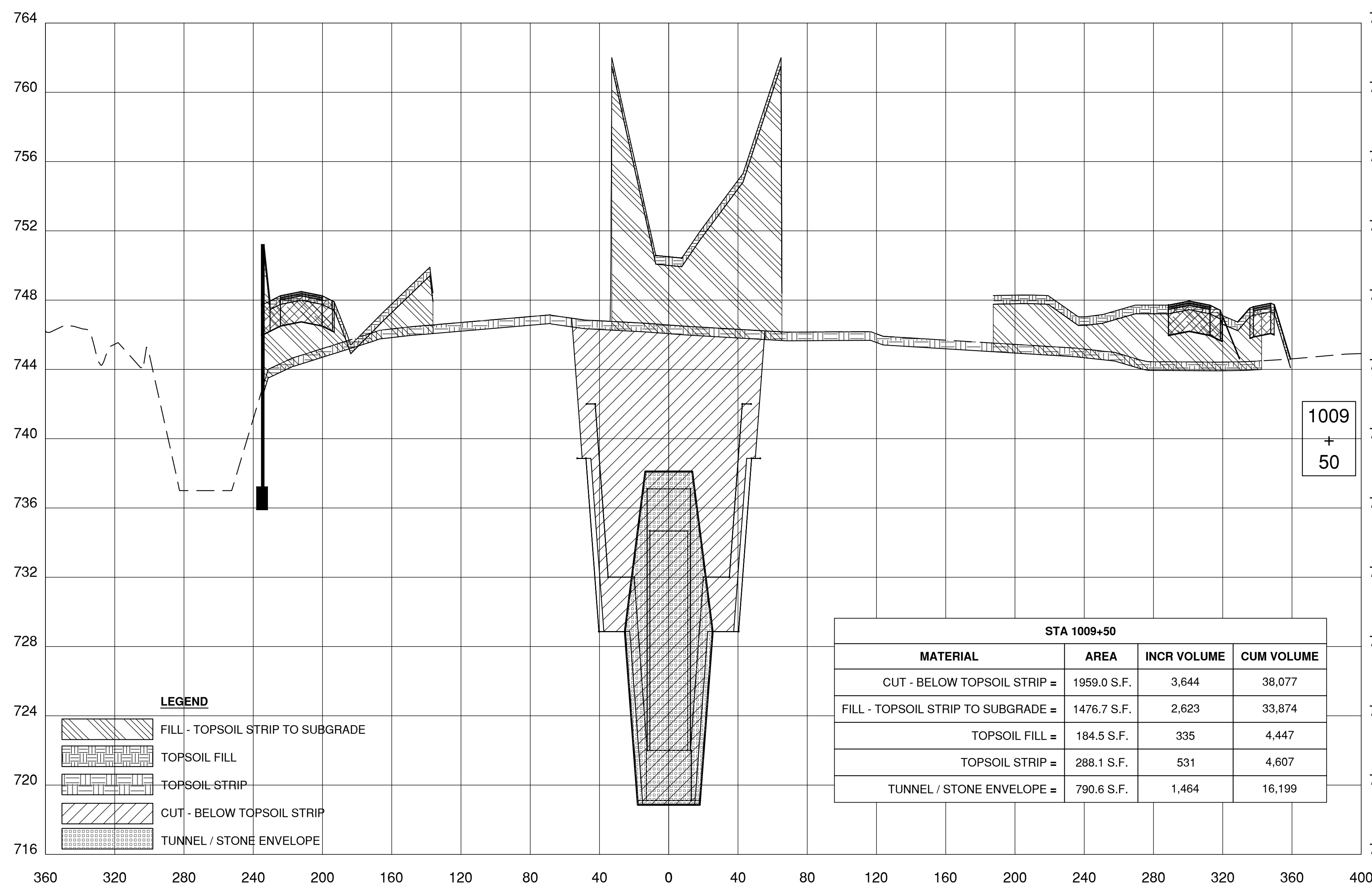
NAME	DATE
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
SUBMITTED	



SCALE:
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0 40 80
SCALE
FEET

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS III
DRAWING NO. **4-3-2** **C-13** REV. 0

06-16-2018



Thursday, August 16, 2018 12:06:51 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Van Buren
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

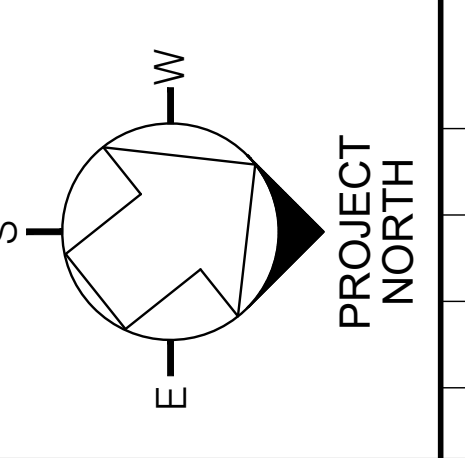
TGRWA
Tyk, Gustafson, Reckers, Wilson, Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

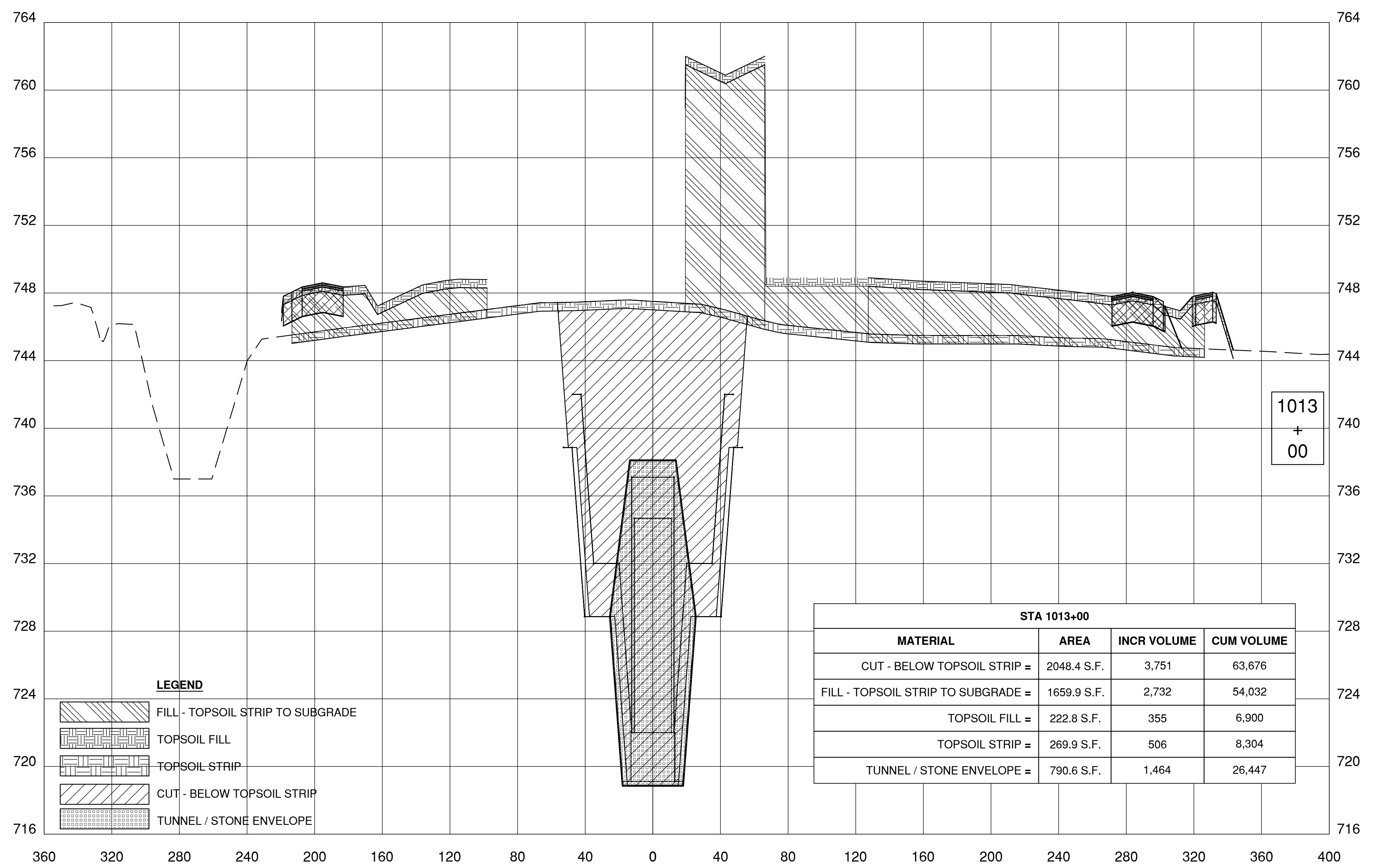
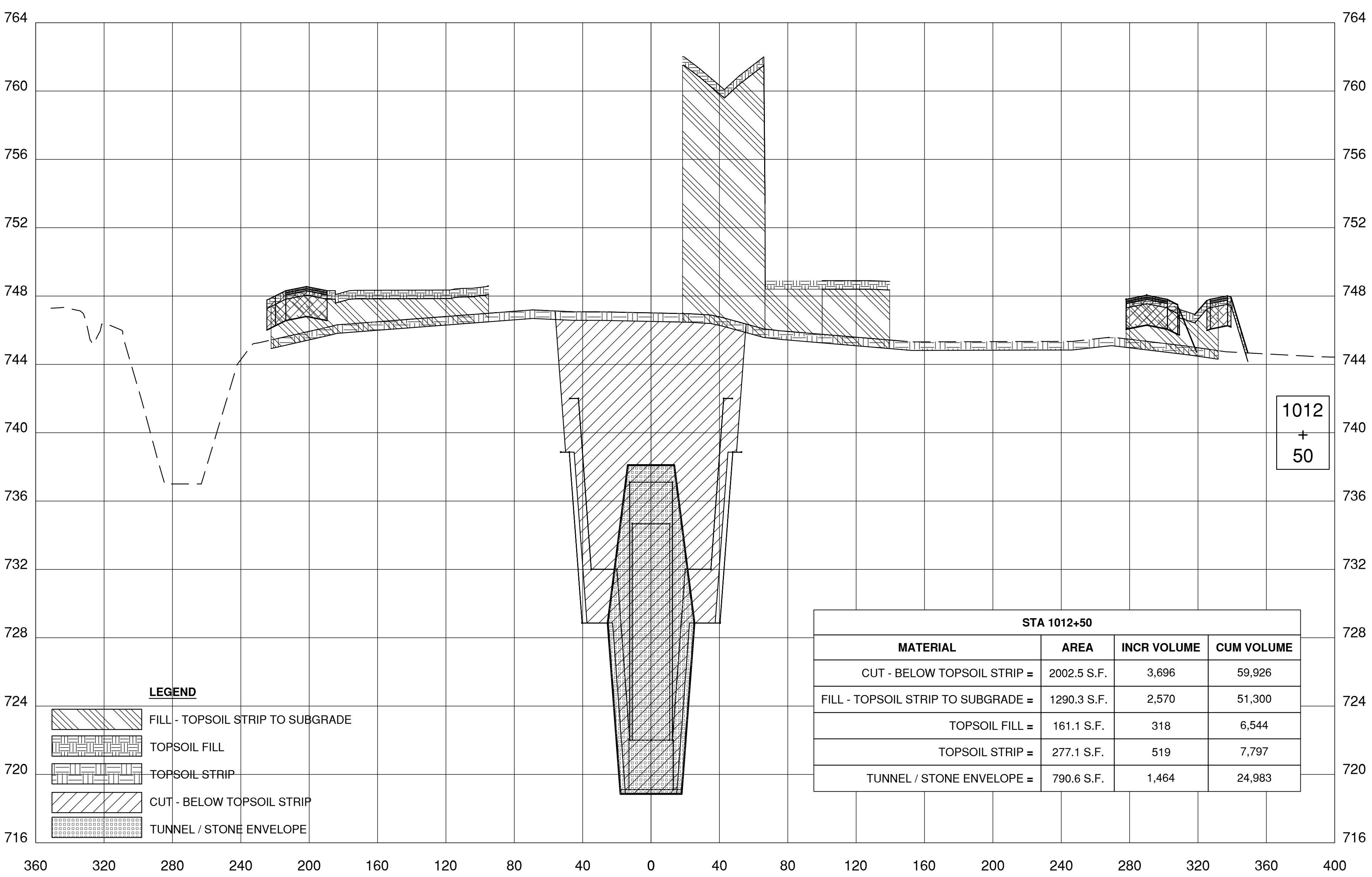
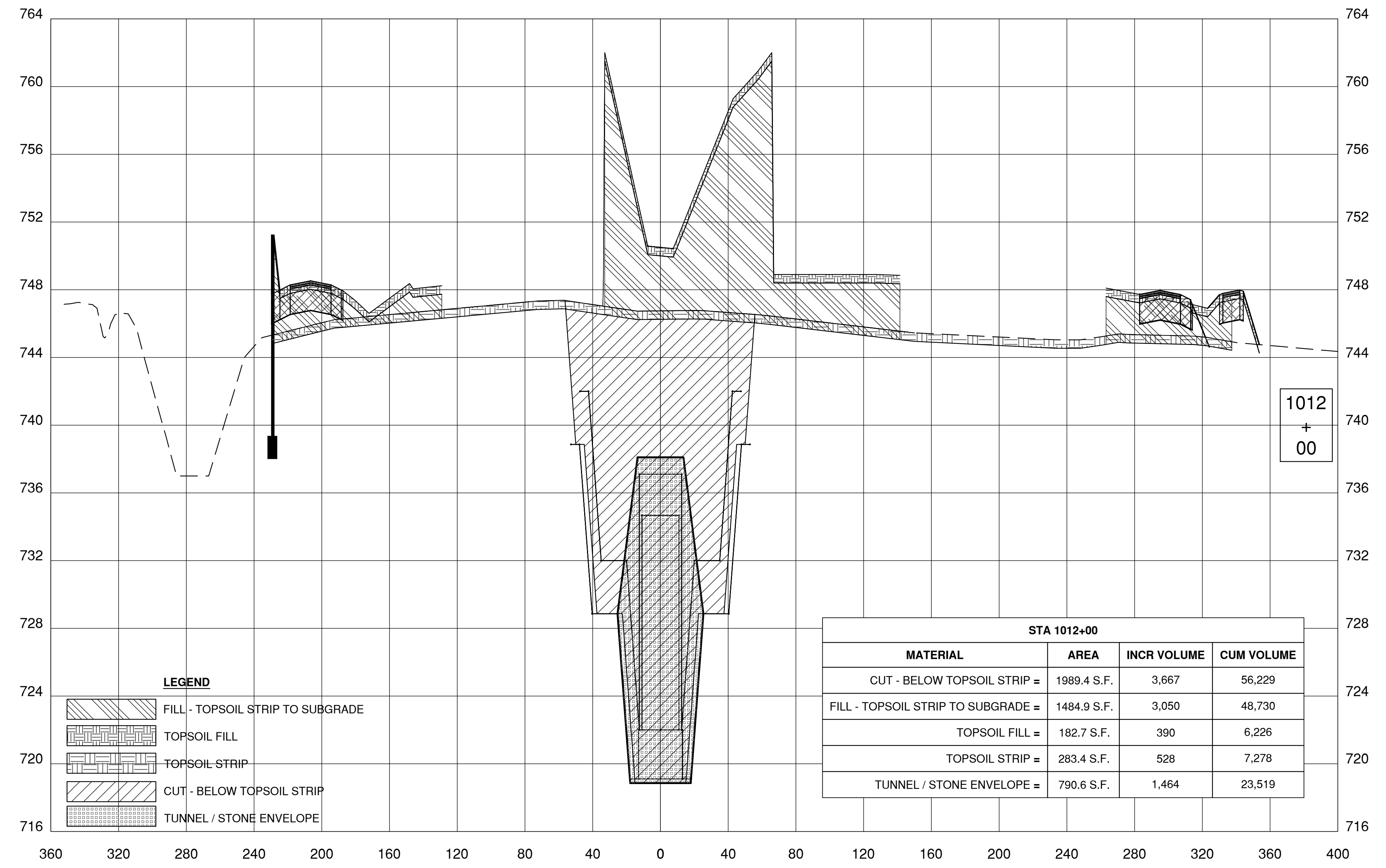
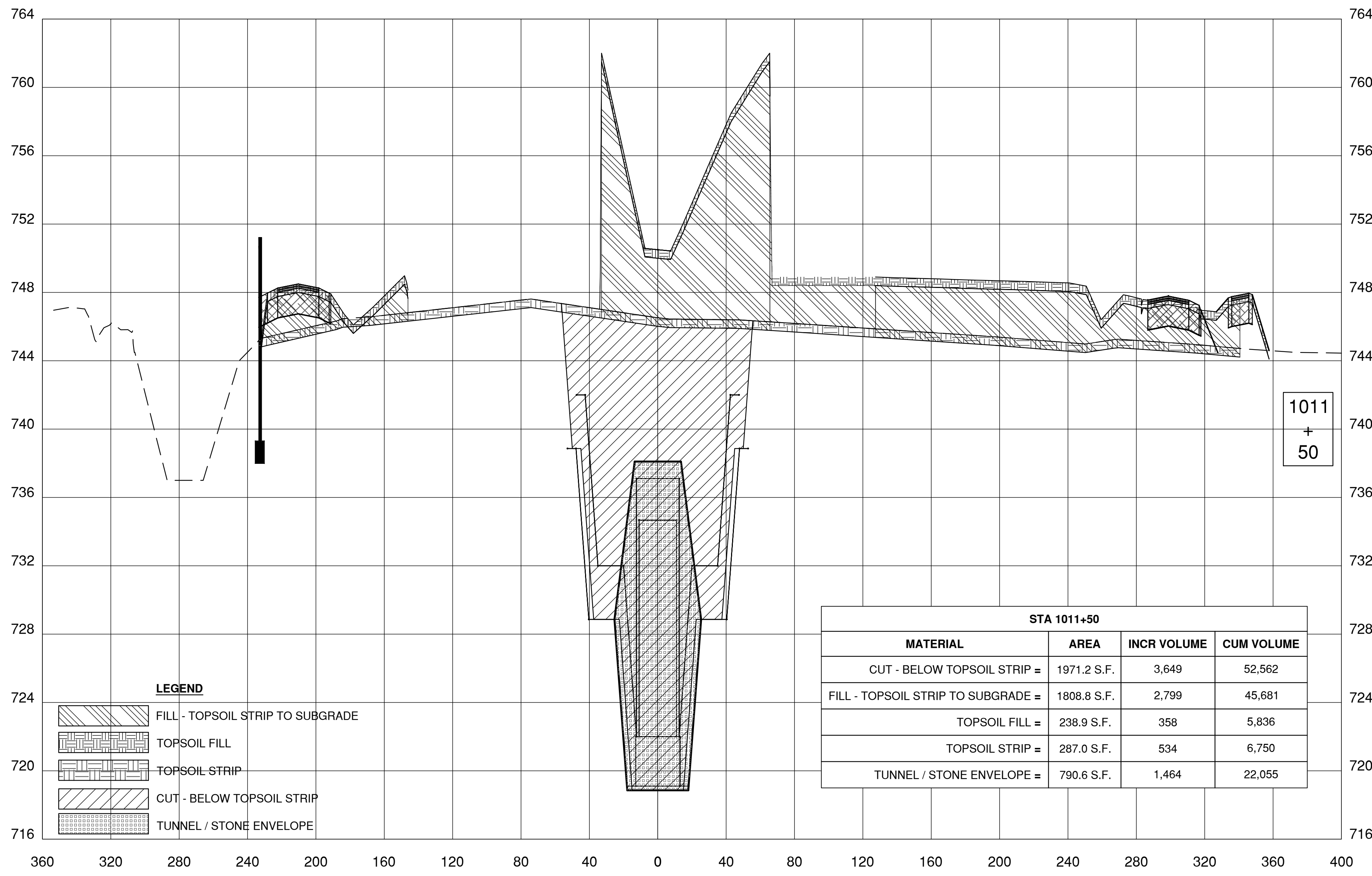
	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



SCALE:
1" = 40'-0"
0 40 80
SCALE
FEET

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS IV
DRAWING NO. **4-3-2** **C-14** REV. **0**

08-16-2018



Thursday, August 16, 2018 12:07:11 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

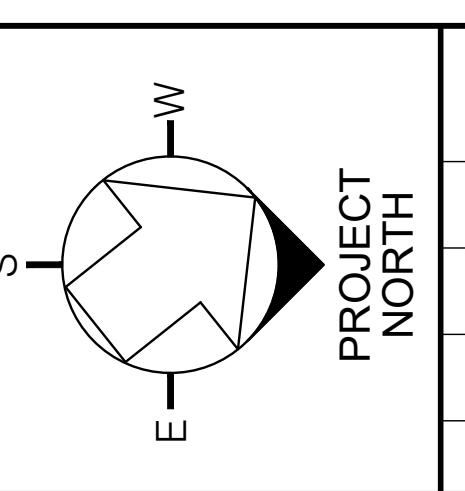
TGRWA
Tyk Gustafson Rickers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East maroon St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

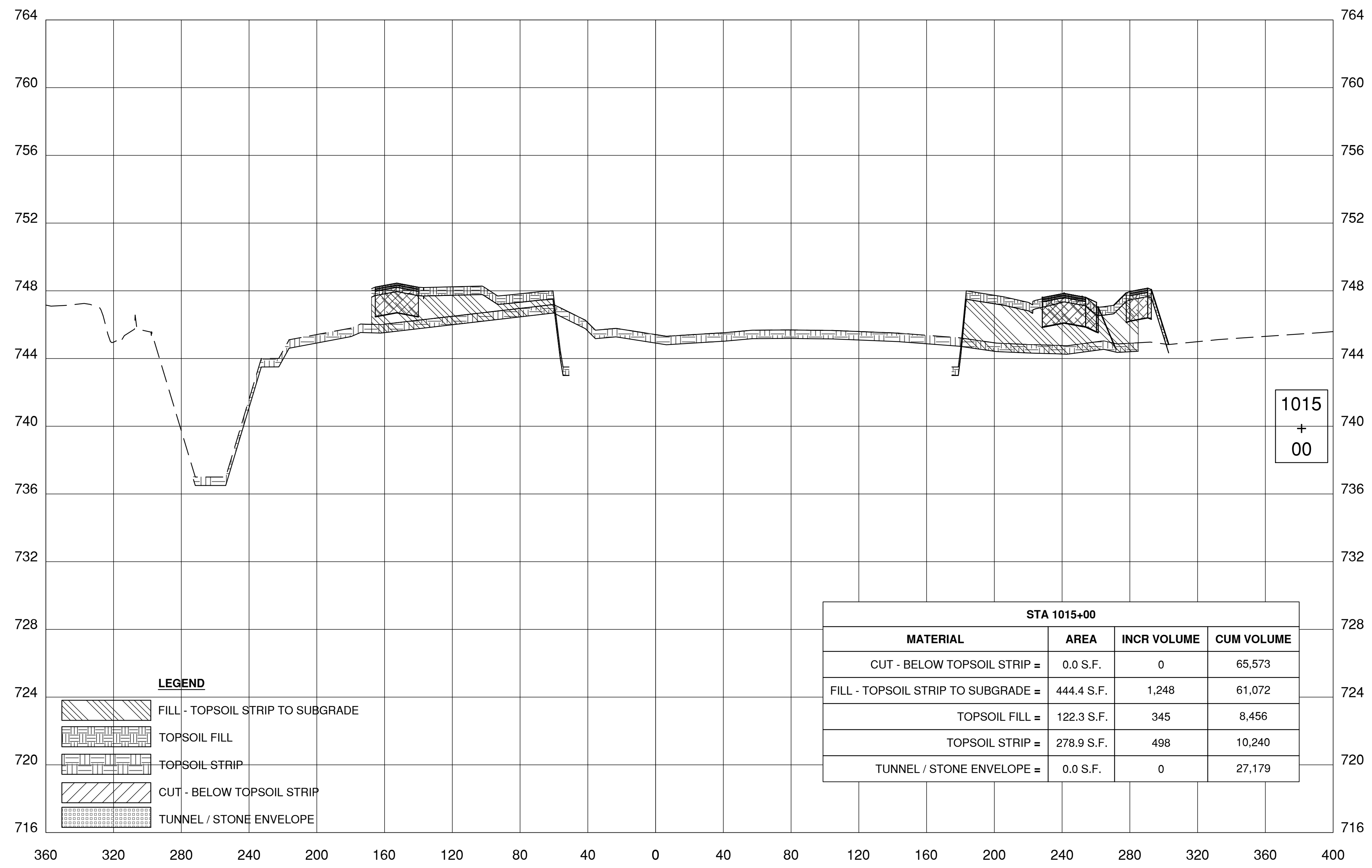
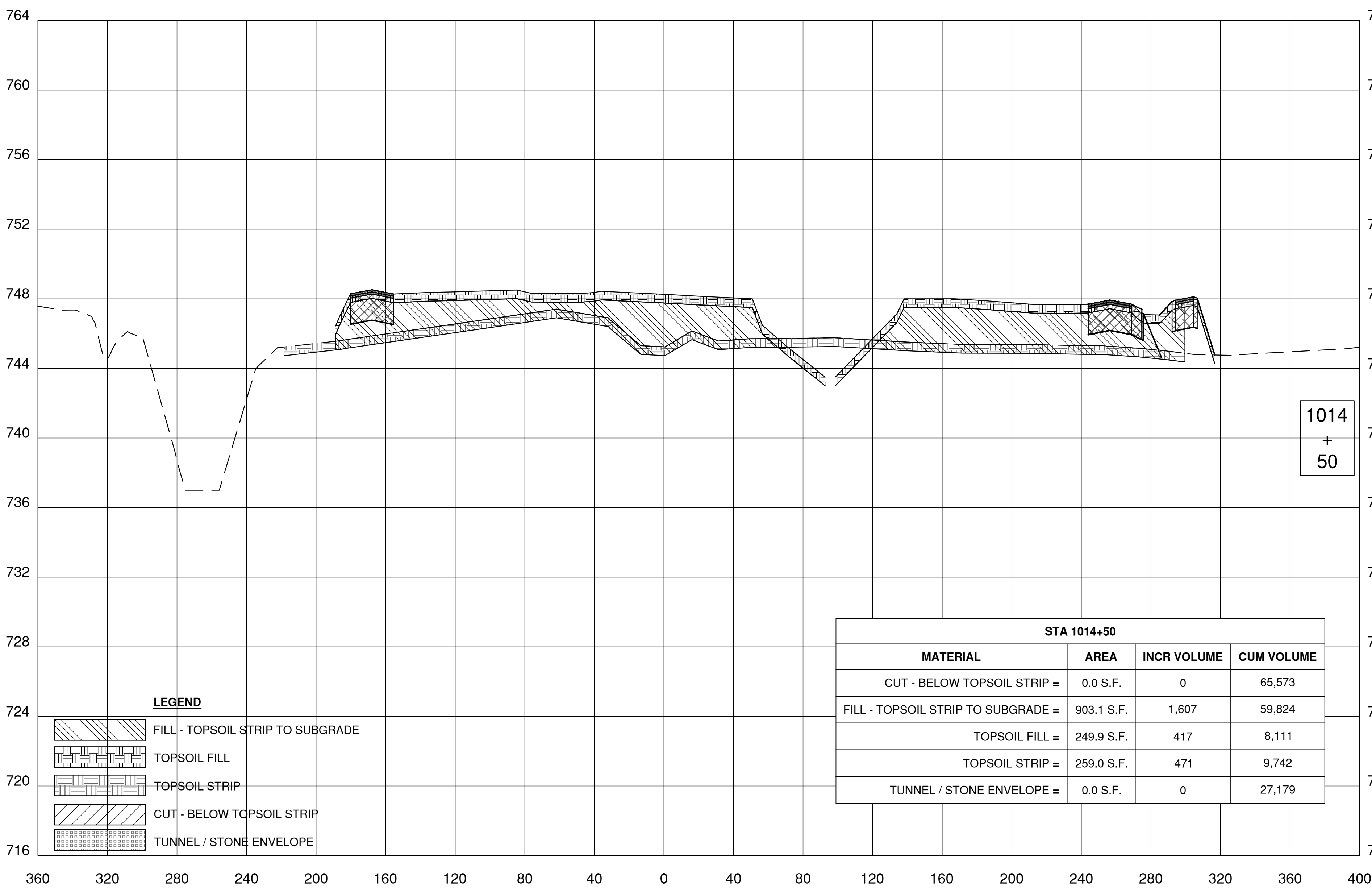
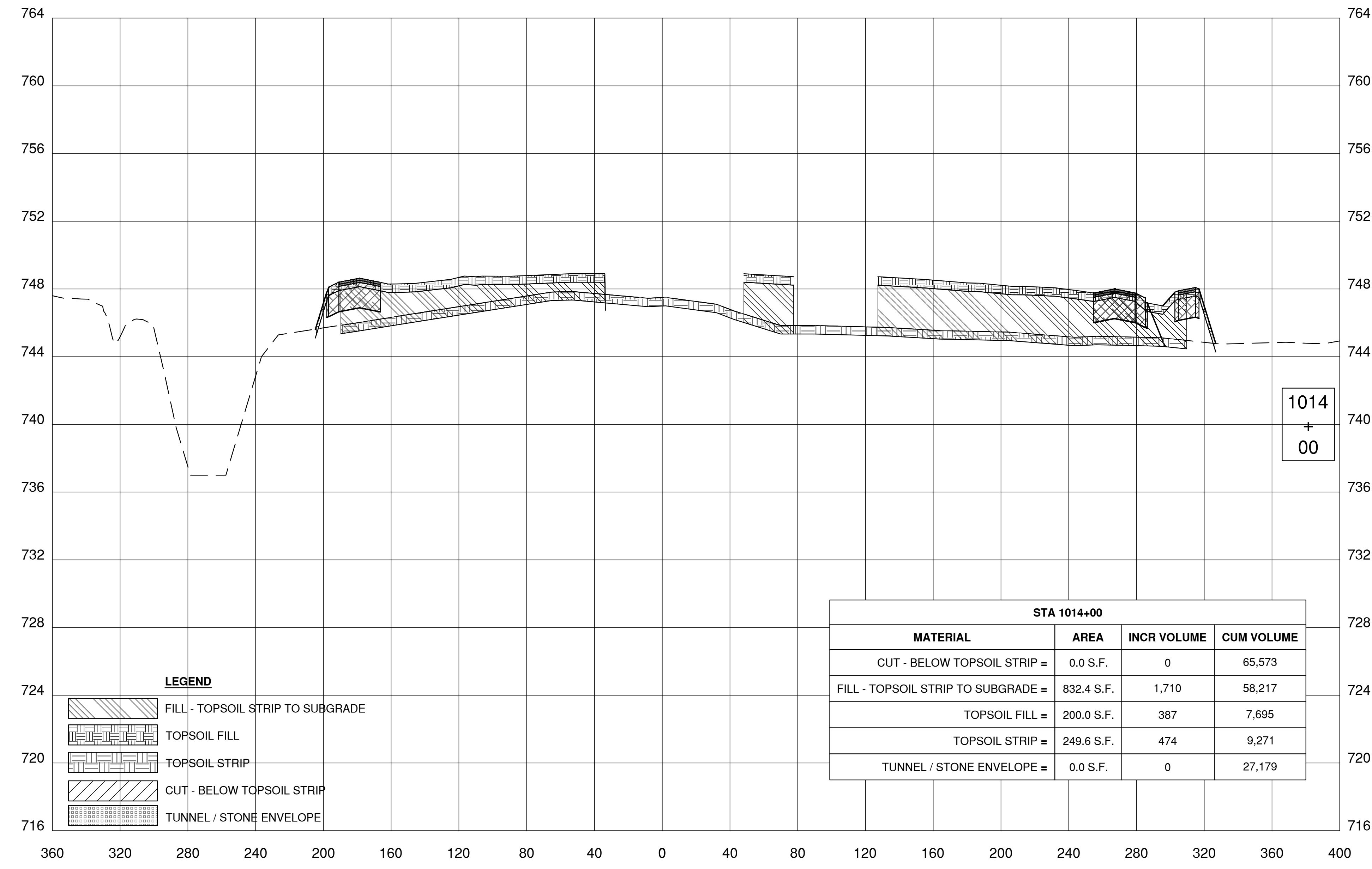
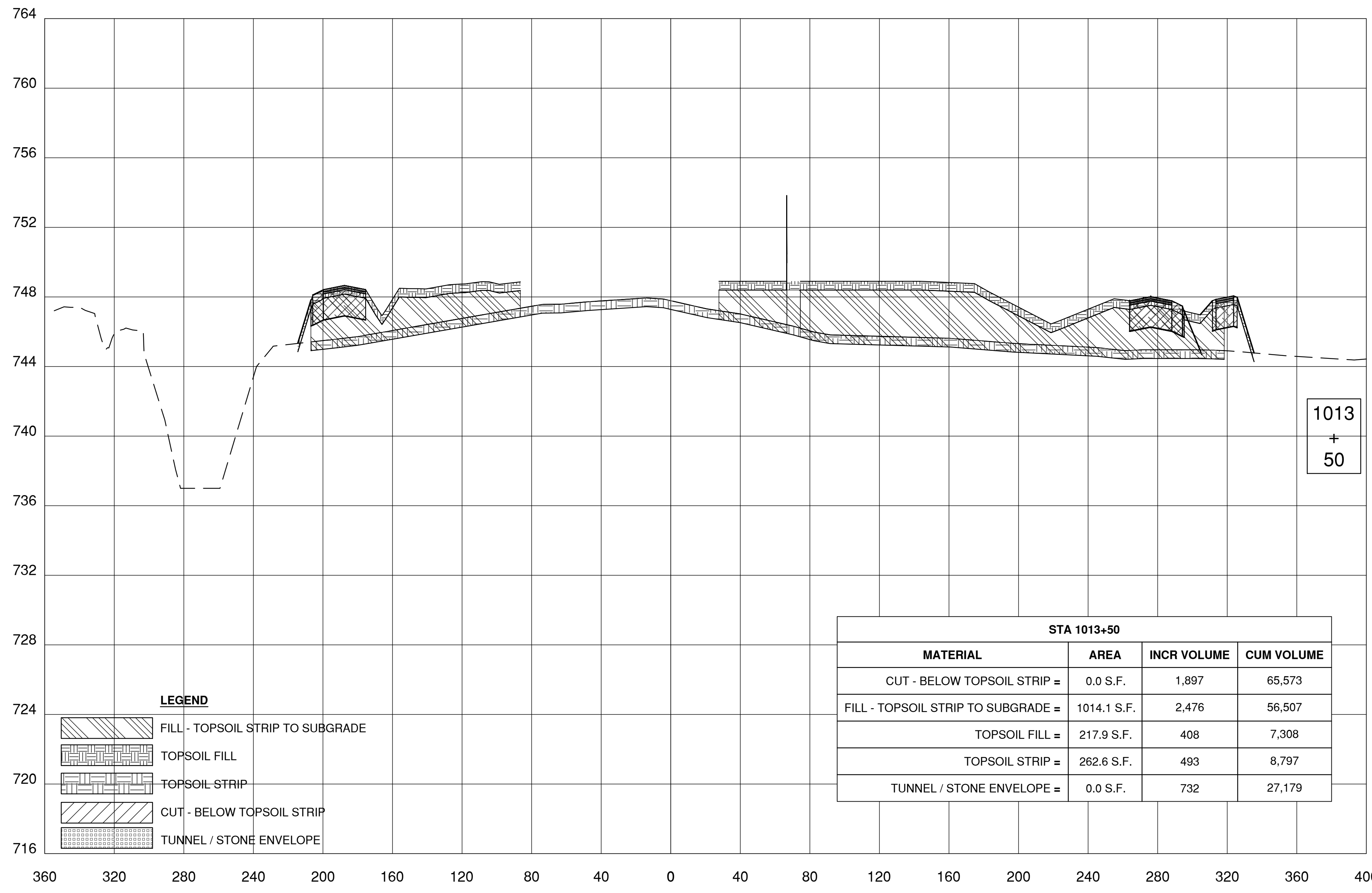
NAME	DATE
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
SUBMITTED	



SCALE:
1" = 40'-0"
0 40 80
SCALE
FEET

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS V
DRAWING NO. **4-3-2** **C-15** REV. 0

08-16-2018



Thursday, August 16, 2018 12:07:31 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

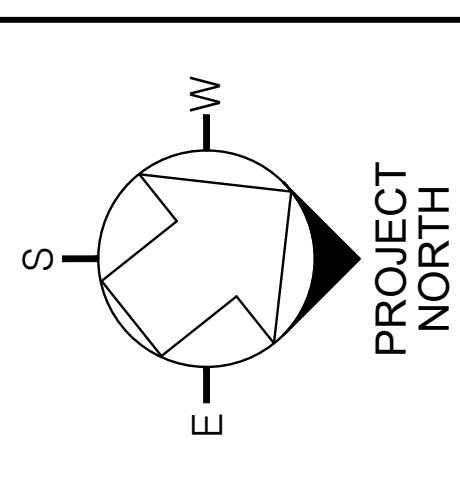
TGRWA
Tyk, Gustafson, Rockers, Wilson, Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

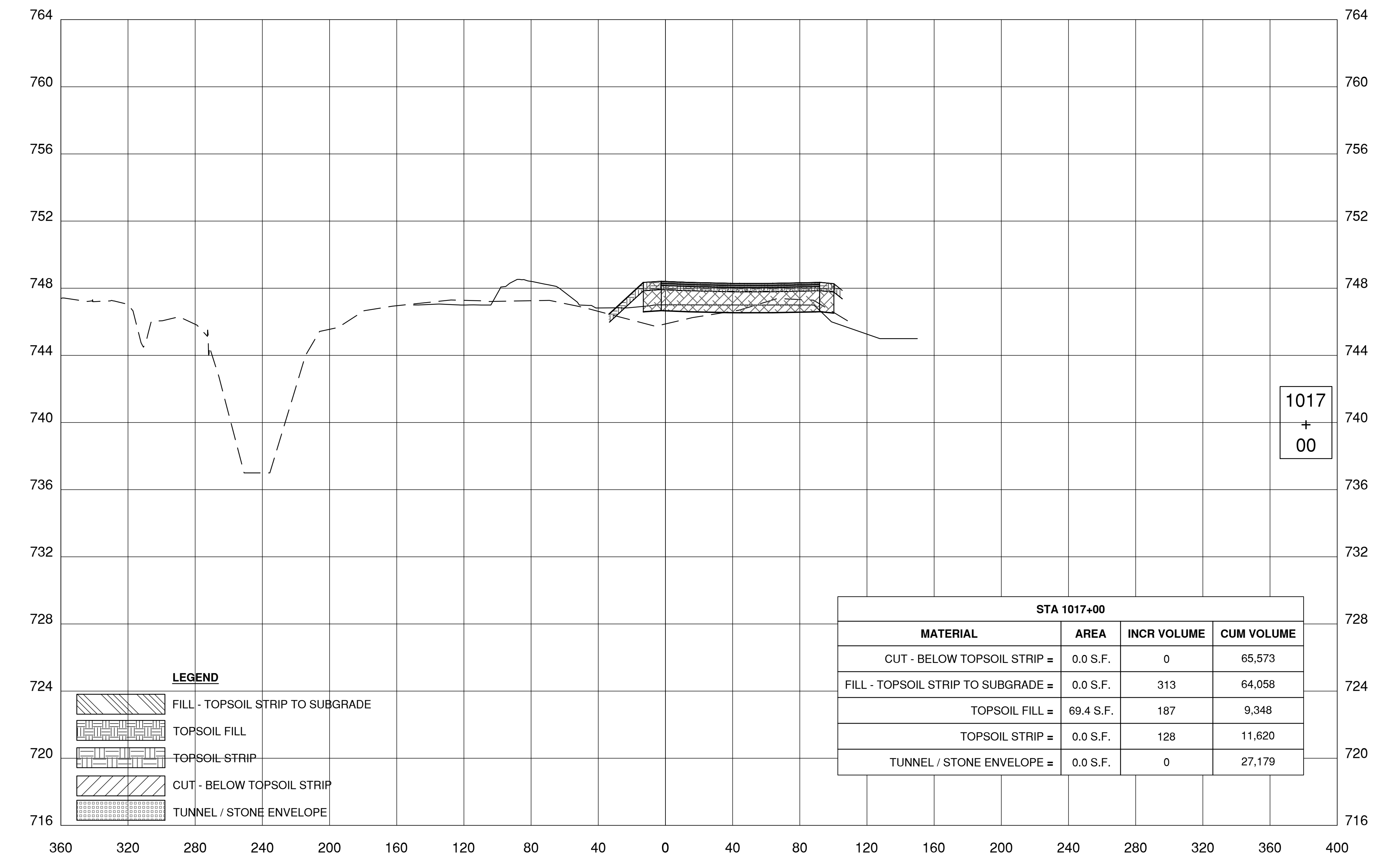
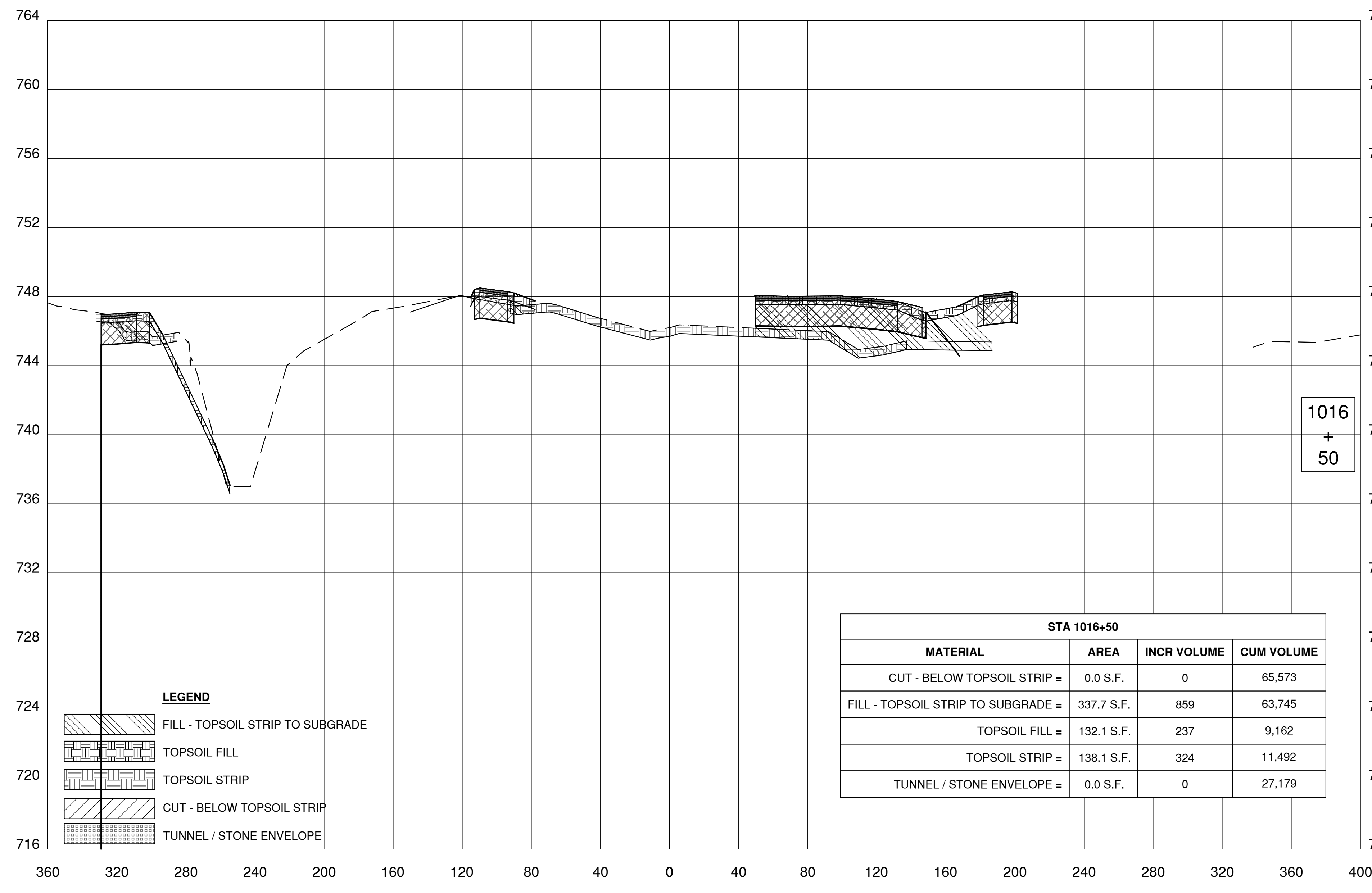
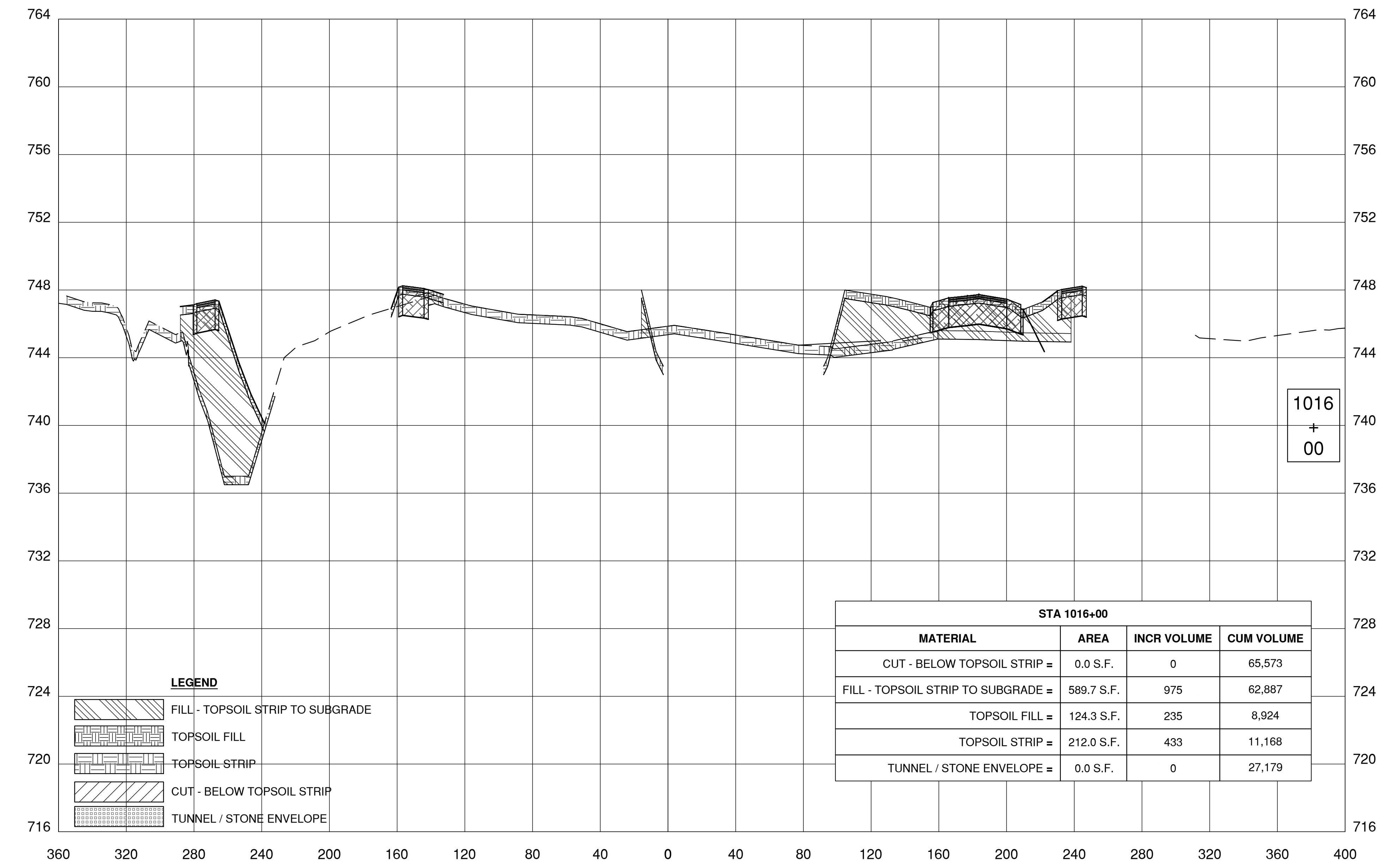
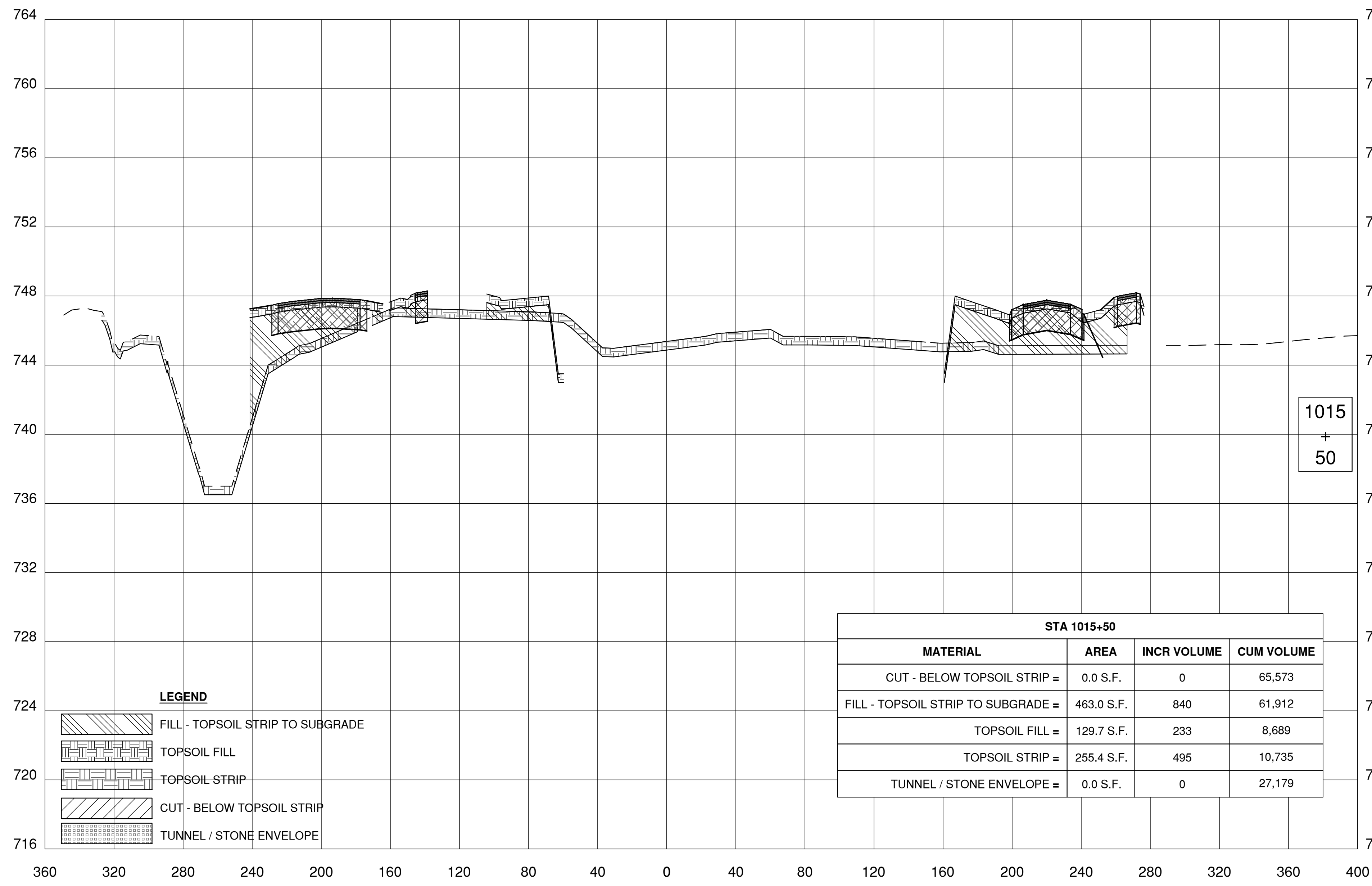
	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



SCALE:
1" = 40'-0"
SCALE

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS VI
DRAWING NO. **4-3-2** **C-16** REV. 0

08-16-2018



Thursday, August 16, 2018 12:07:51 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

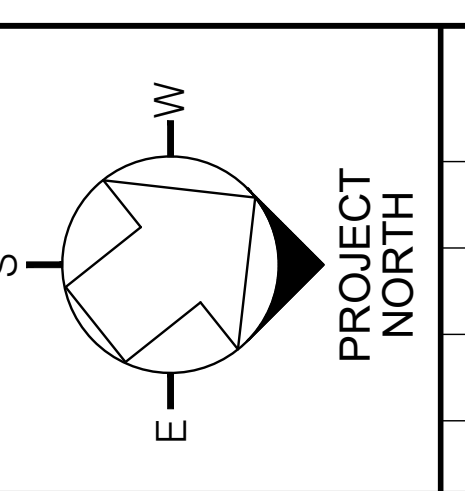
TGRWA
TyRk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60603
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

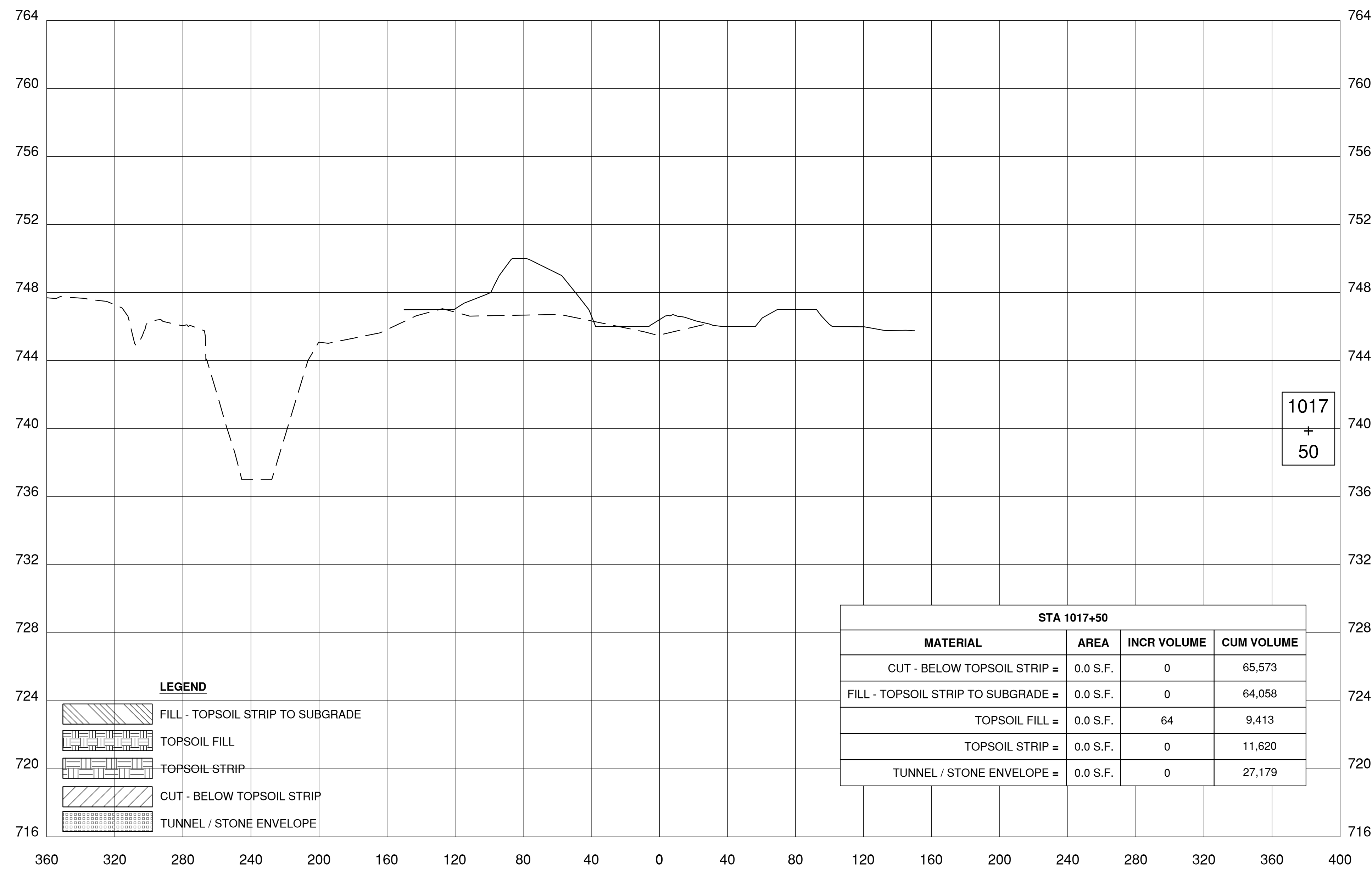
NAME	DATE
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
SUBMITTED	



SCALE:
1" = 40'-0"
SCALE

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW PIP-II CAMPUS CROSS SECTIONS VII
DRAWING NO. **4-3-2** **C-17** REV. 0

08-16-2018



STA 1017+50			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
CUT - BELOW TOPSOIL STRIP	0.0 S.F.	0	65,573
FILL - TOPSOIL STRIP TO SUBGRADE	0.0 S.F.	0	64,058
TOPSOIL FILL	0.0 S.F.	64	9,413
TOPSOIL STRIP	0.0 S.F.	0	11,620
TUNNEL / STONE ENVELOPE	0.0 S.F.	0	27,179

LEGEND

	FILL - TOPSOIL STRIP TO SUBGRADE
	TOPSOIL FILL
	TOPSOIL STRIP
	CUT - BELOW TOPSOIL STRIP
	TUNNEL / STONE ENVELOPE

Thursday, August 16, 2018 12:28:04 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

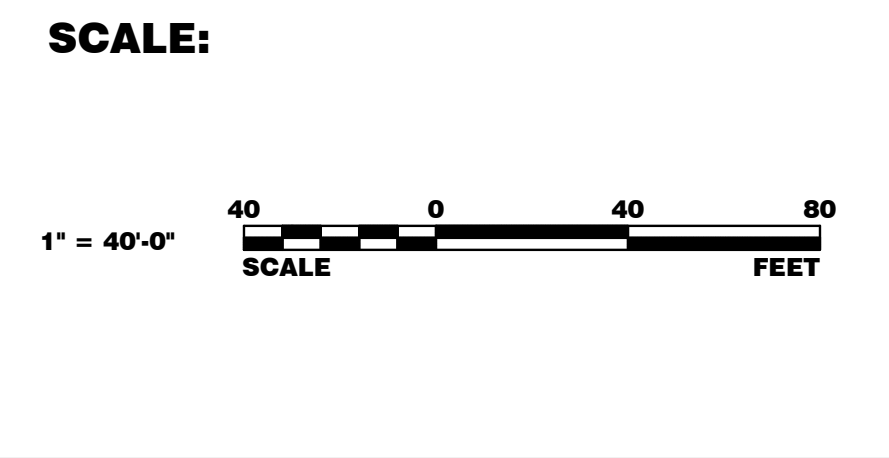
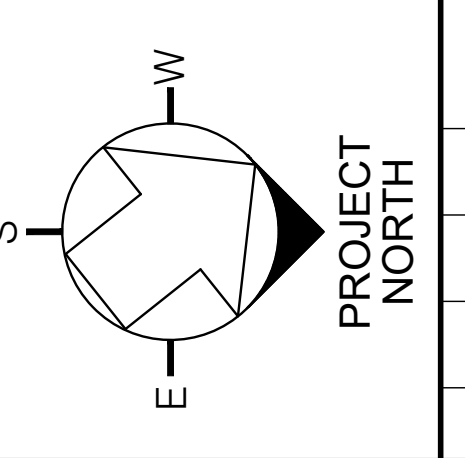
TGRWA
 TyRk Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wienerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

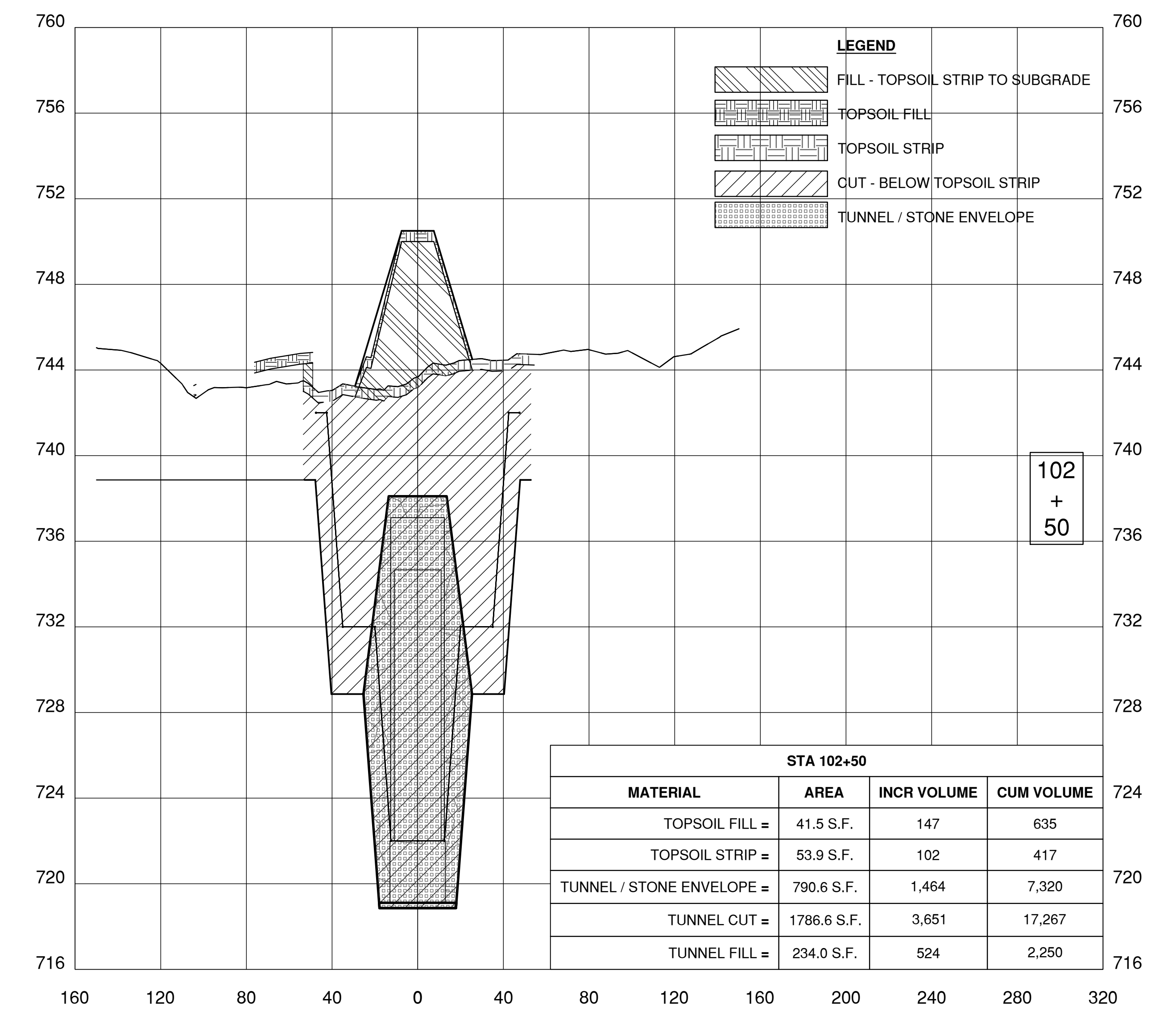
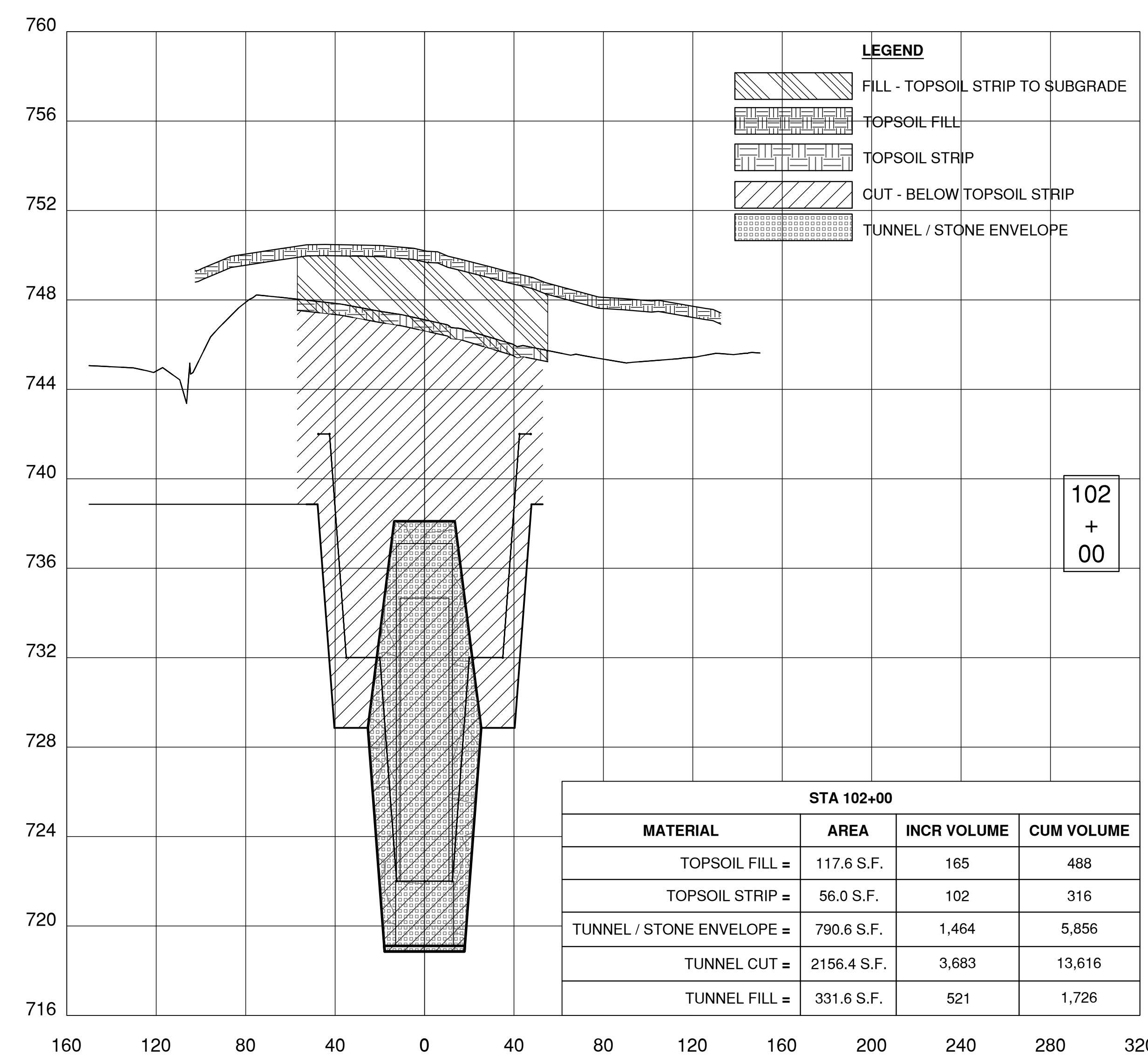
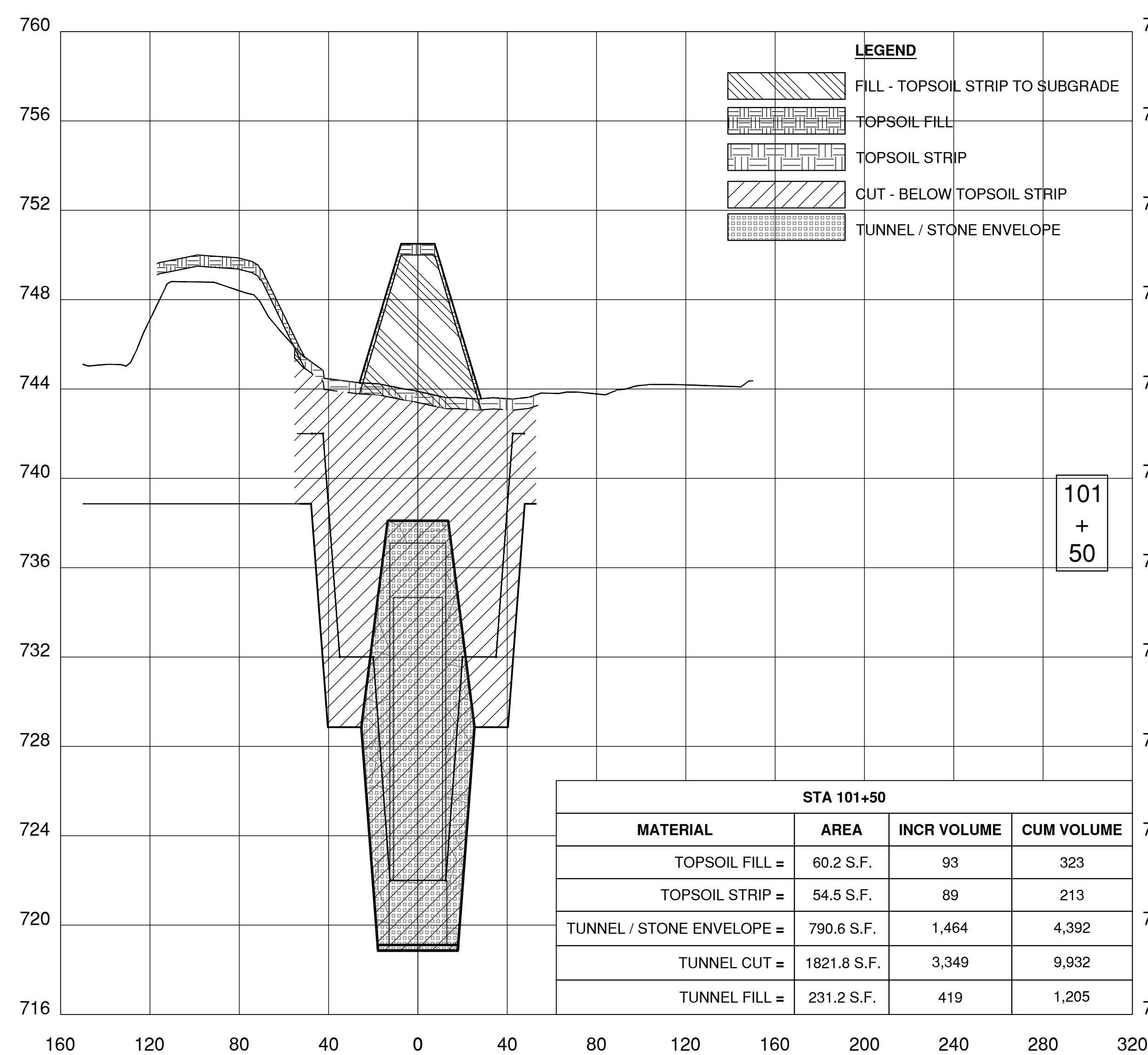
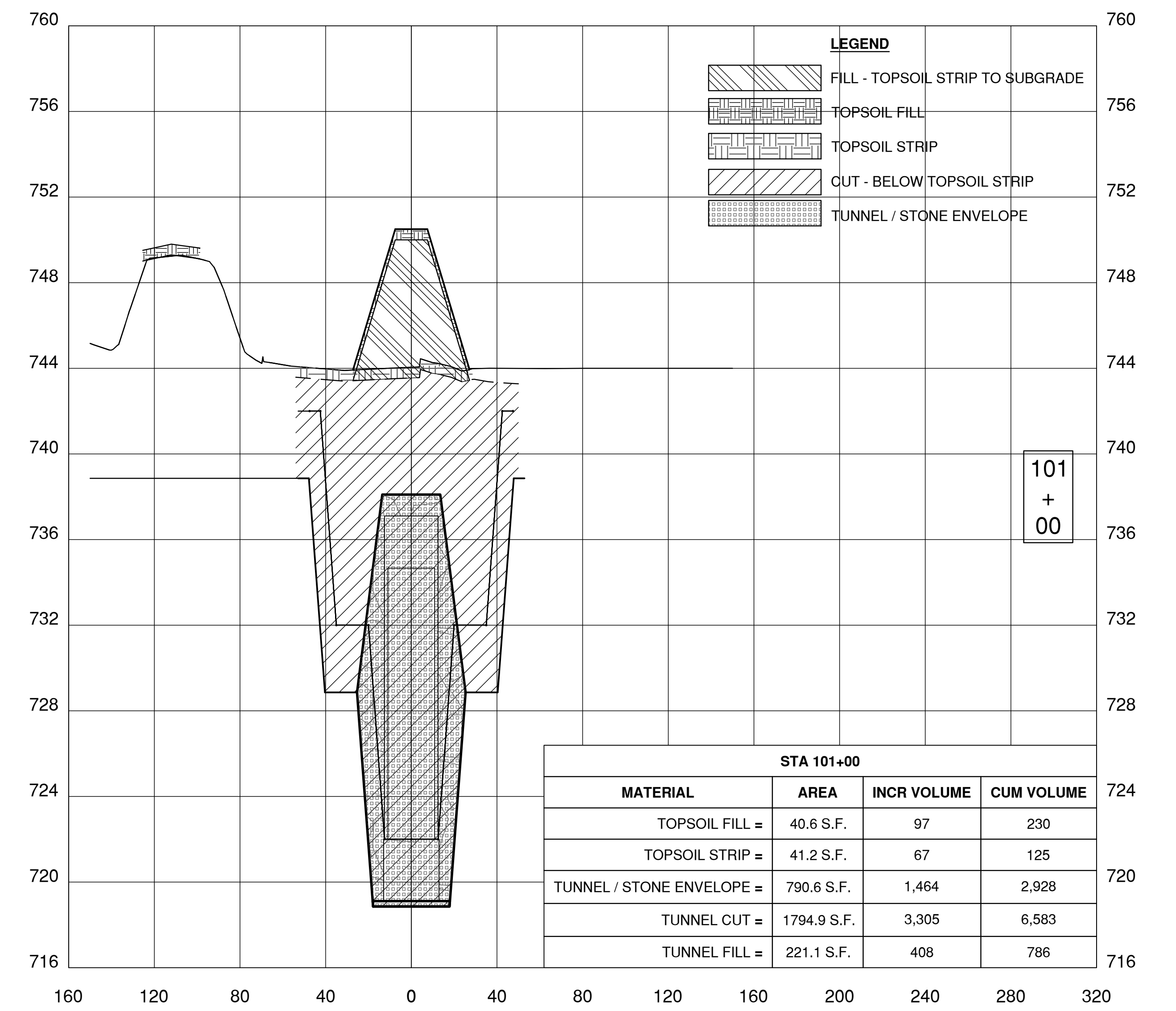
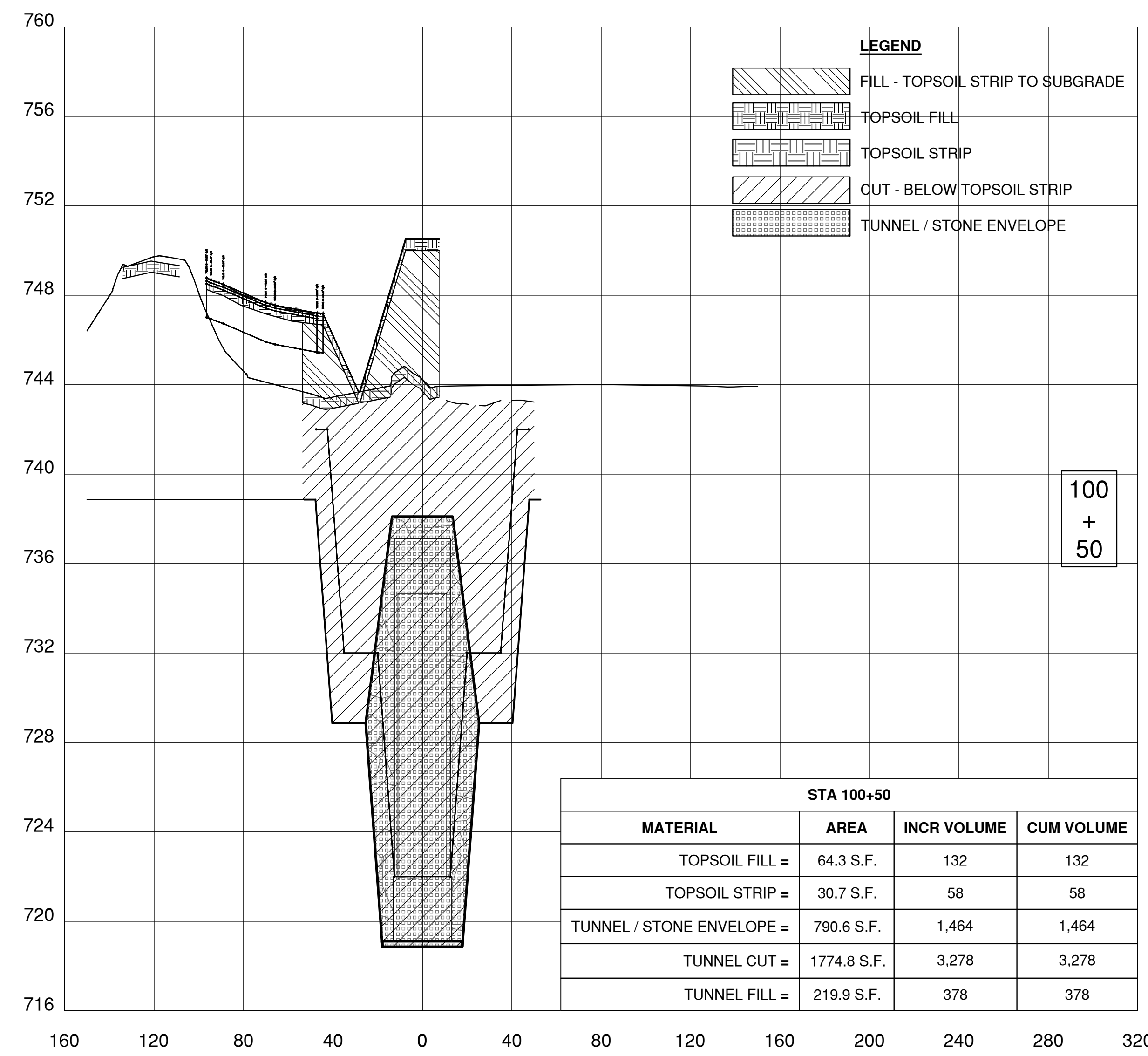
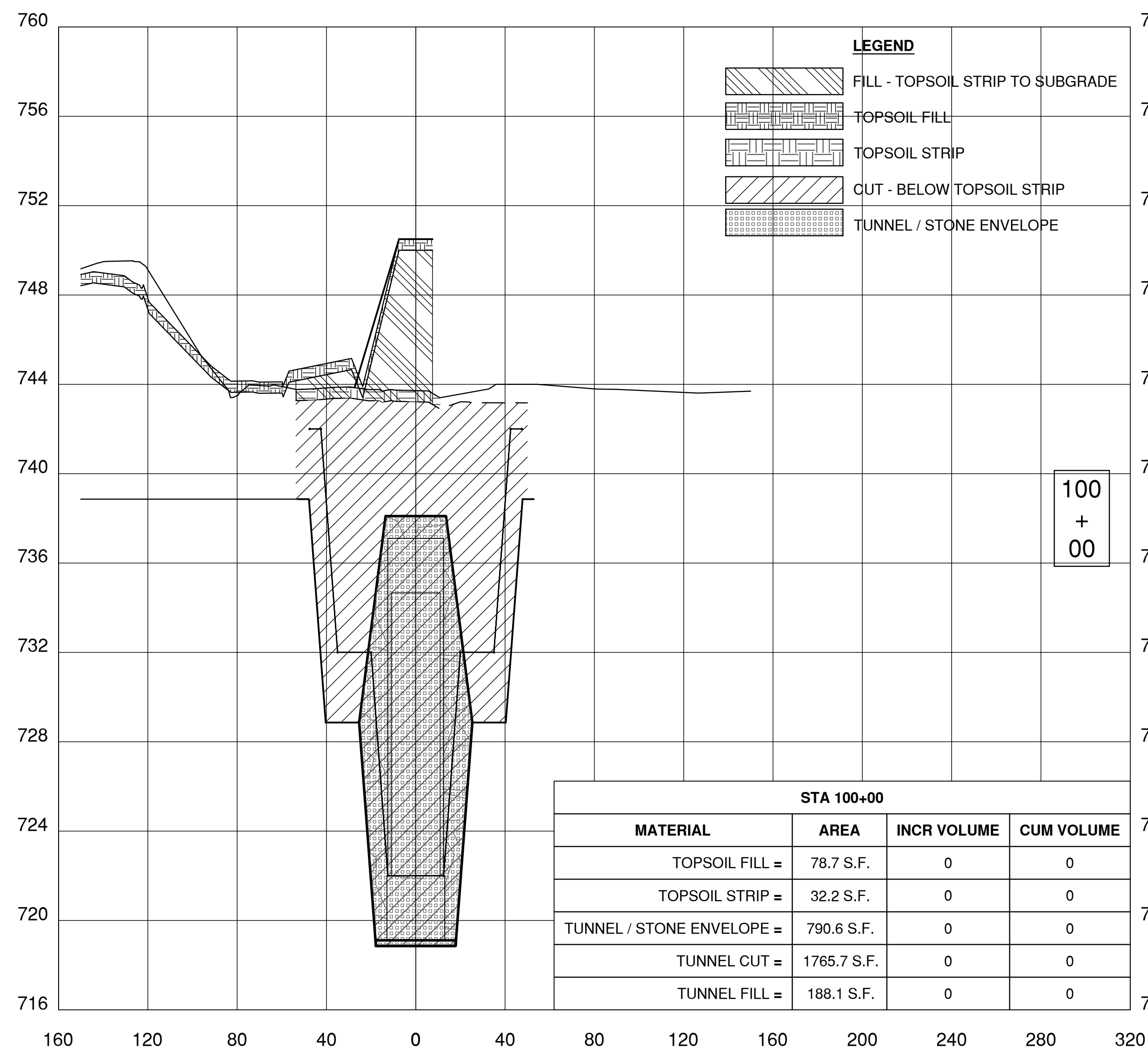
	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
PIP2 CAMPUS CROSS SECTIONS - VIII
 DRAWING NO. **4-3-2** **C-18** REV. **0**

08-16-2018



Thursday, August 16, 2018 12:25:54 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

TyRk Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607

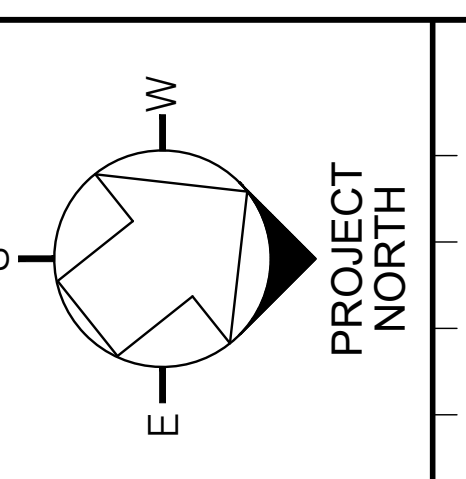
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

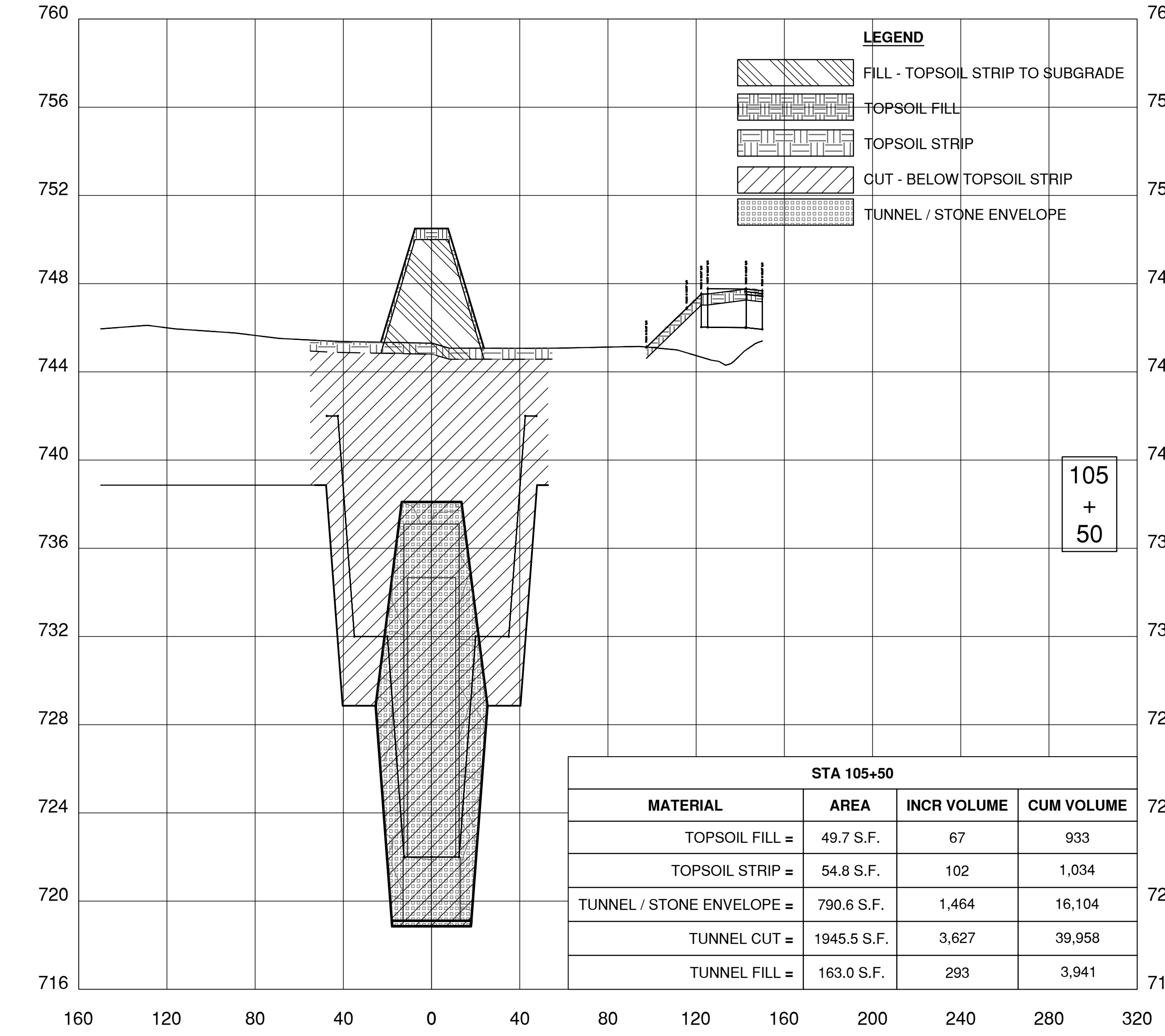
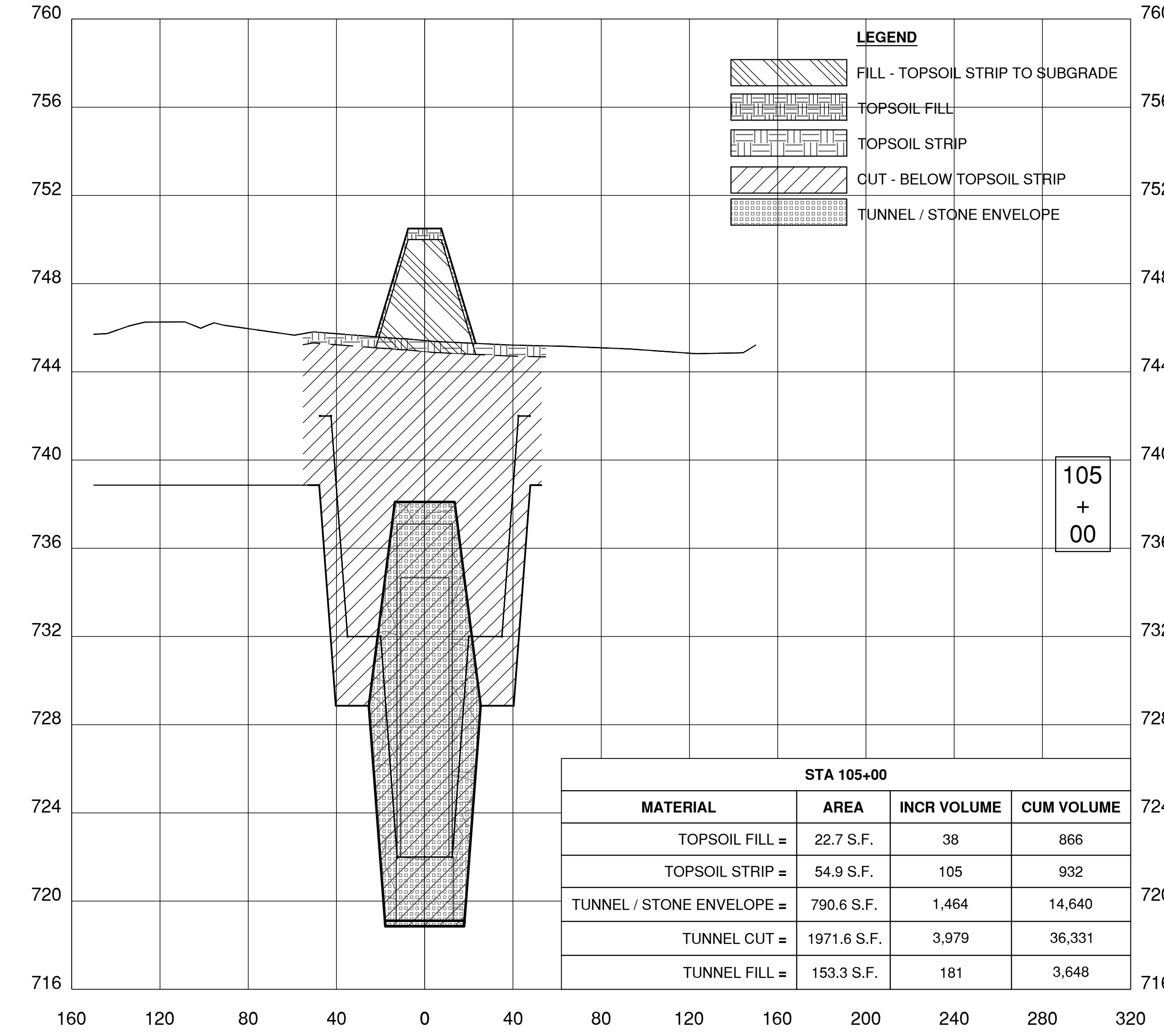
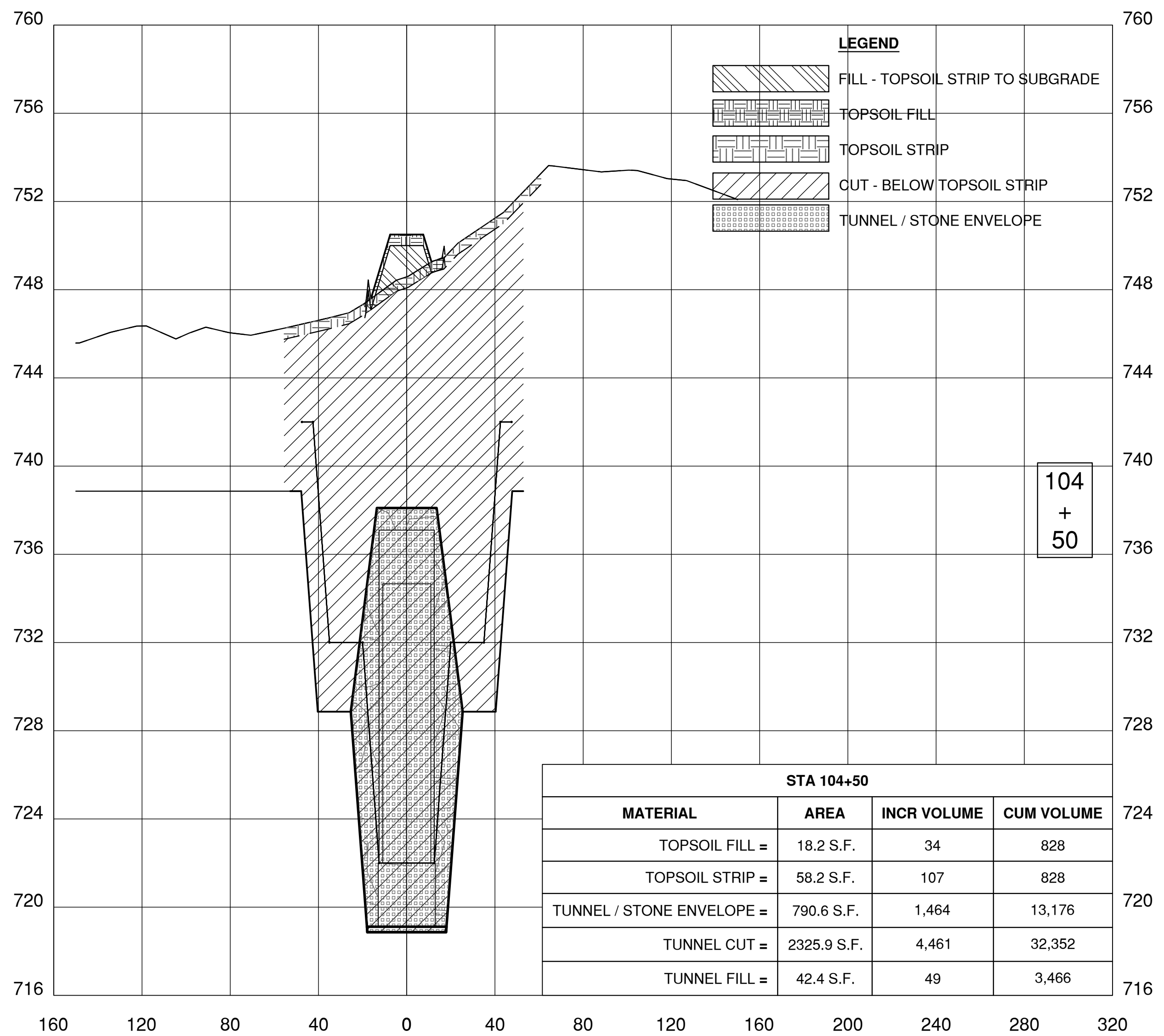
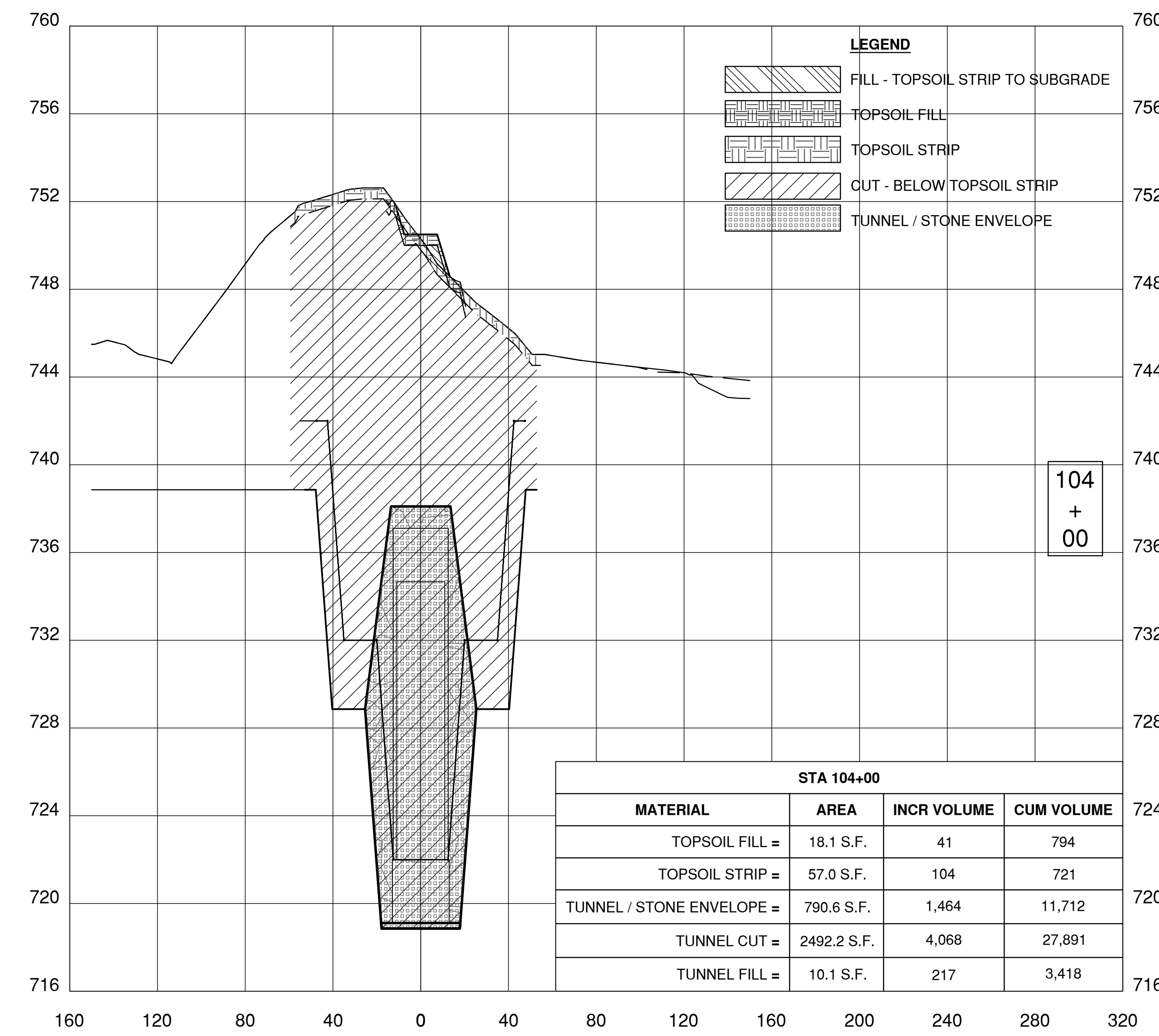
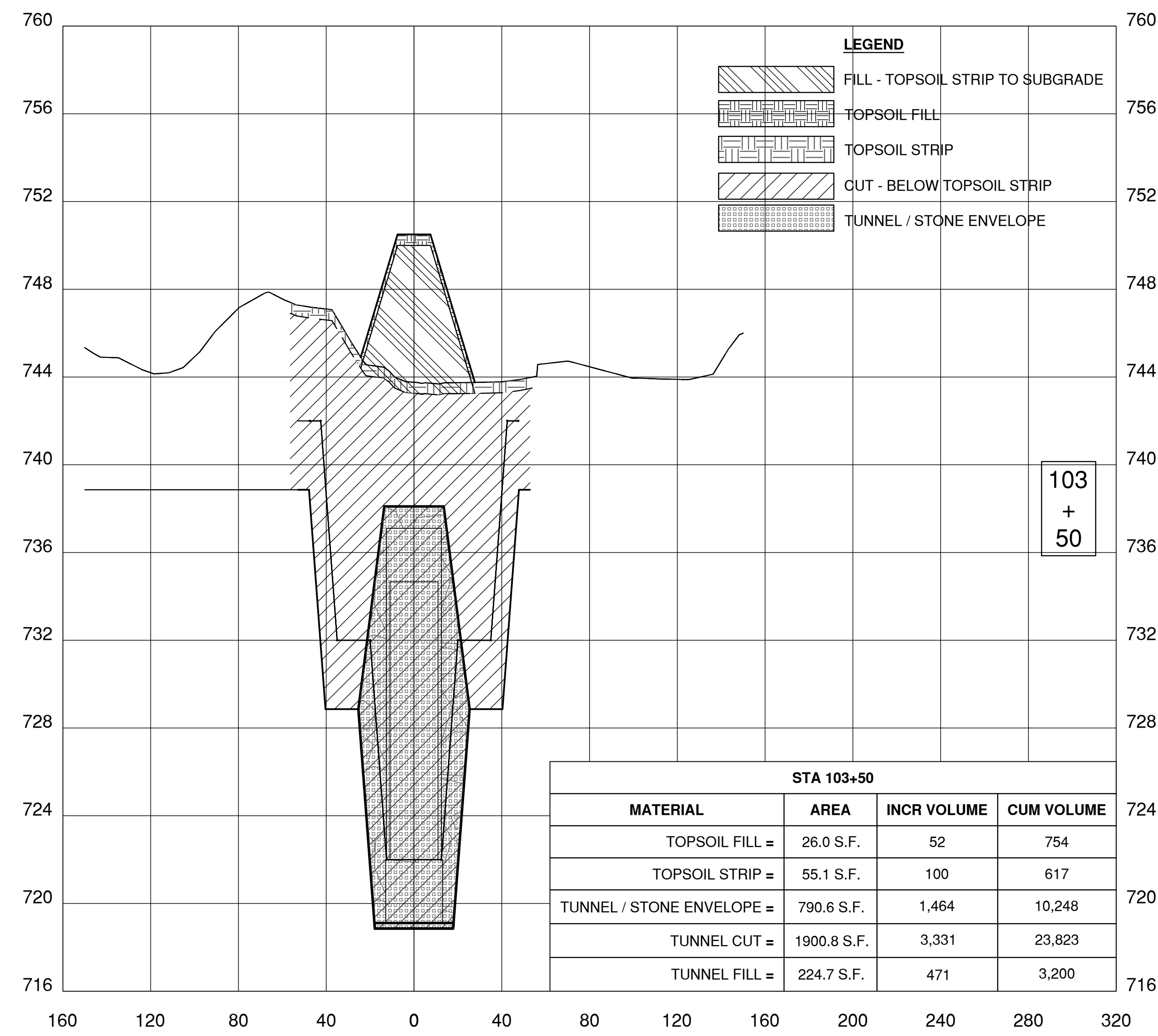
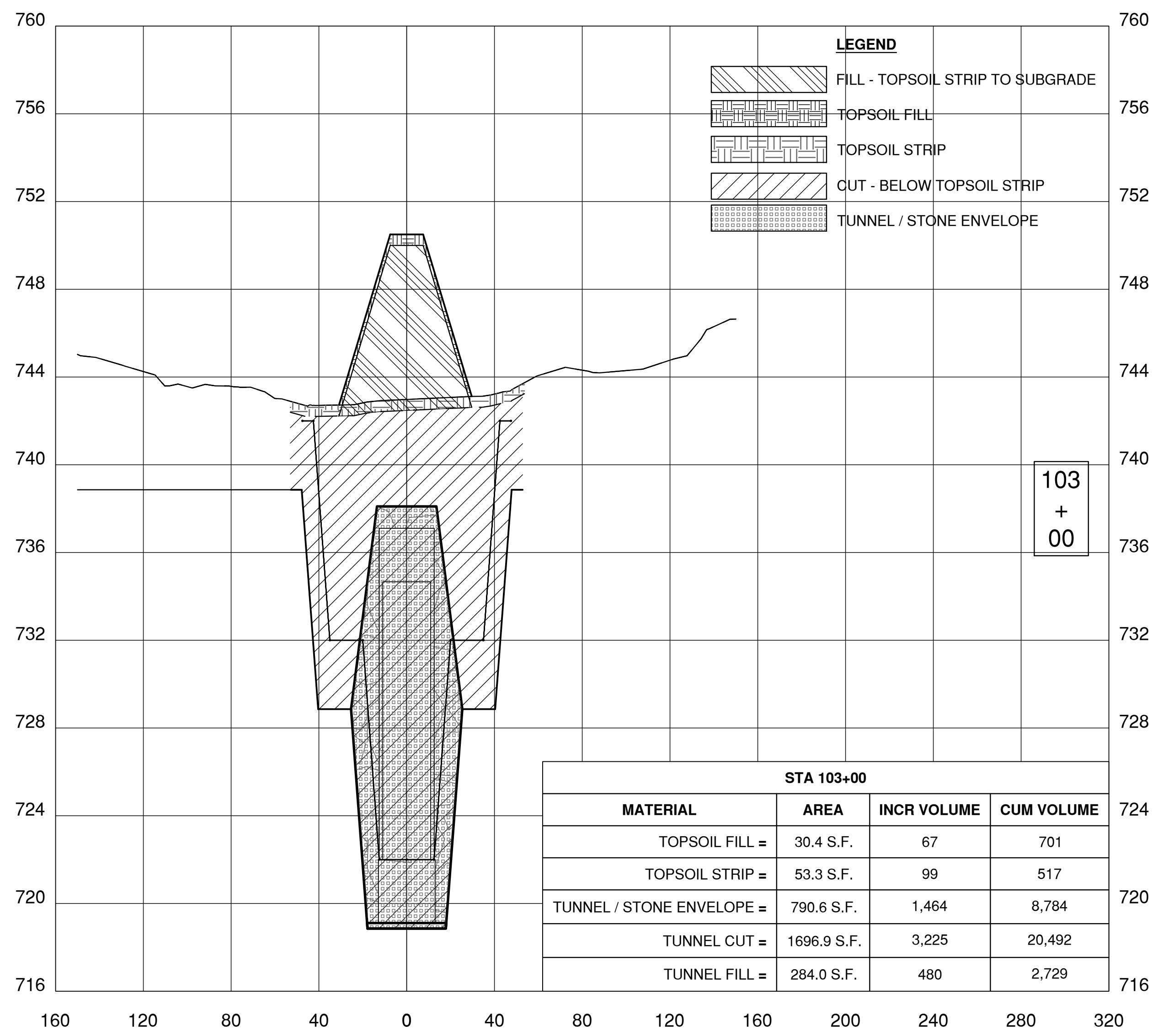


FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
NEW TRANSFER TUNNEL CROSS SECTIONS I

DRAWING NO. **4-3-2** **C-19** REV. 1

08-17-2018



Thursday, August 16, 2018 12:31:05 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

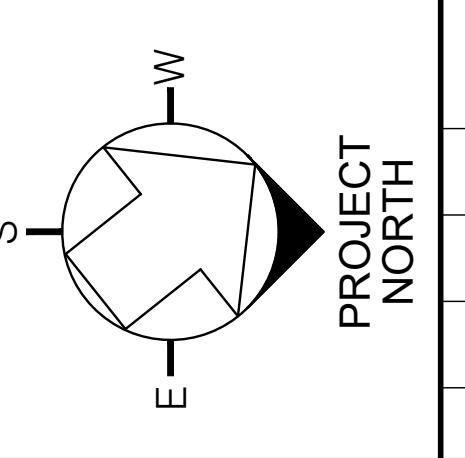
TGRWA
TyRk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wernerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

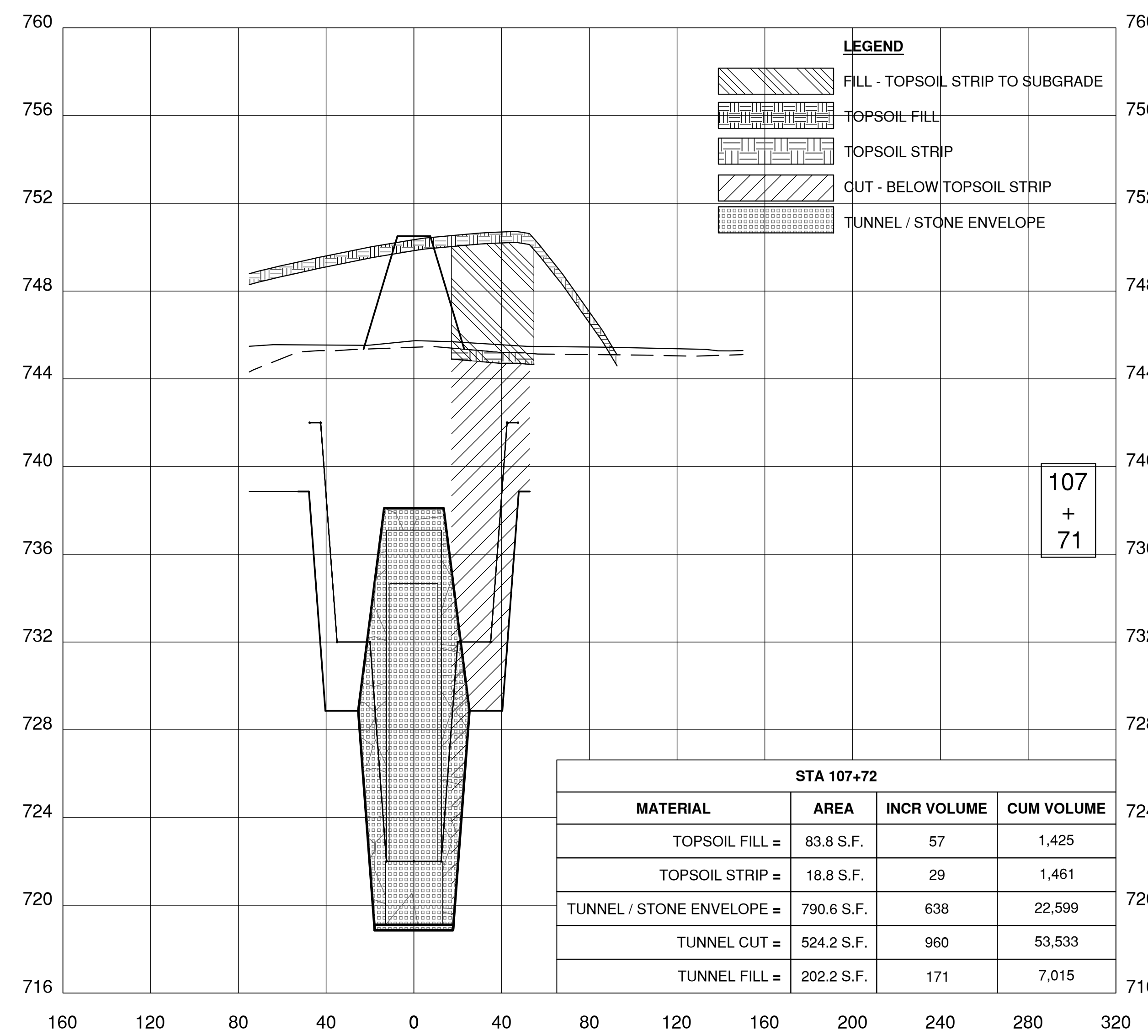
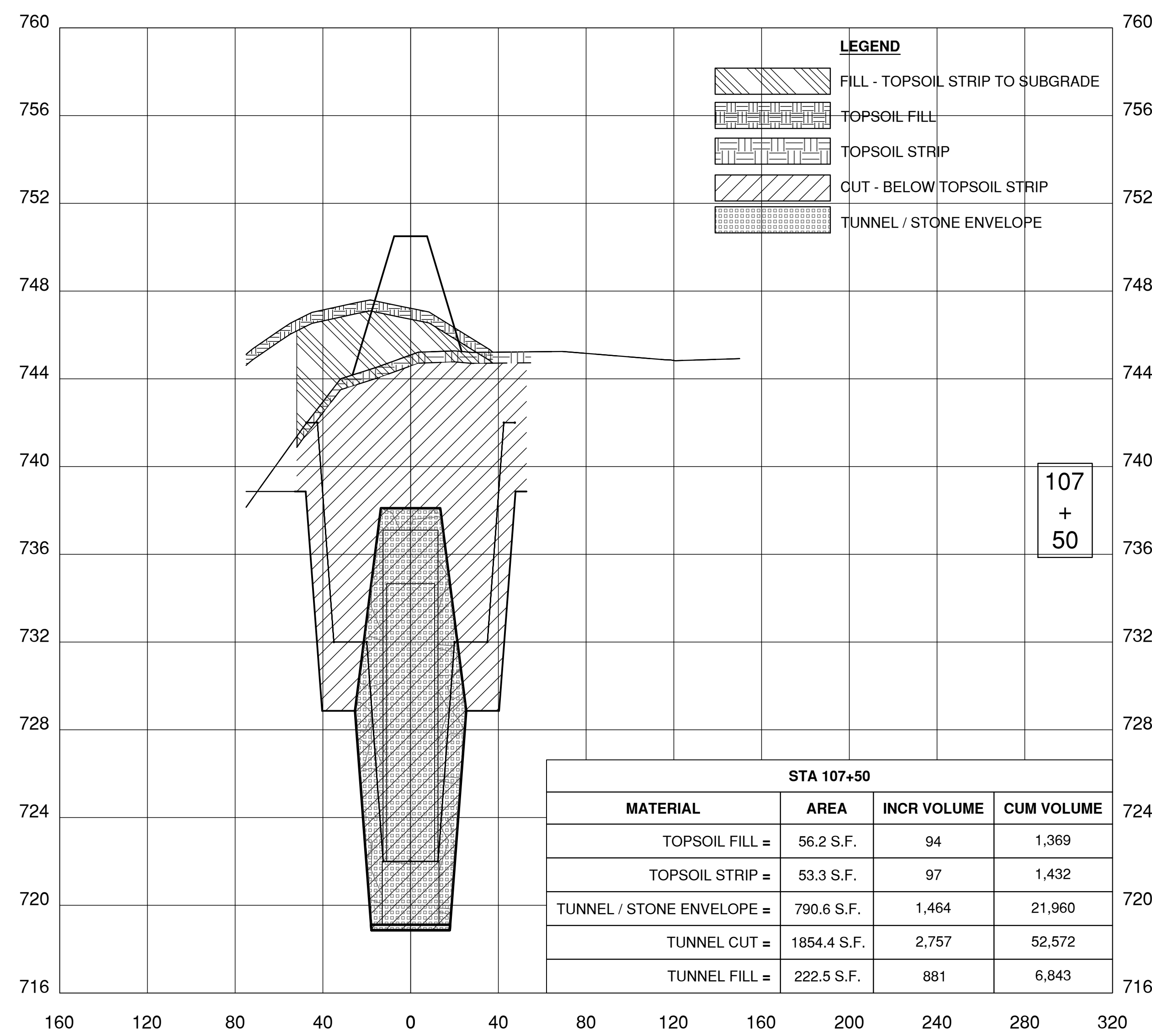
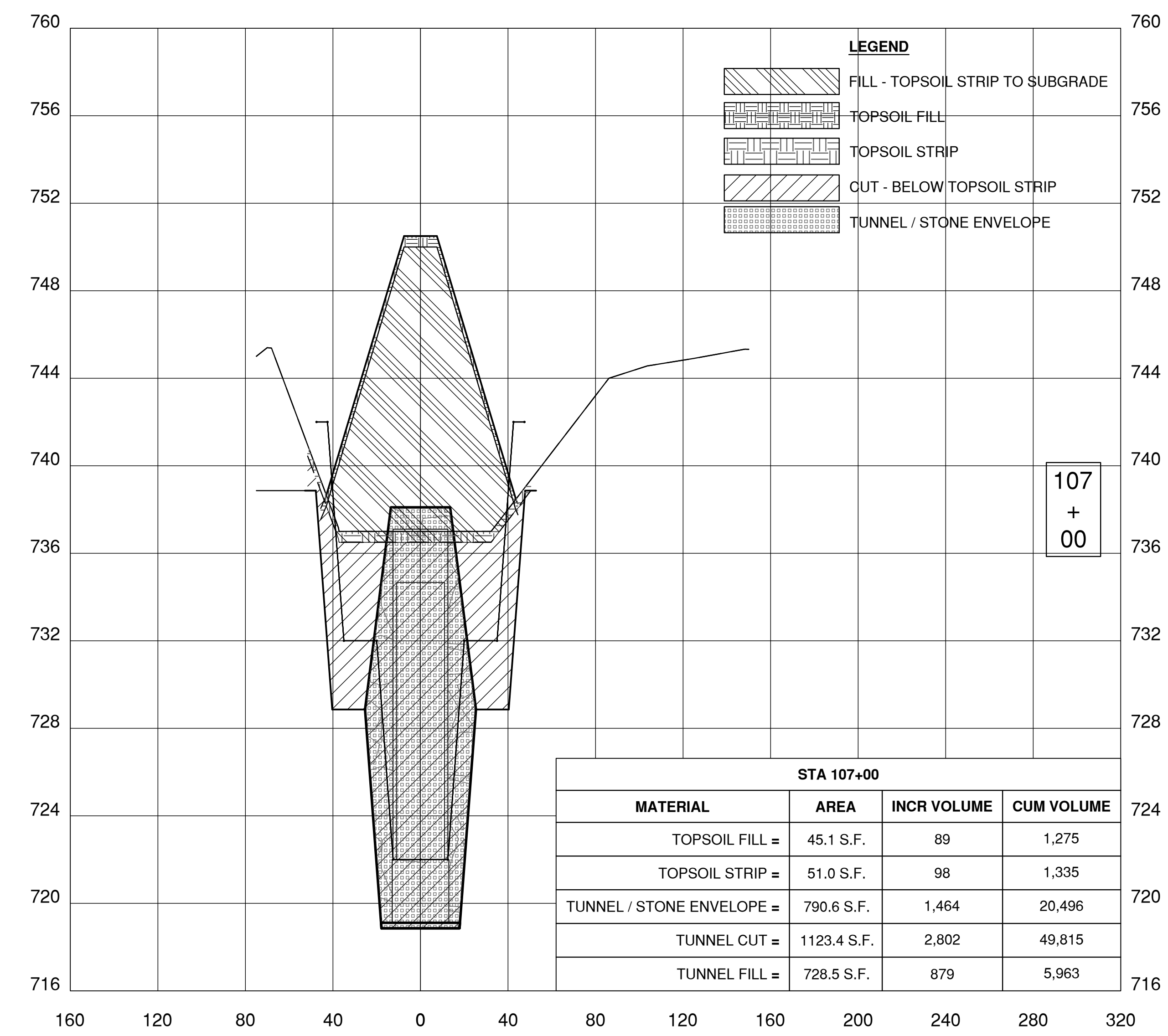
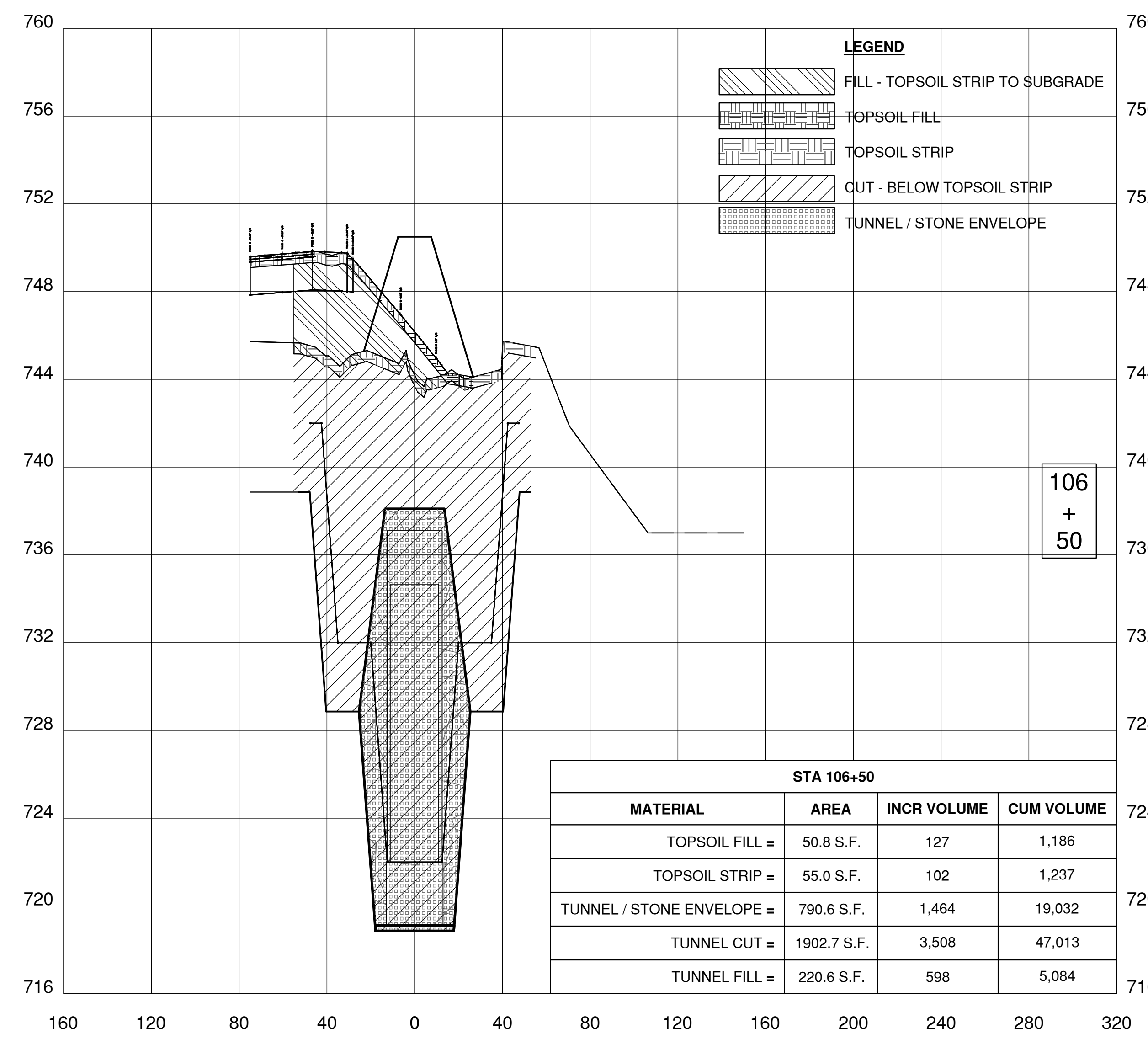
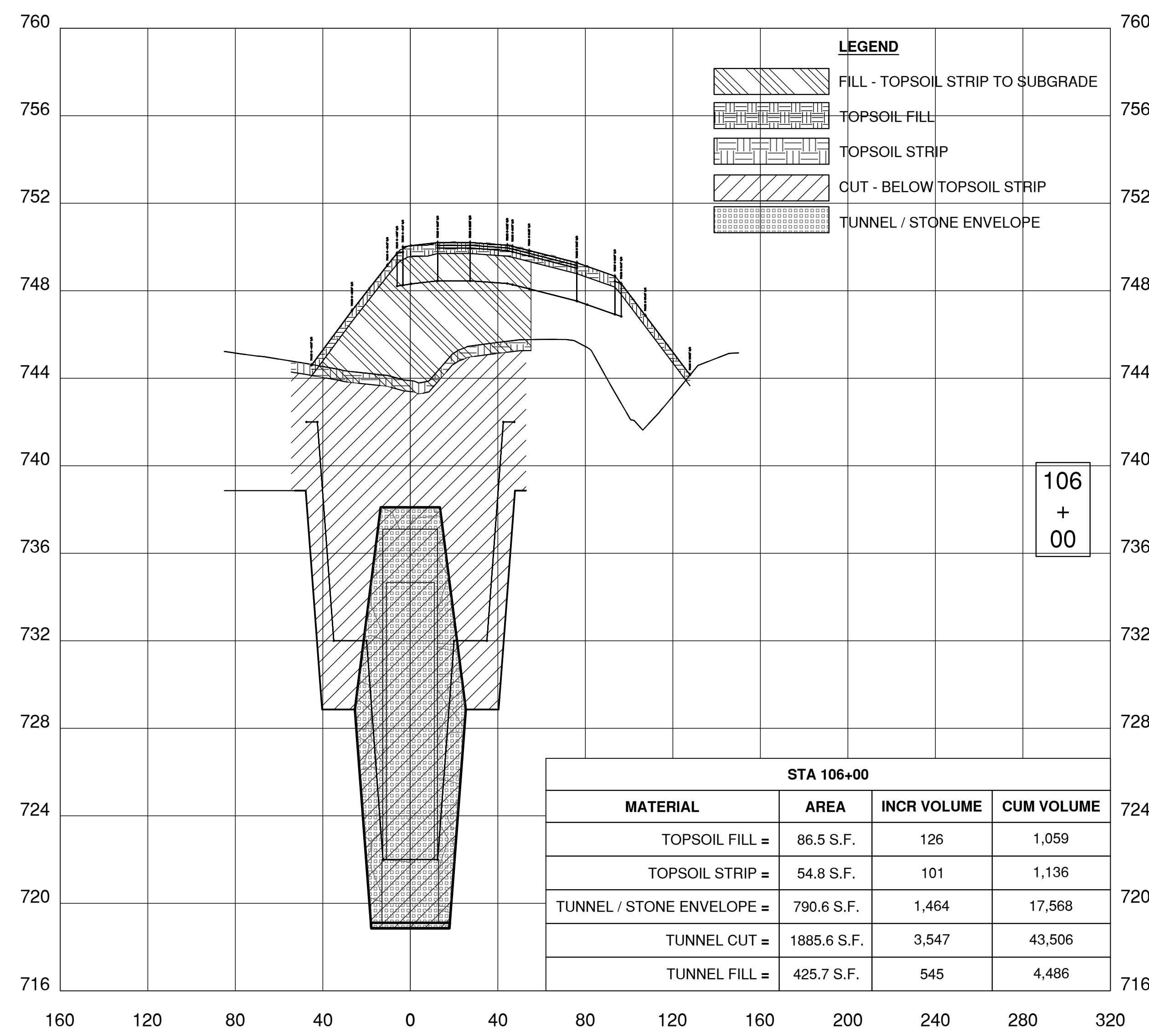
Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANITIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



SCALE:
1" = 40'-0"
SCALE

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW TRANSFER TUNNEL CROSS SECTIONS II
DRAWING NO. **4-3-2** **C-20** REV. 1



Thursday, August 16, 2018 12:32:42 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

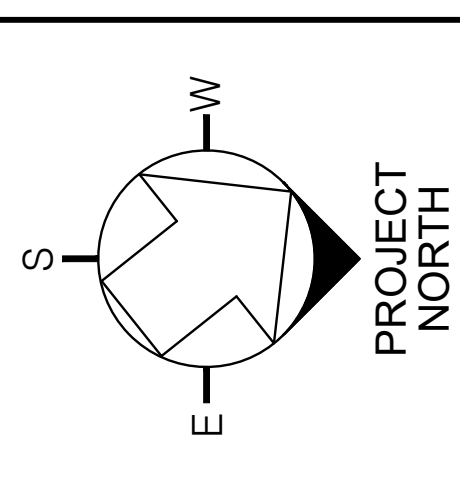
TGRWA
Tyk, Gustafson, Rockers, Wilson, Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wernerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

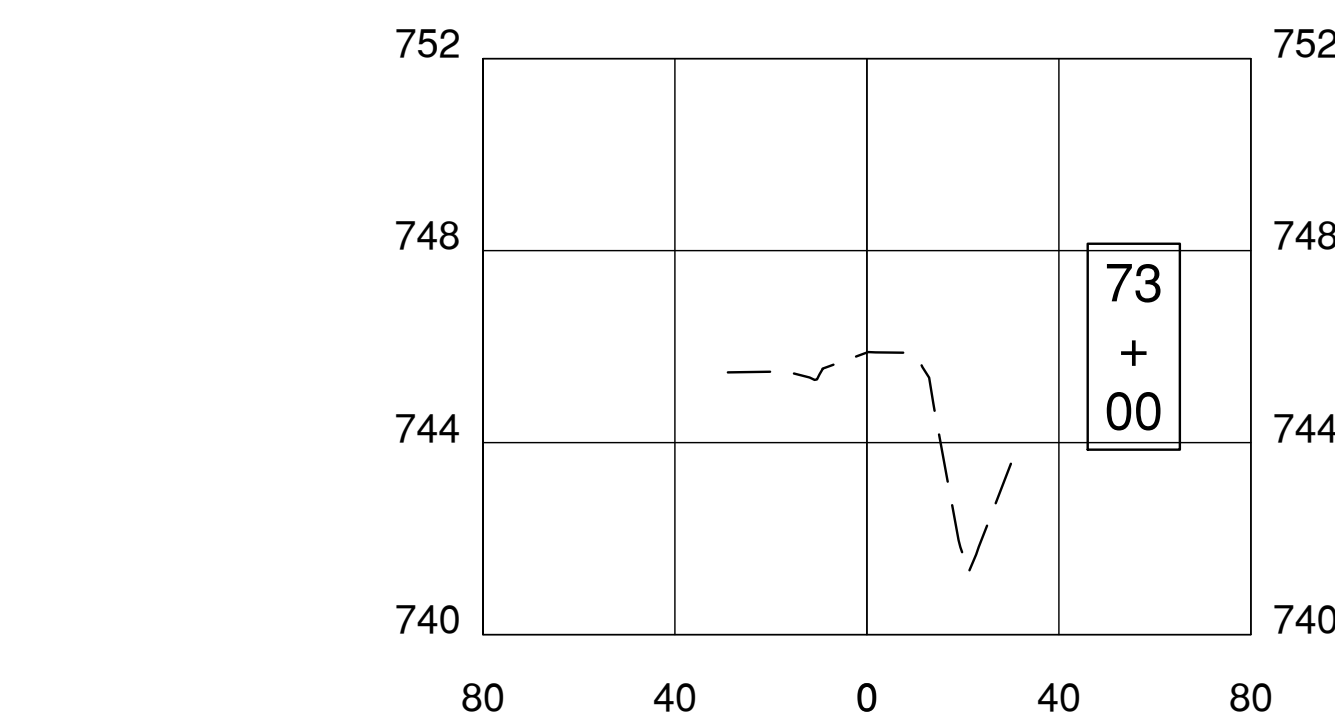
	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



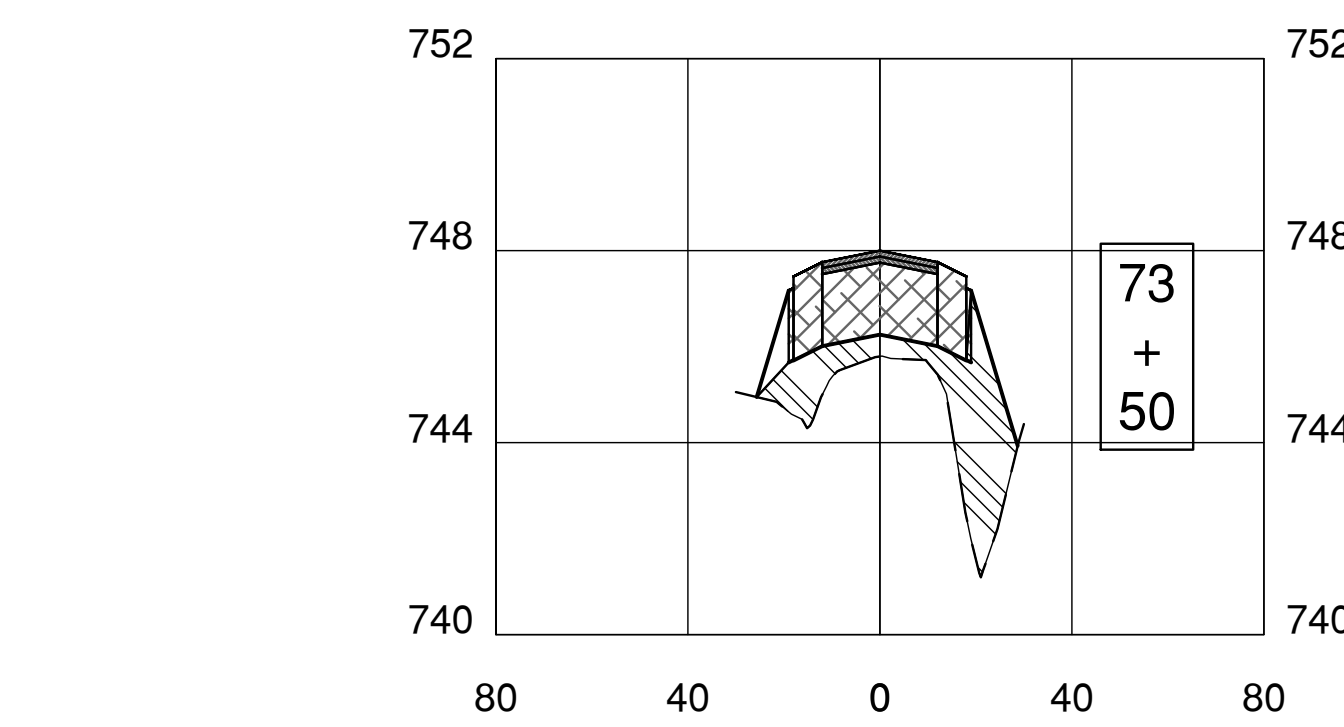
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FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW TRANSFER TUNNEL CROSS SECTIONS III
DRAWING NO. **4-3-2** **C-21** REV. 1

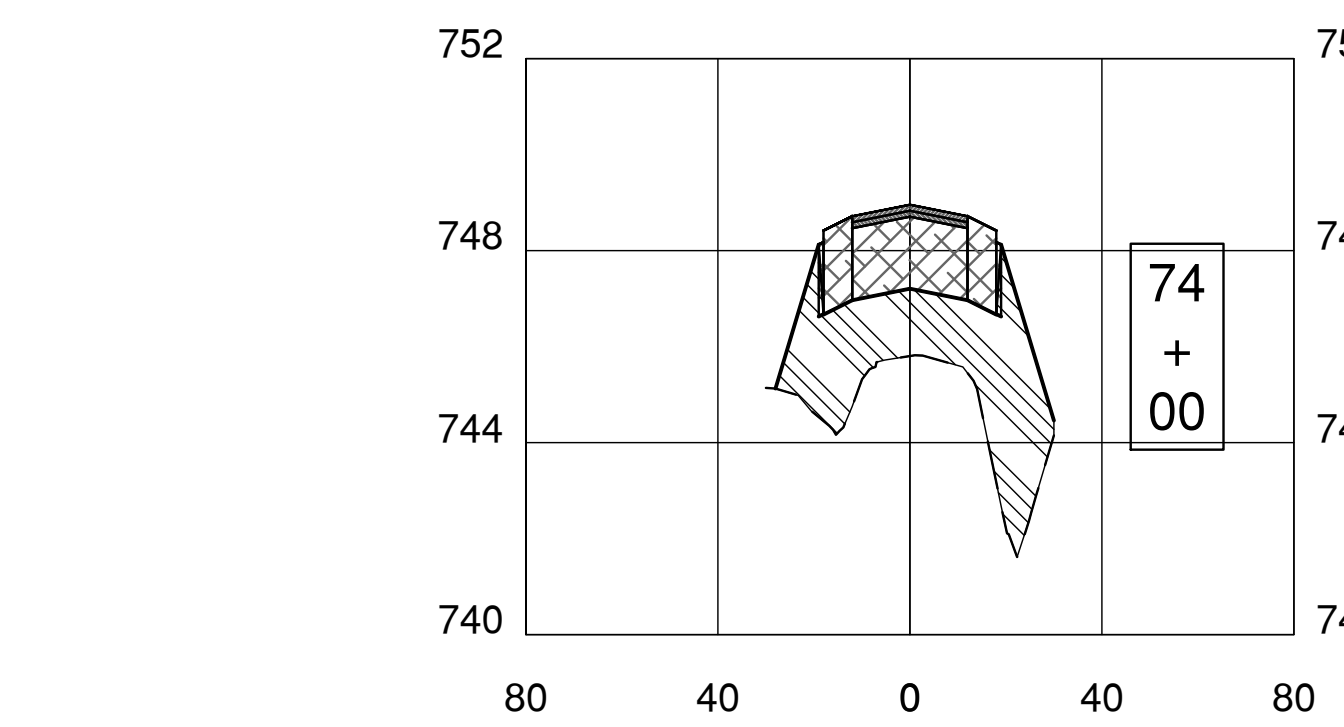
08-17-2018



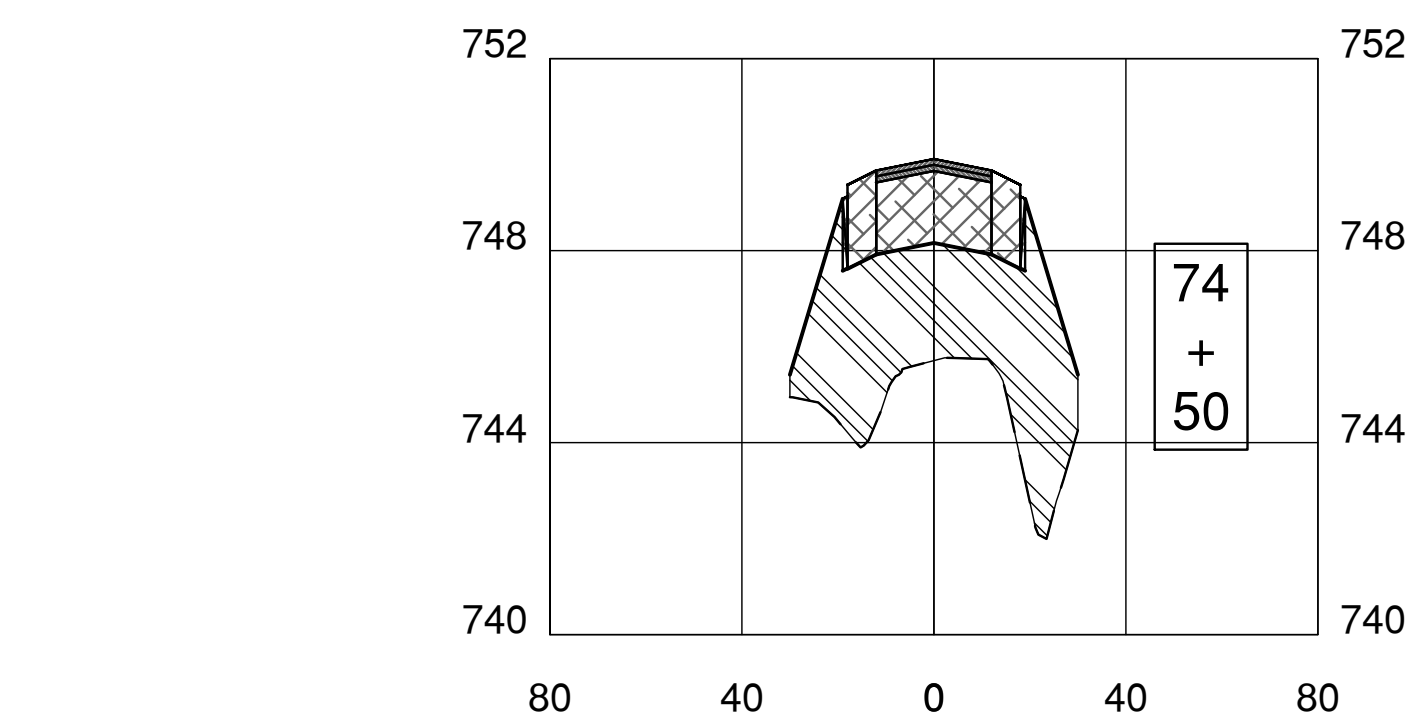
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FILL - TOPSOIL STRIP TO SUBGRADE =	0.0 S.F.	0	0



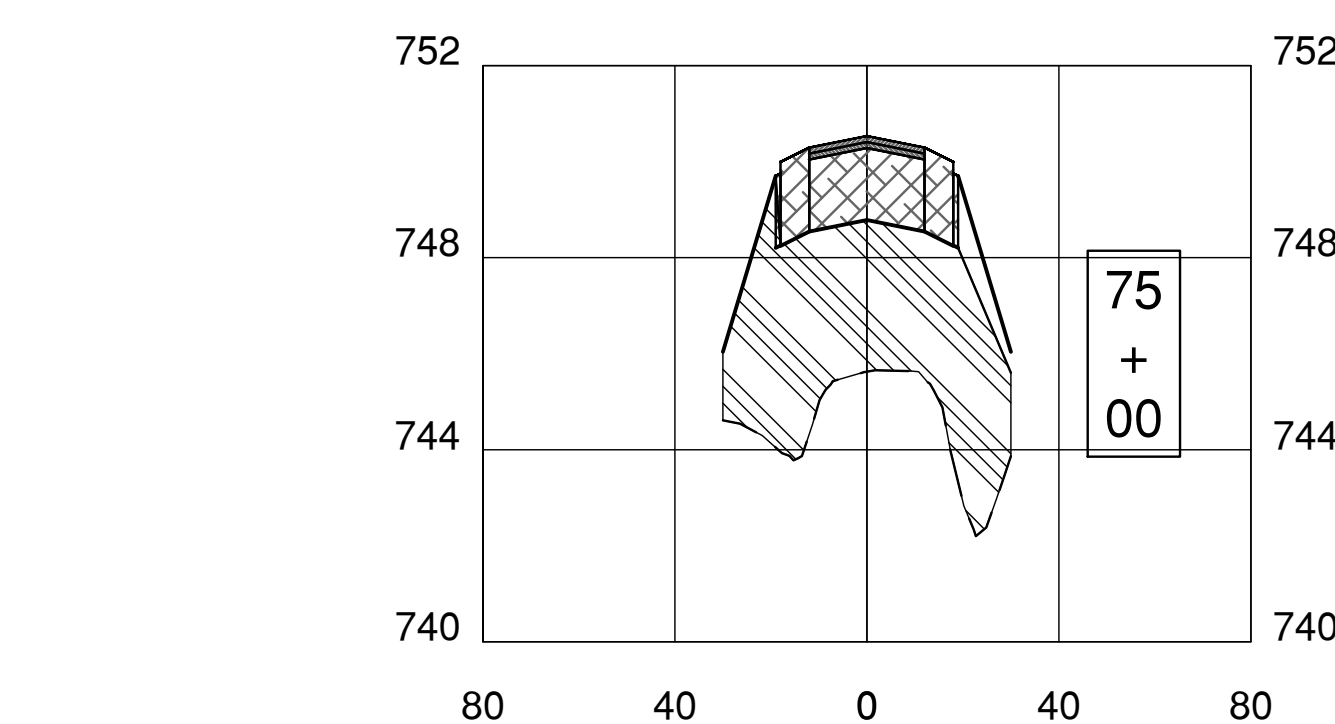
STA 73+50			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
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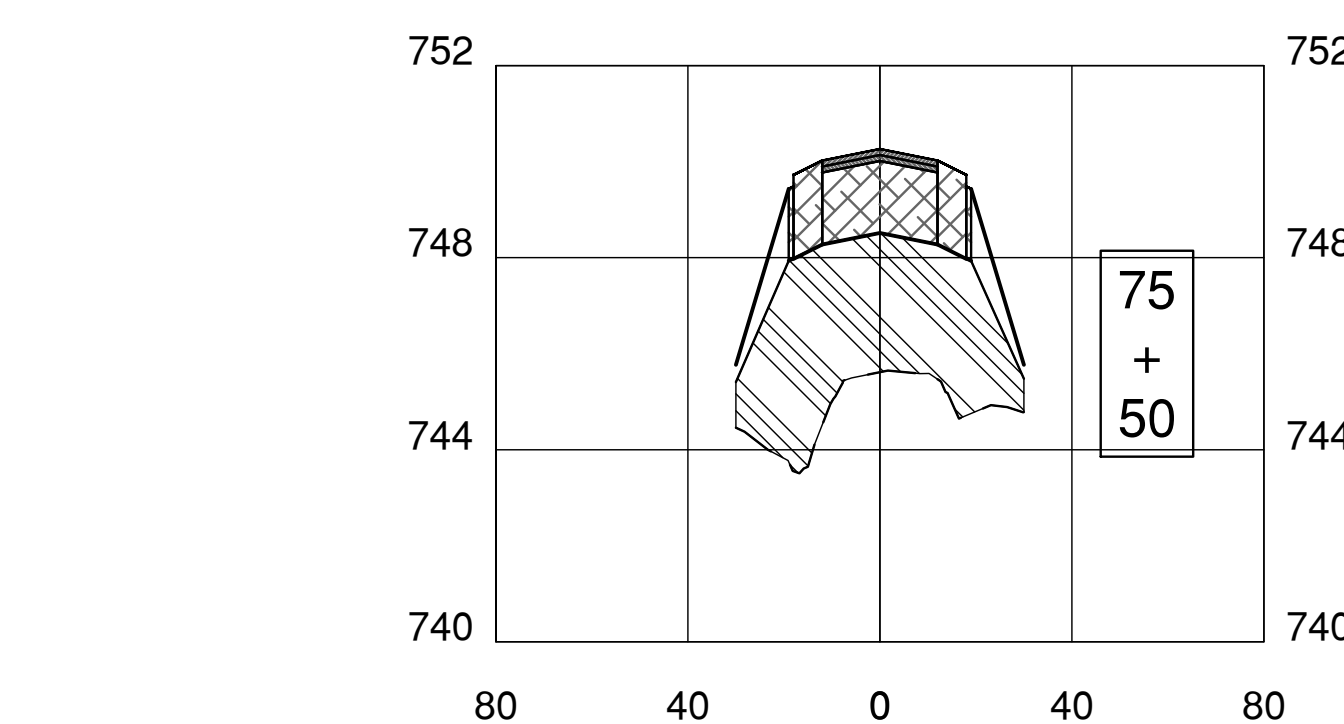
STA 74+00			
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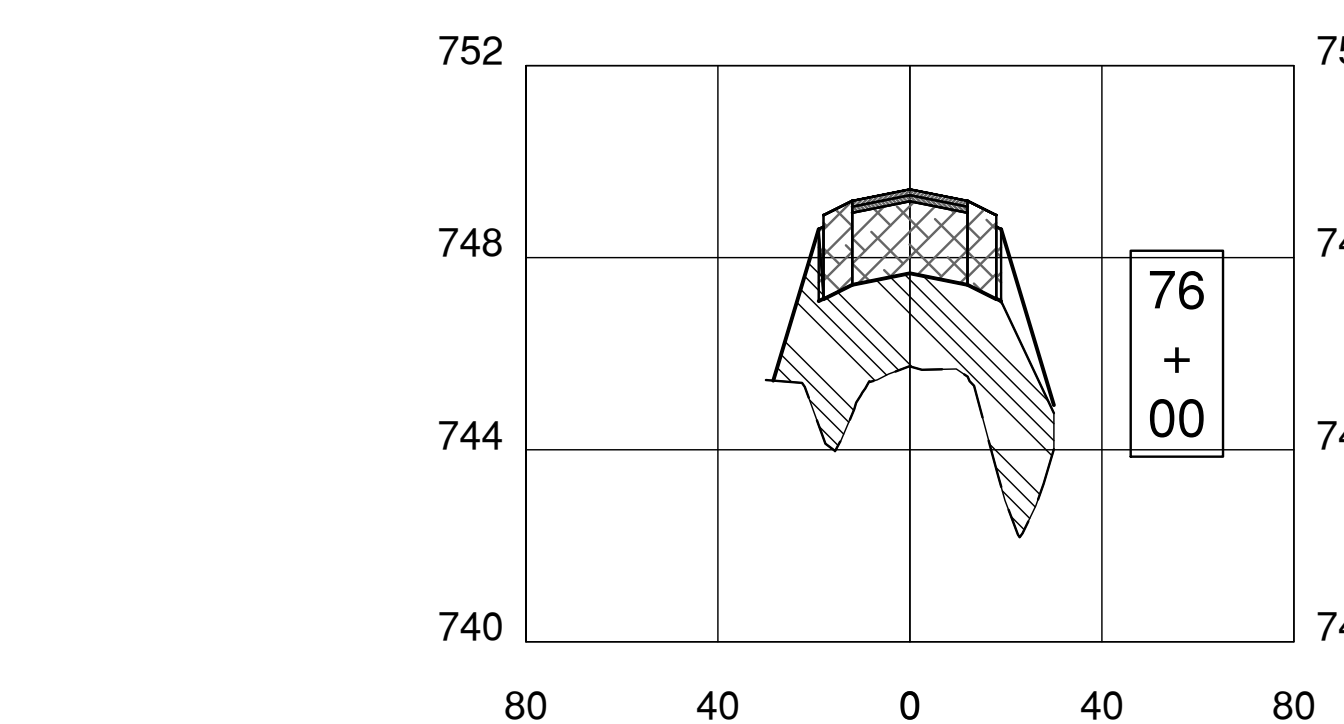
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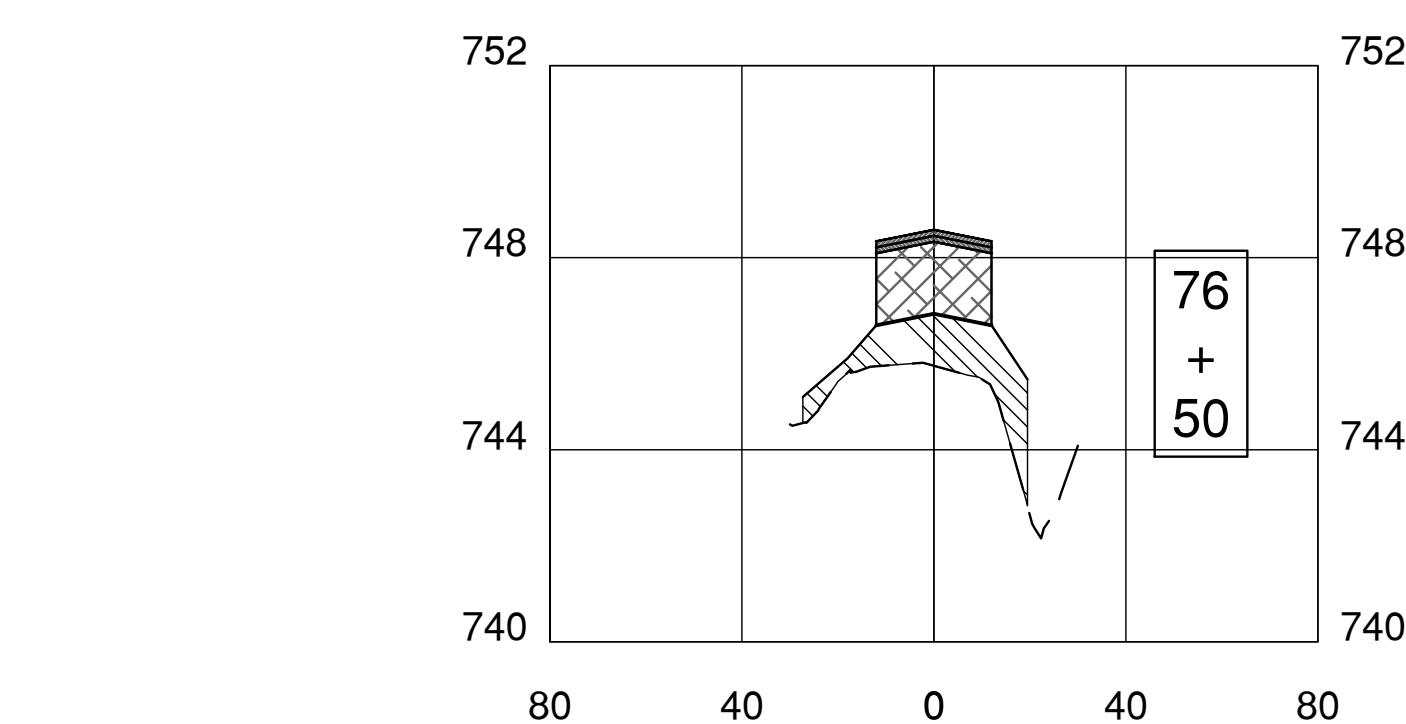
STA 75+00			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
FILL - TOPSOIL STRIP TO SUBGRADE =	217.4 S.F.	372	906



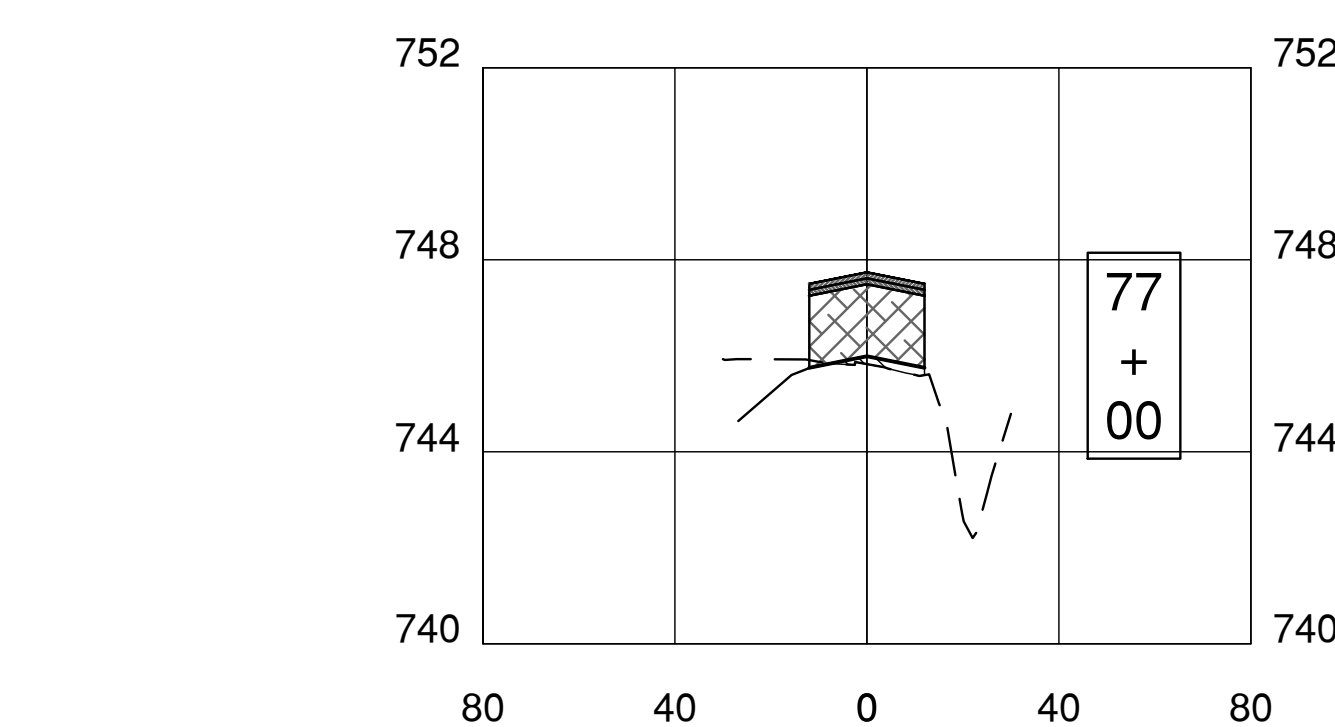
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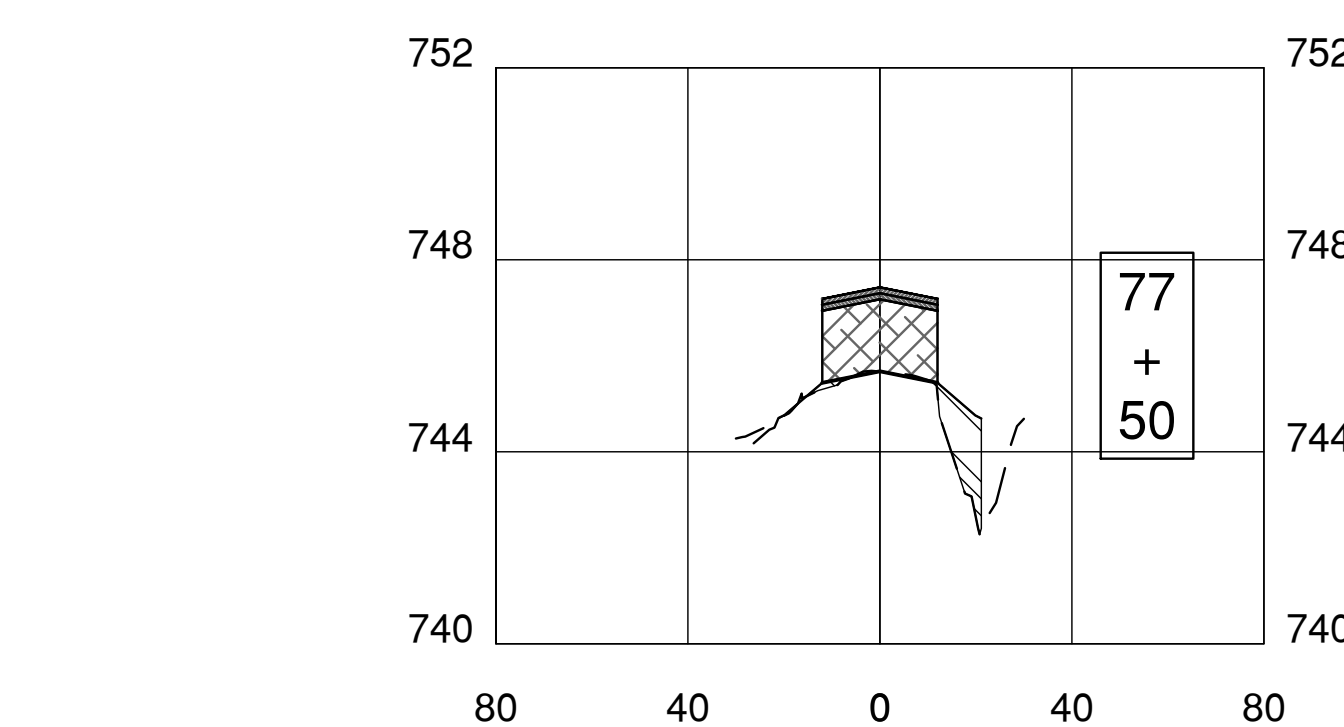
STA 76+00			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
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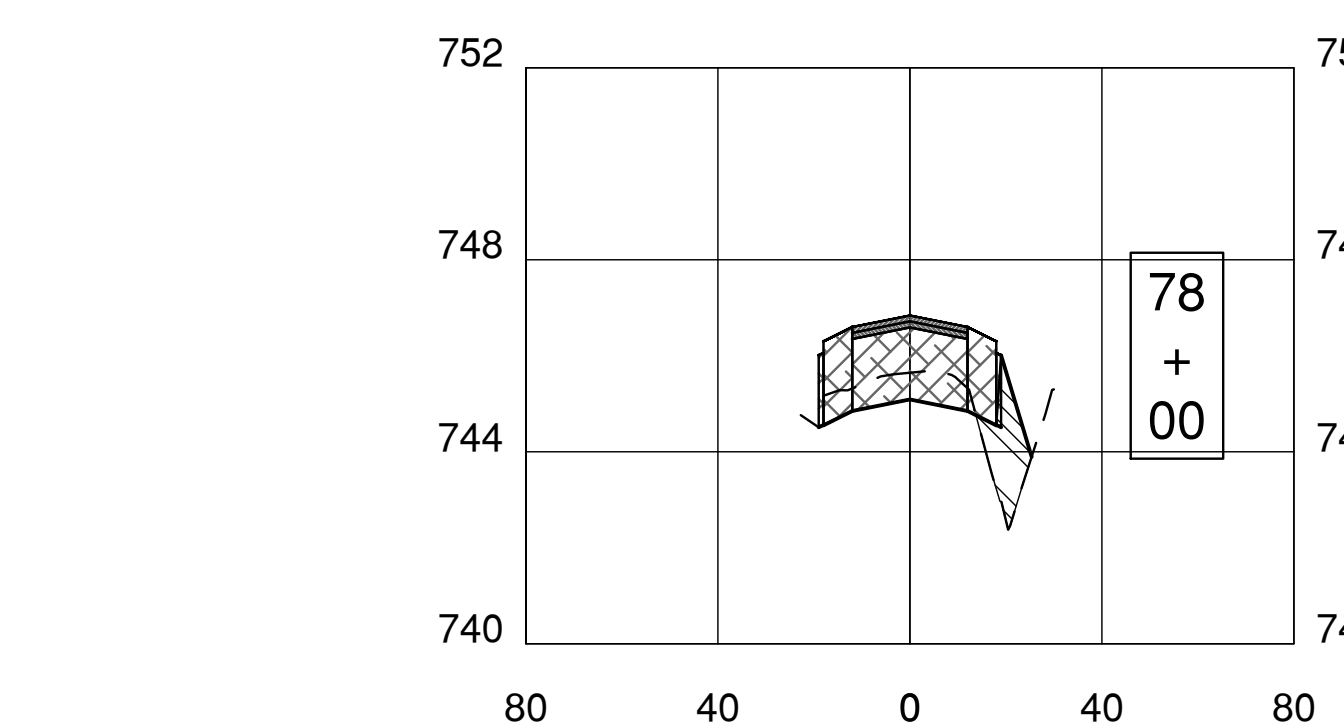
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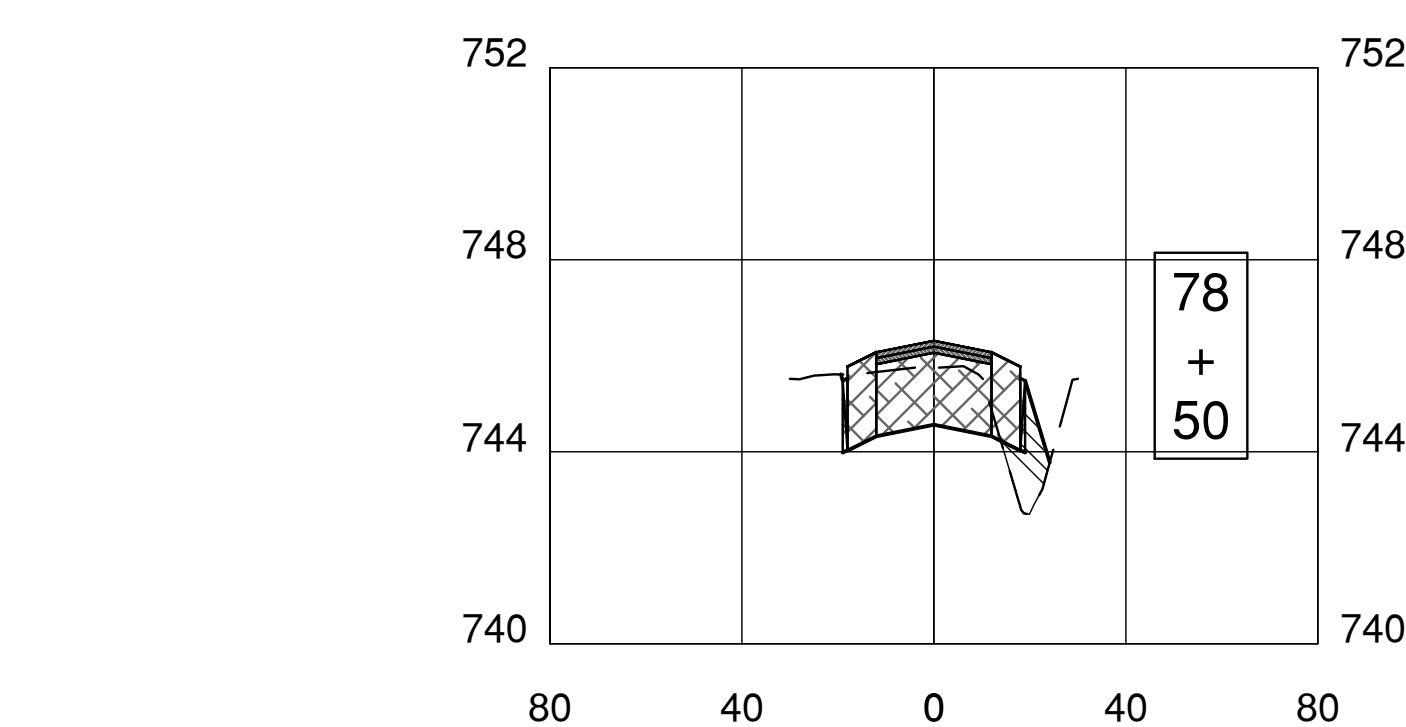
STA 77+00			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
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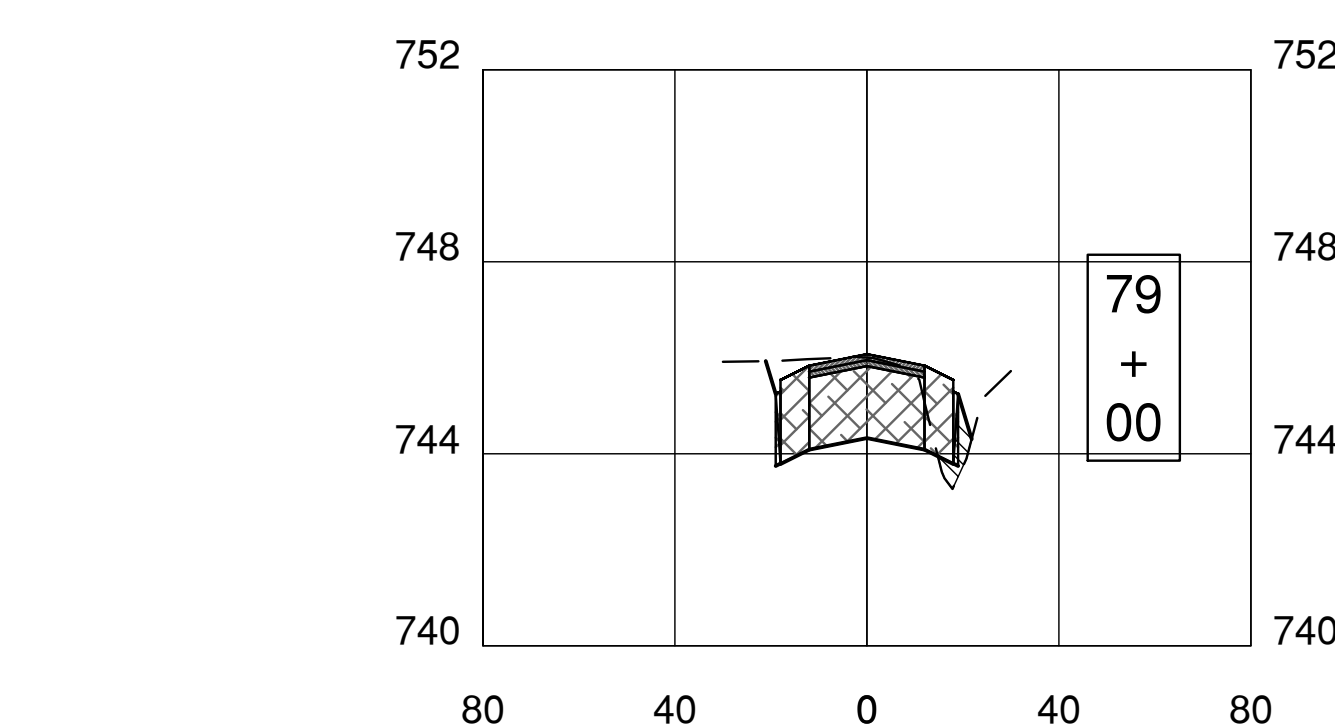
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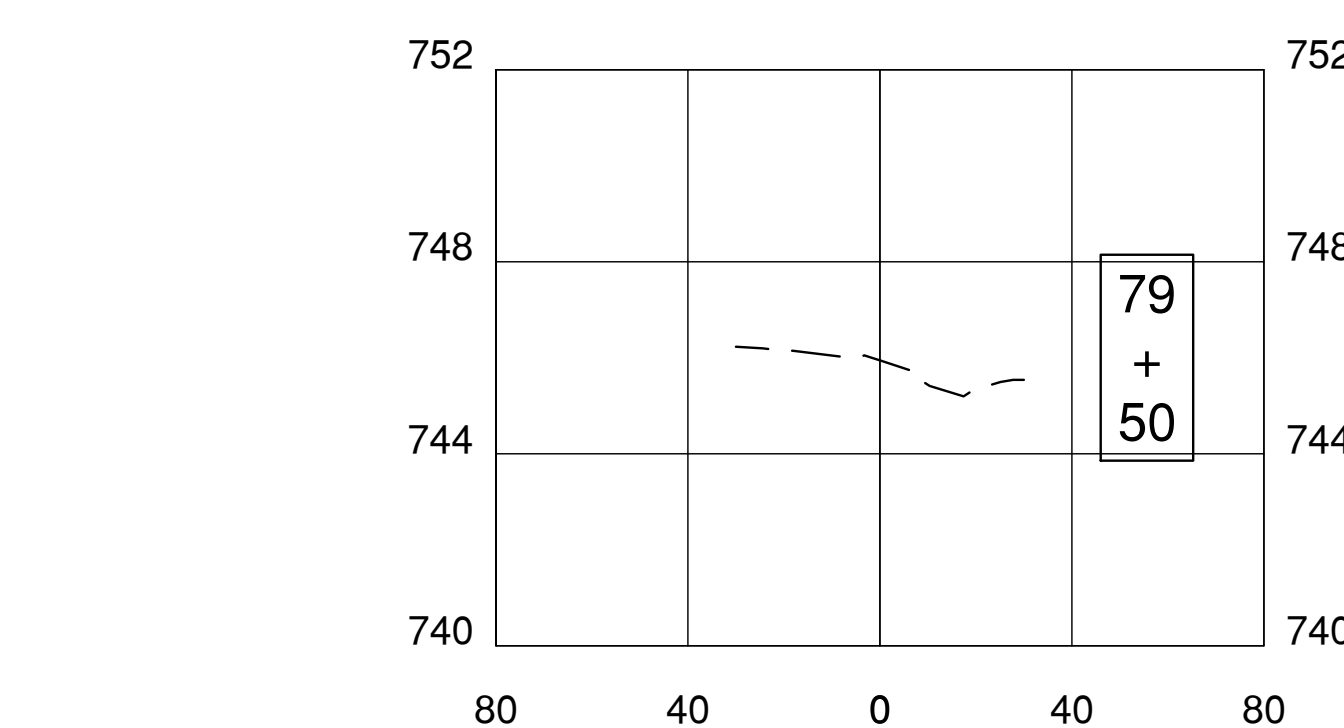
STA 78+00			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
FILL - TOPSOIL STRIP TO SUBGRADE =	17.4 S.F.	29	1,816



STA 78+50			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
FILL - TOPSOIL STRIP TO SUBGRADE =	12.3 S.F.	28	1,844



STA 79+00			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
FILL - TOPSOIL STRIP TO SUBGRADE =	4.9 S.F.	16	1,860



STA 79+50			
MATERIAL	AREA	INCR VOLUME	CUM VOLUME
FILL - TOPSOIL STRIP TO SUBGRADE =	0.0 S.F.	5	1,864

Thursday, August 16, 2018 12:29:47 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

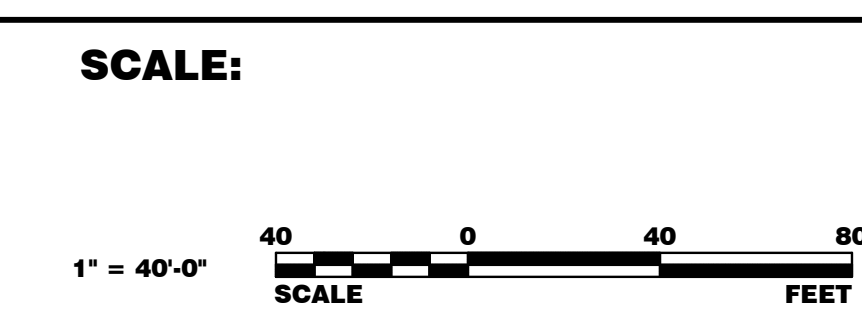
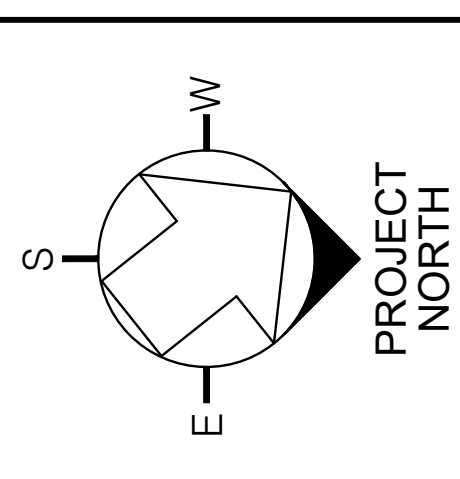
TGRWA
TyRk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

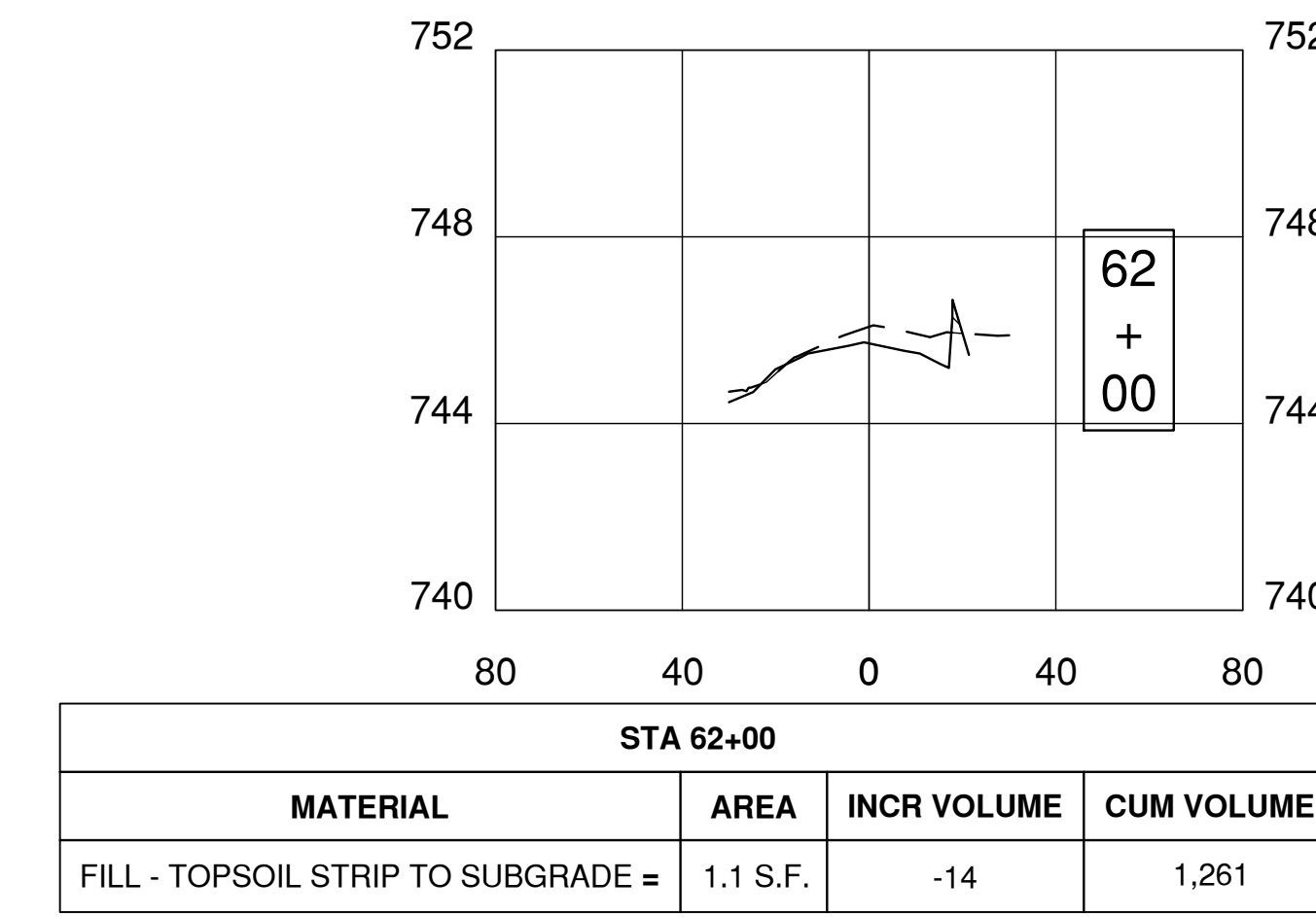
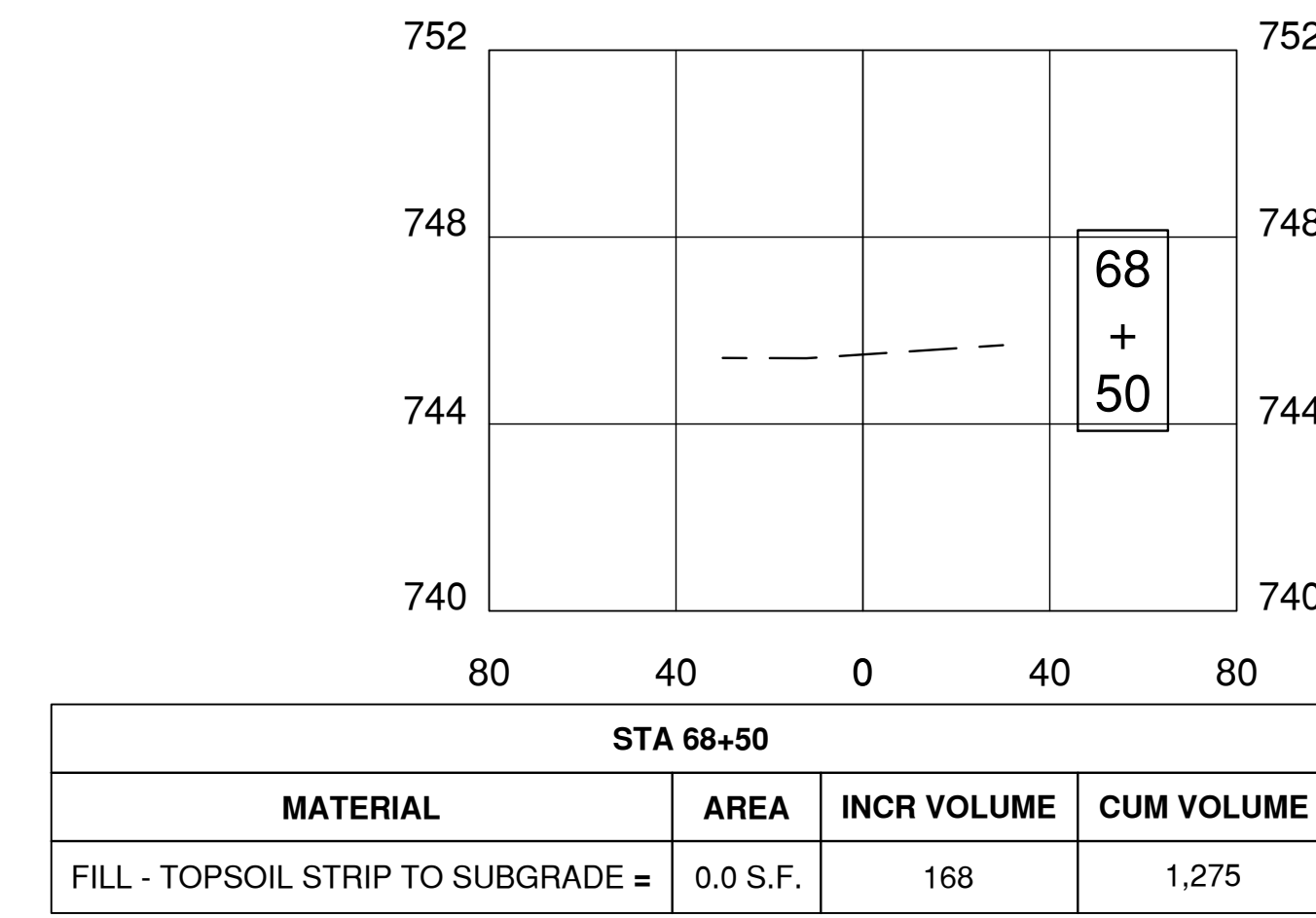
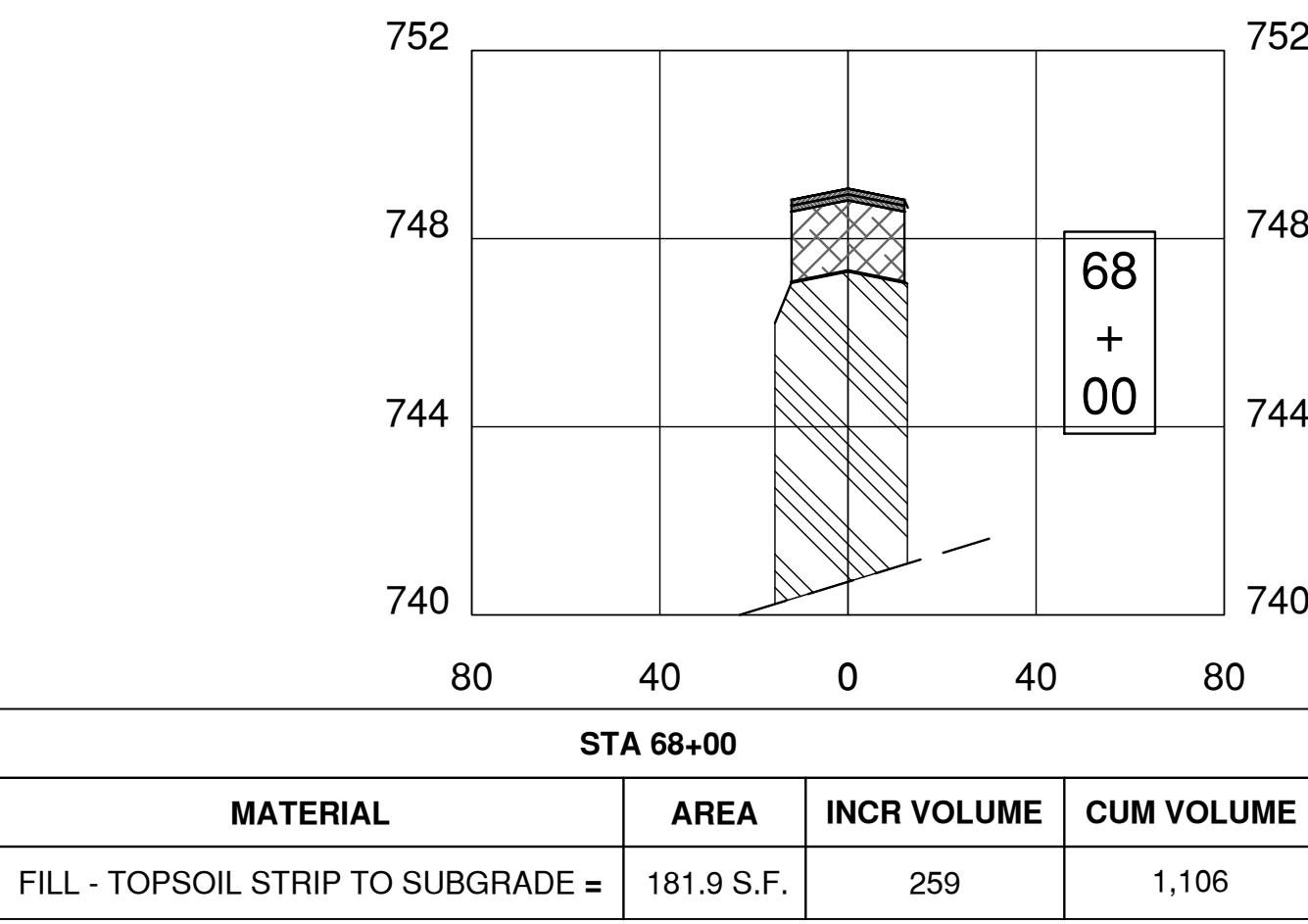
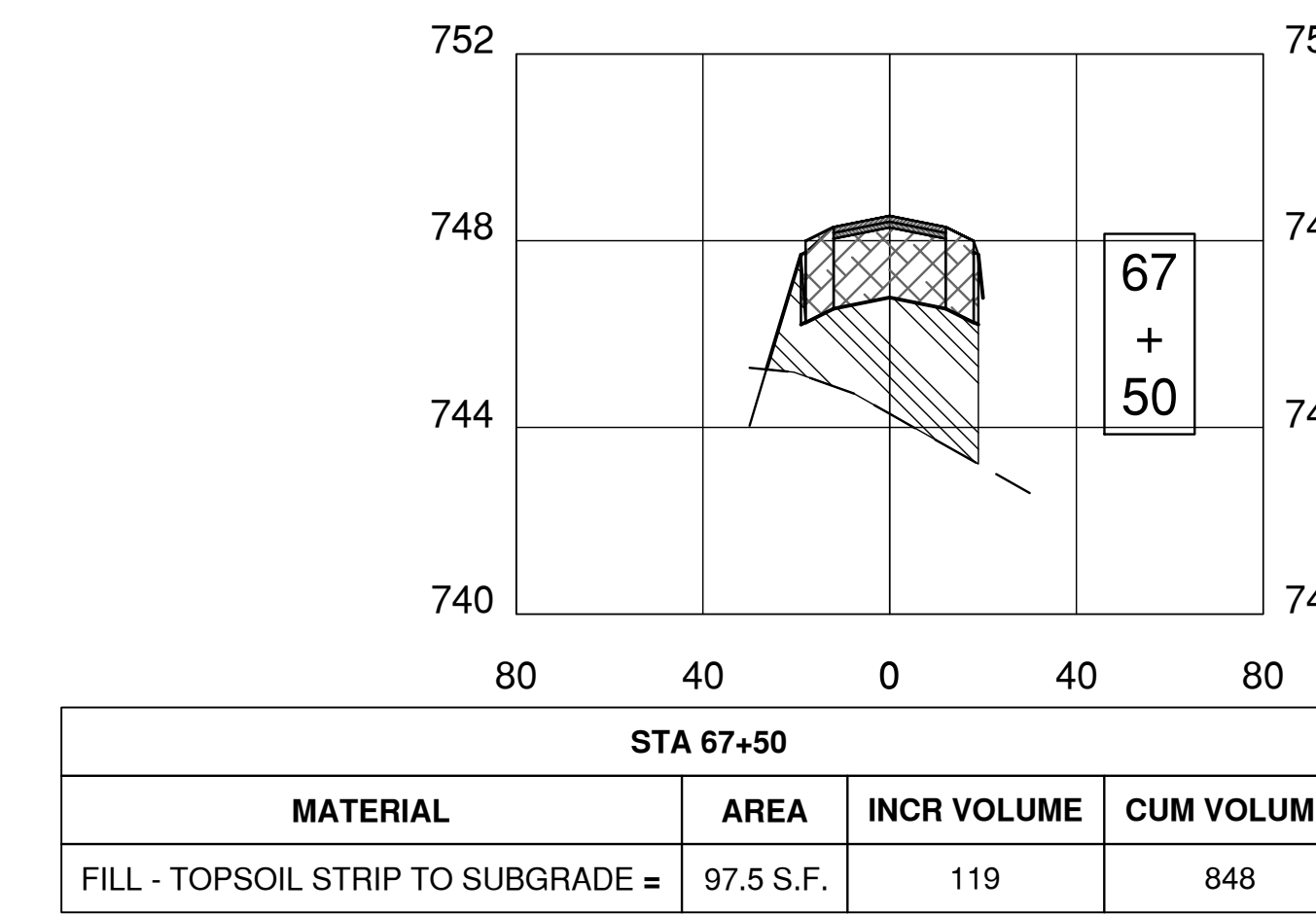
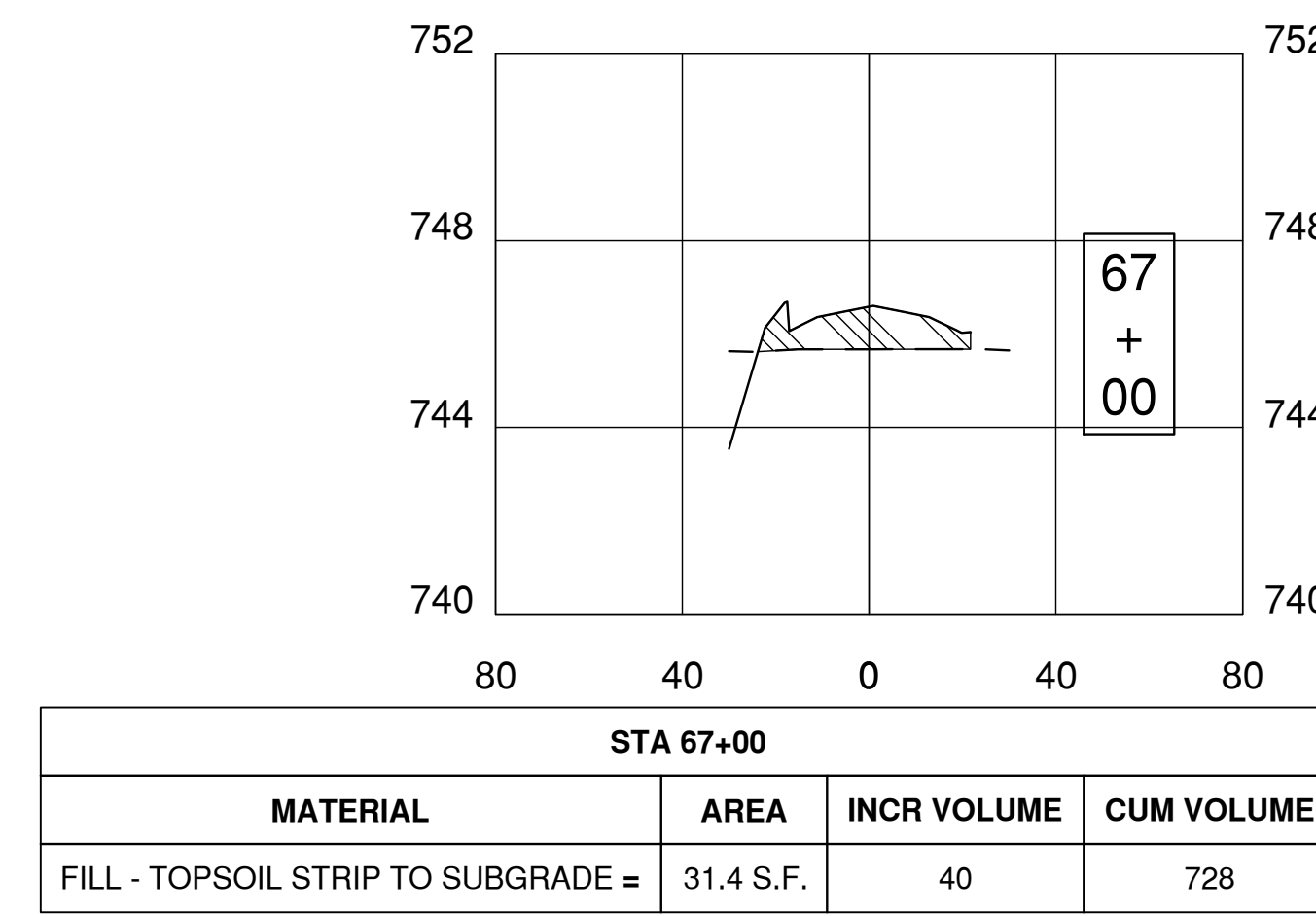
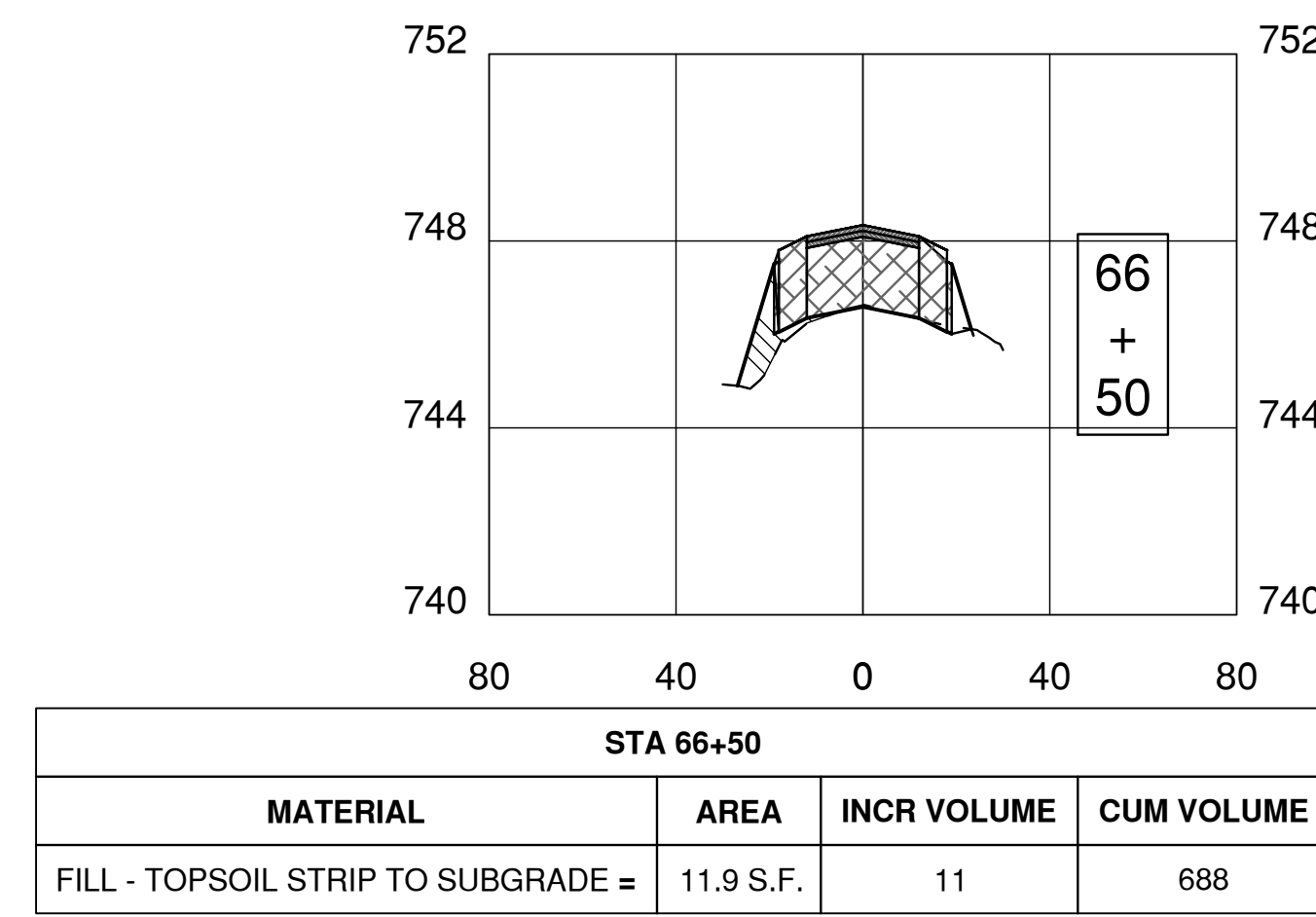
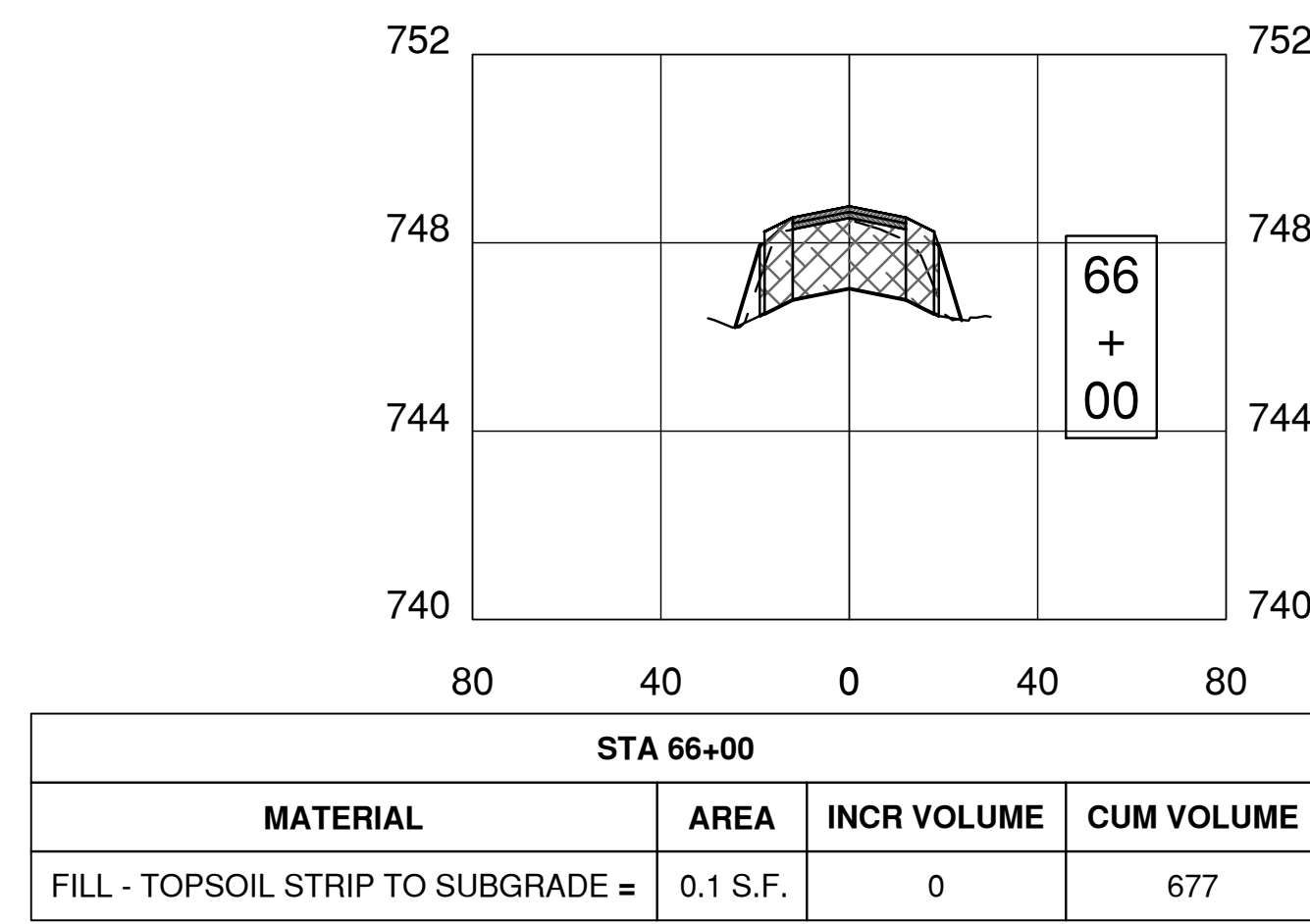
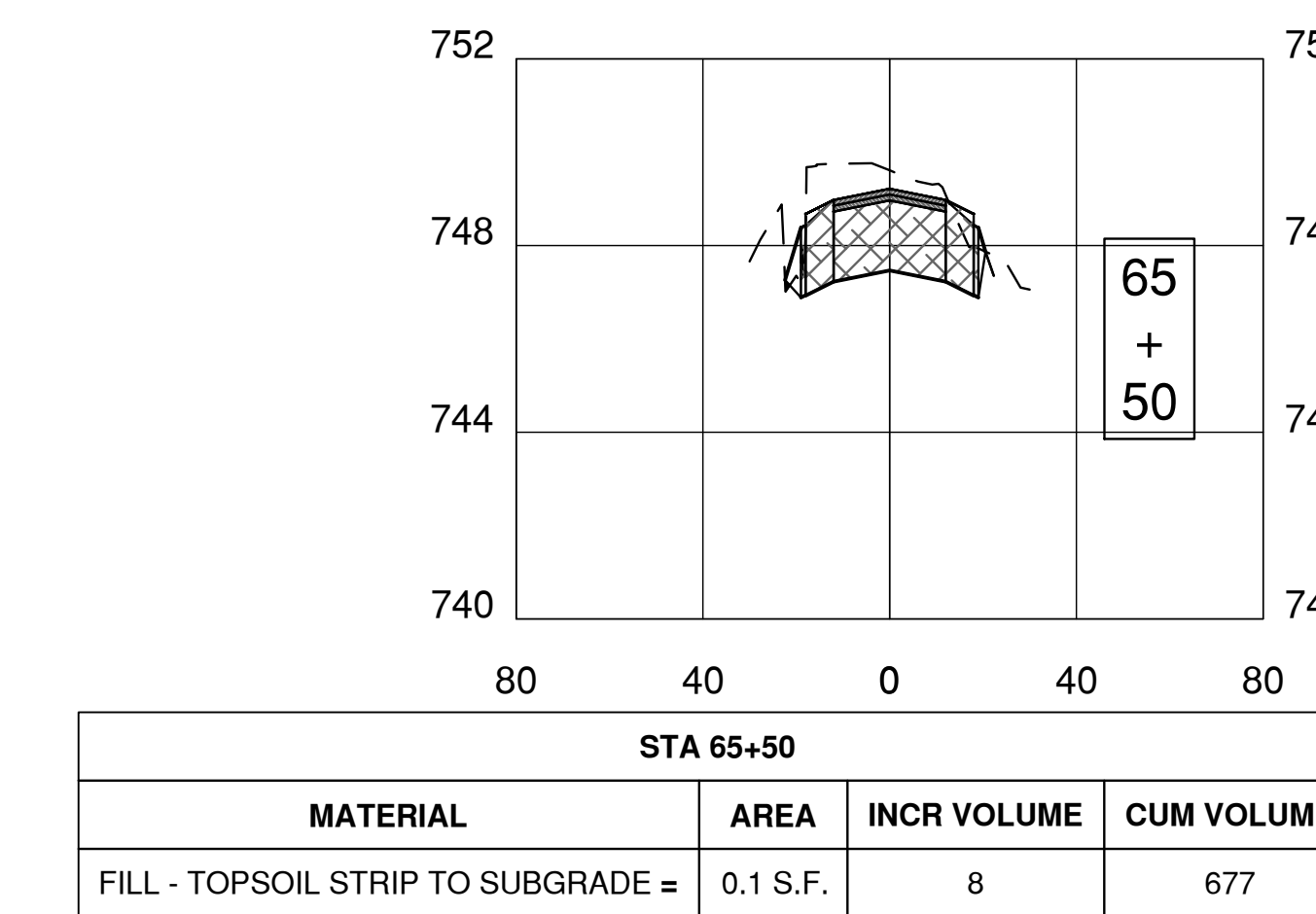
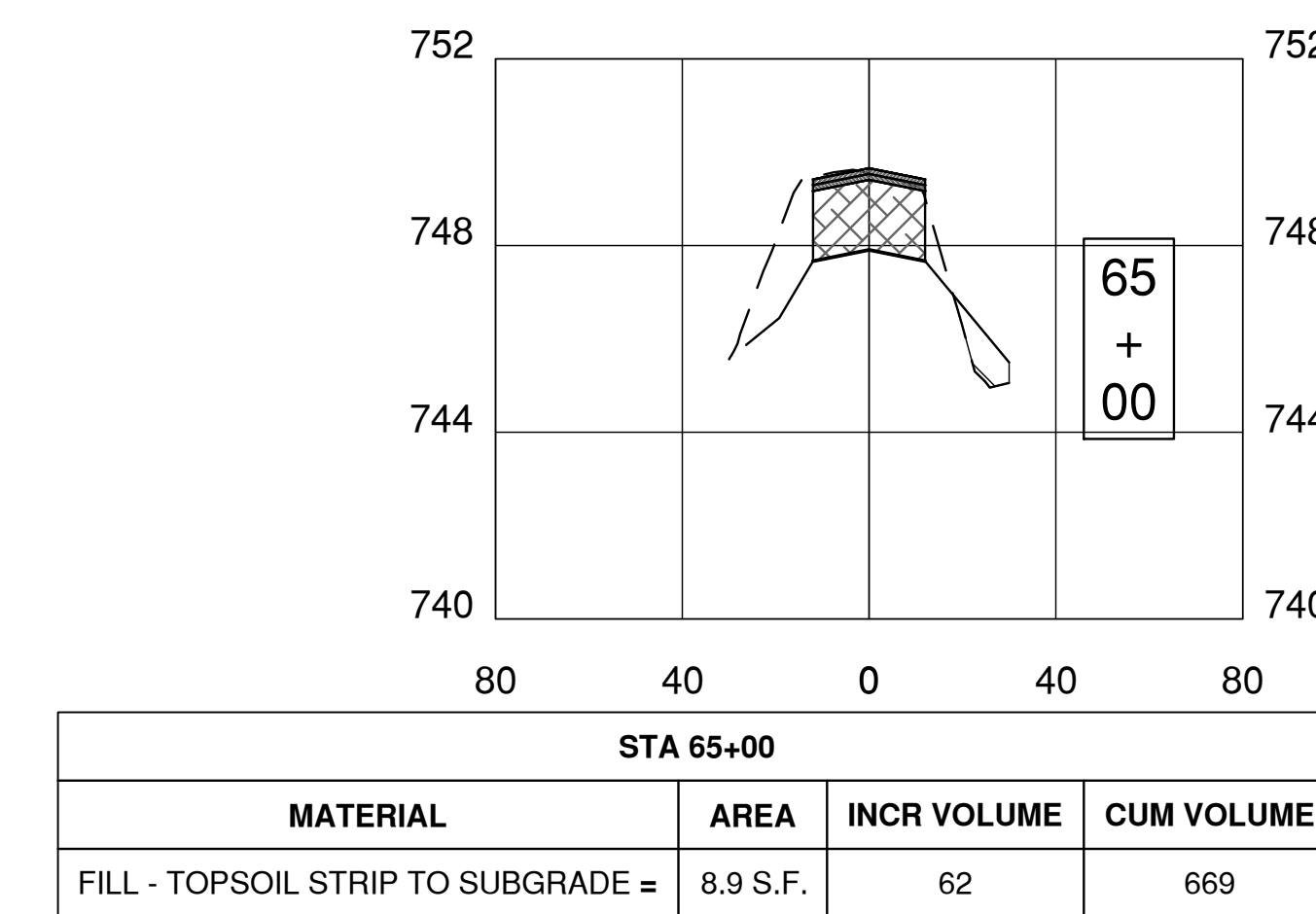
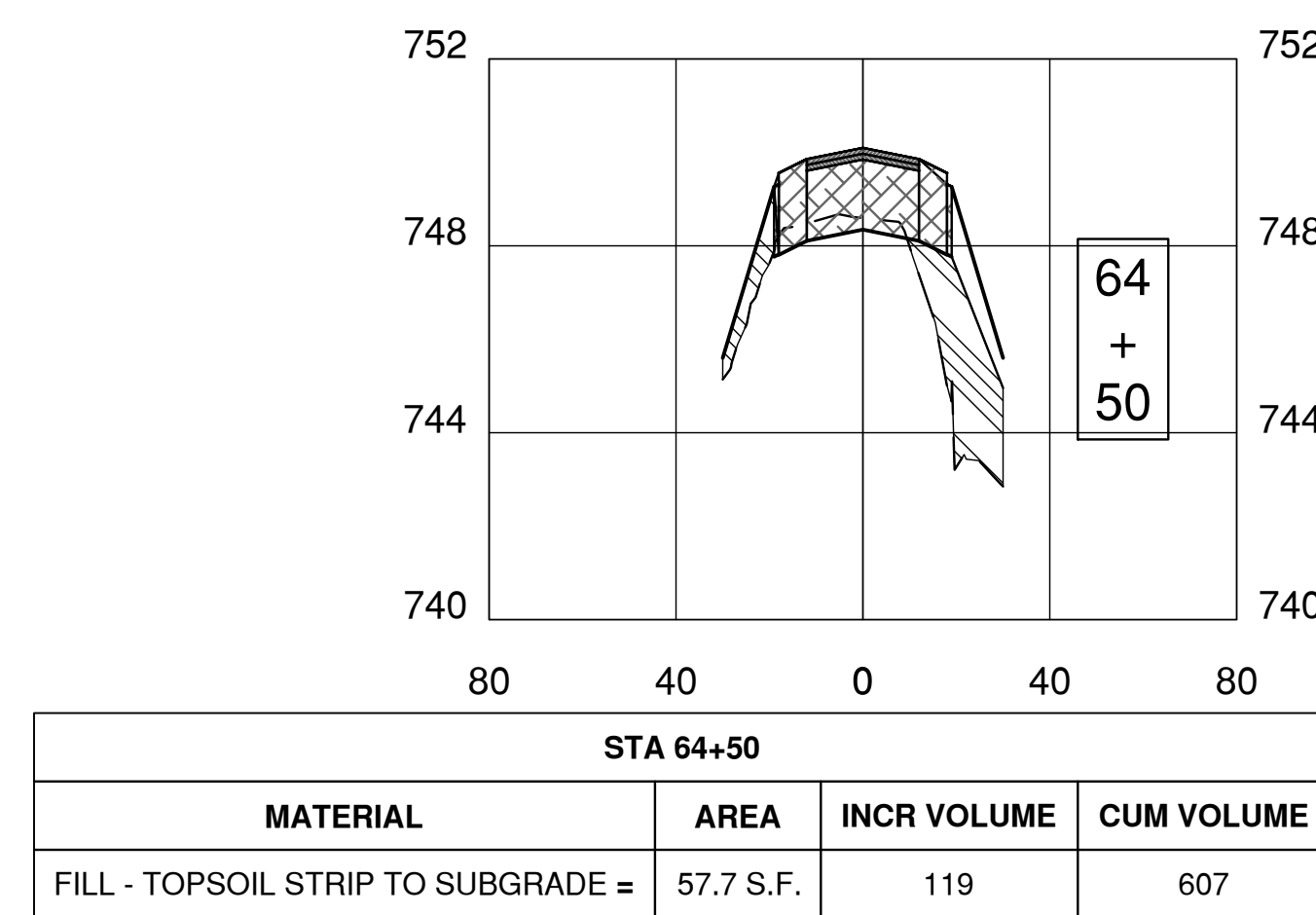
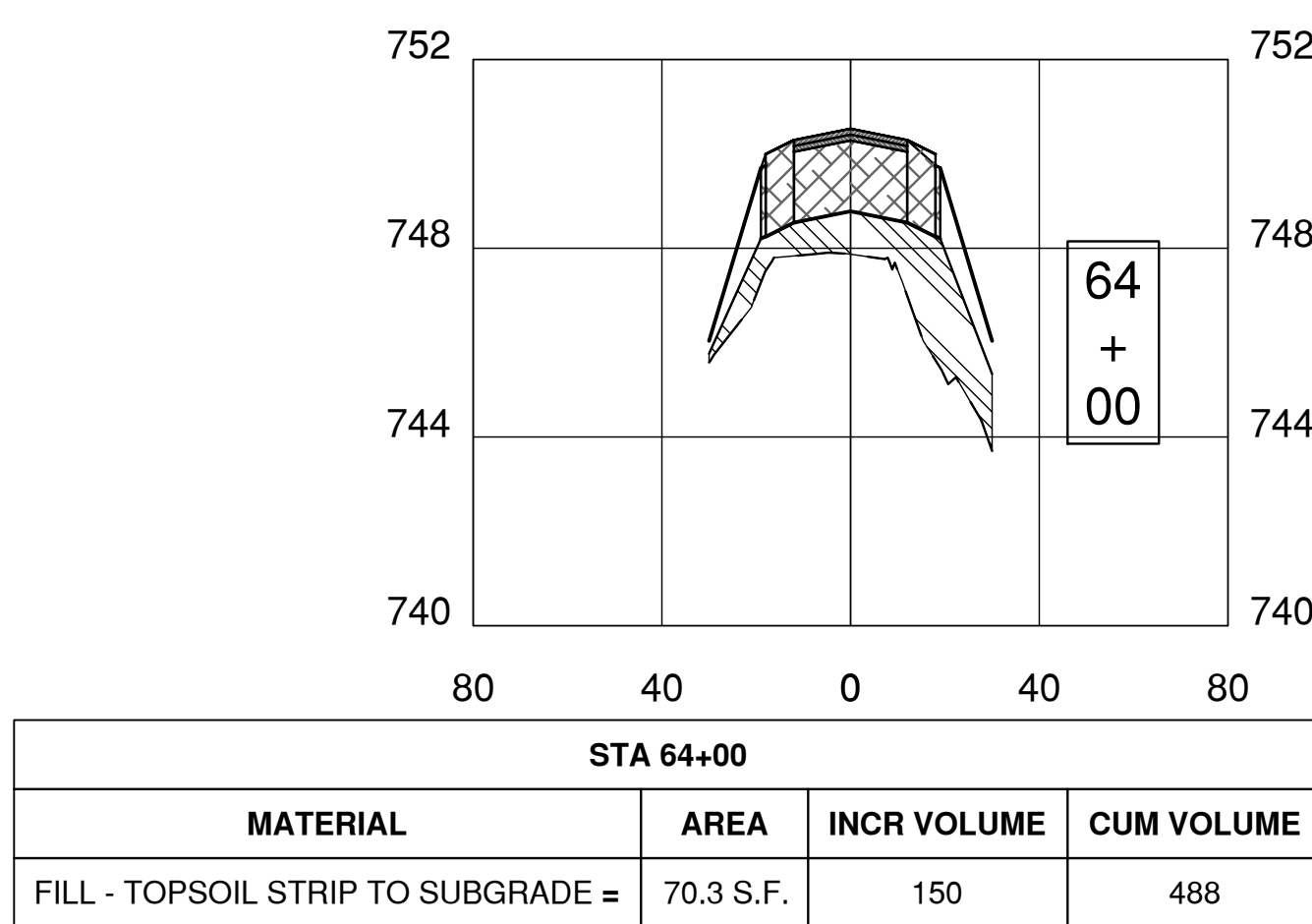
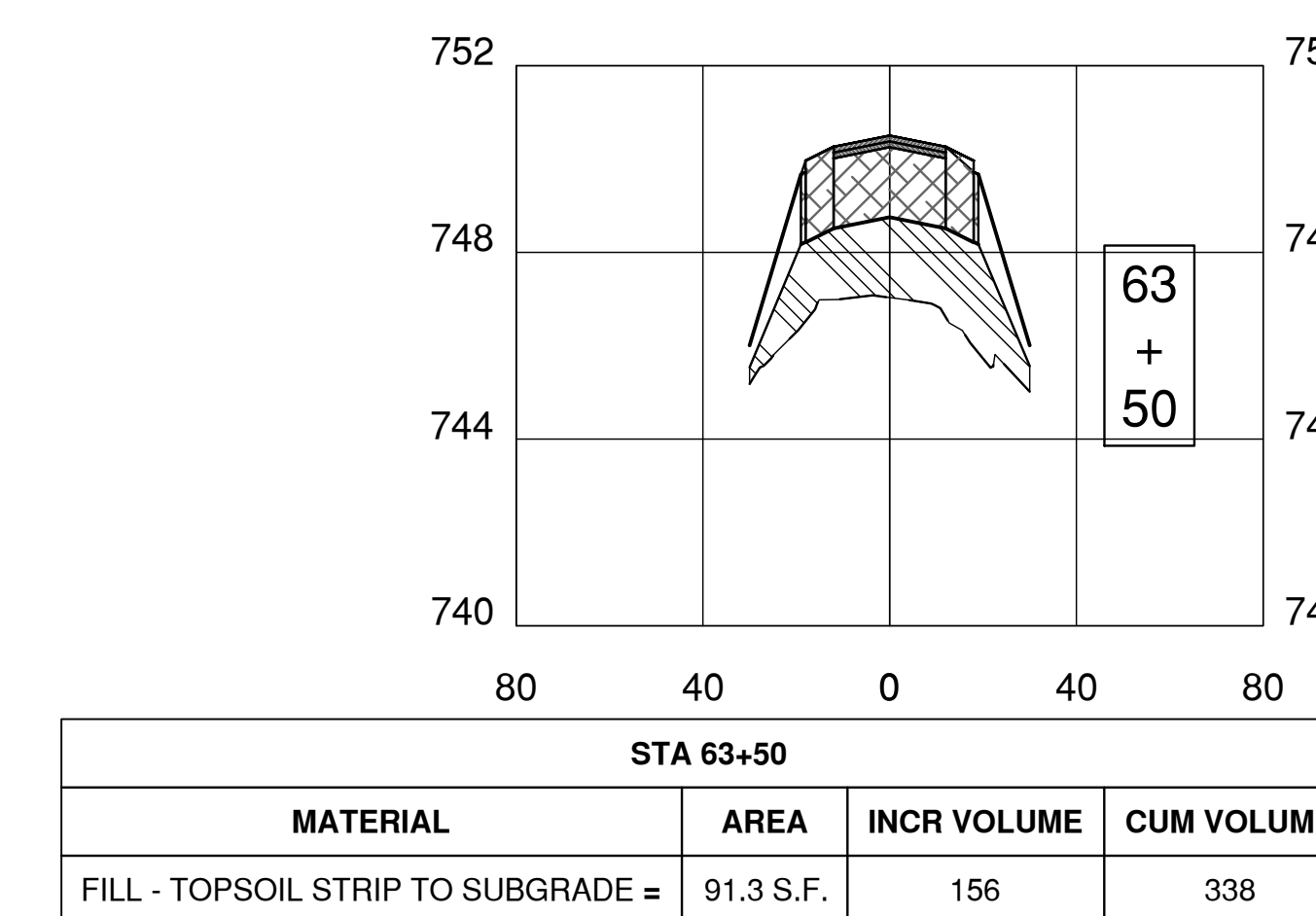
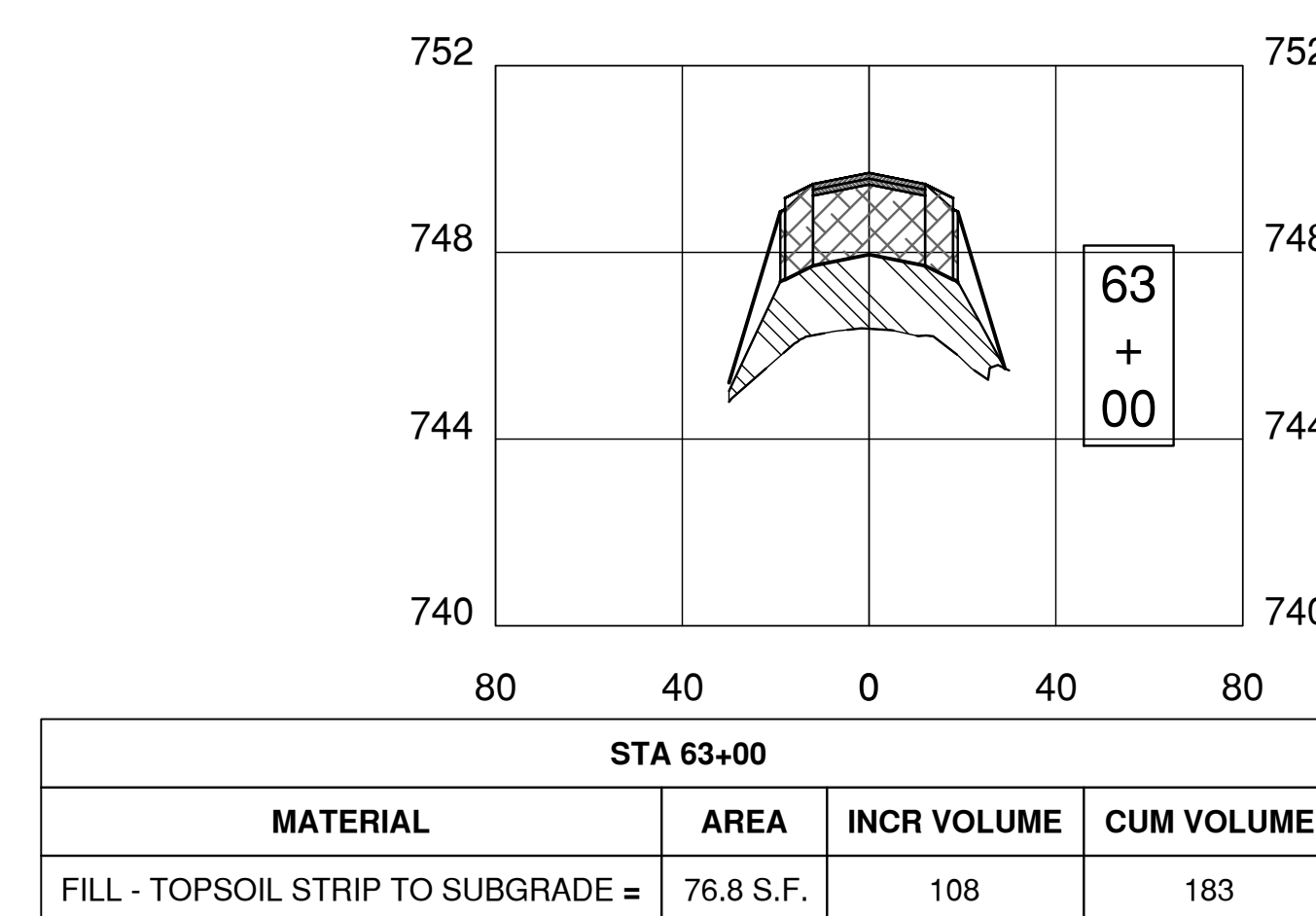
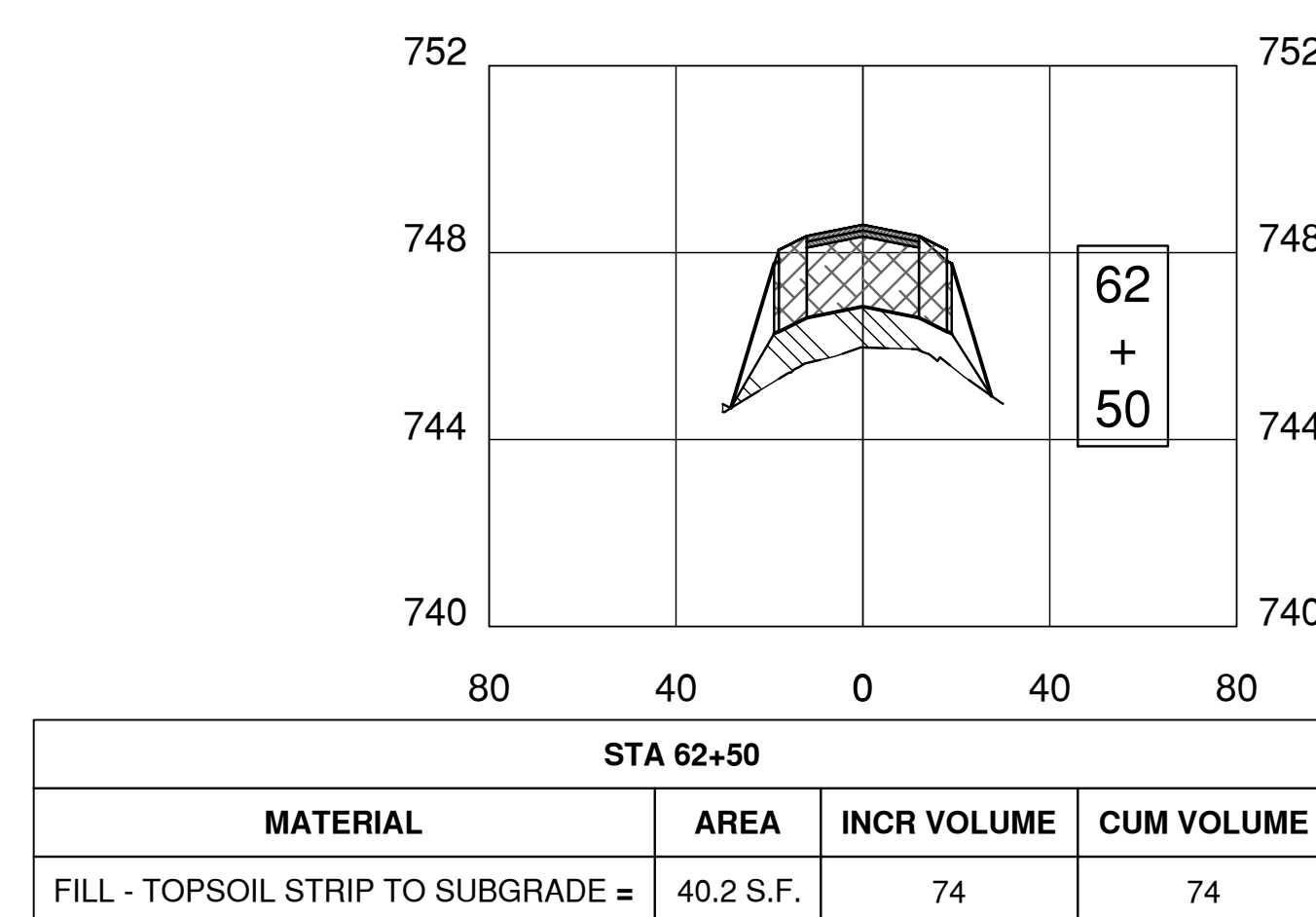
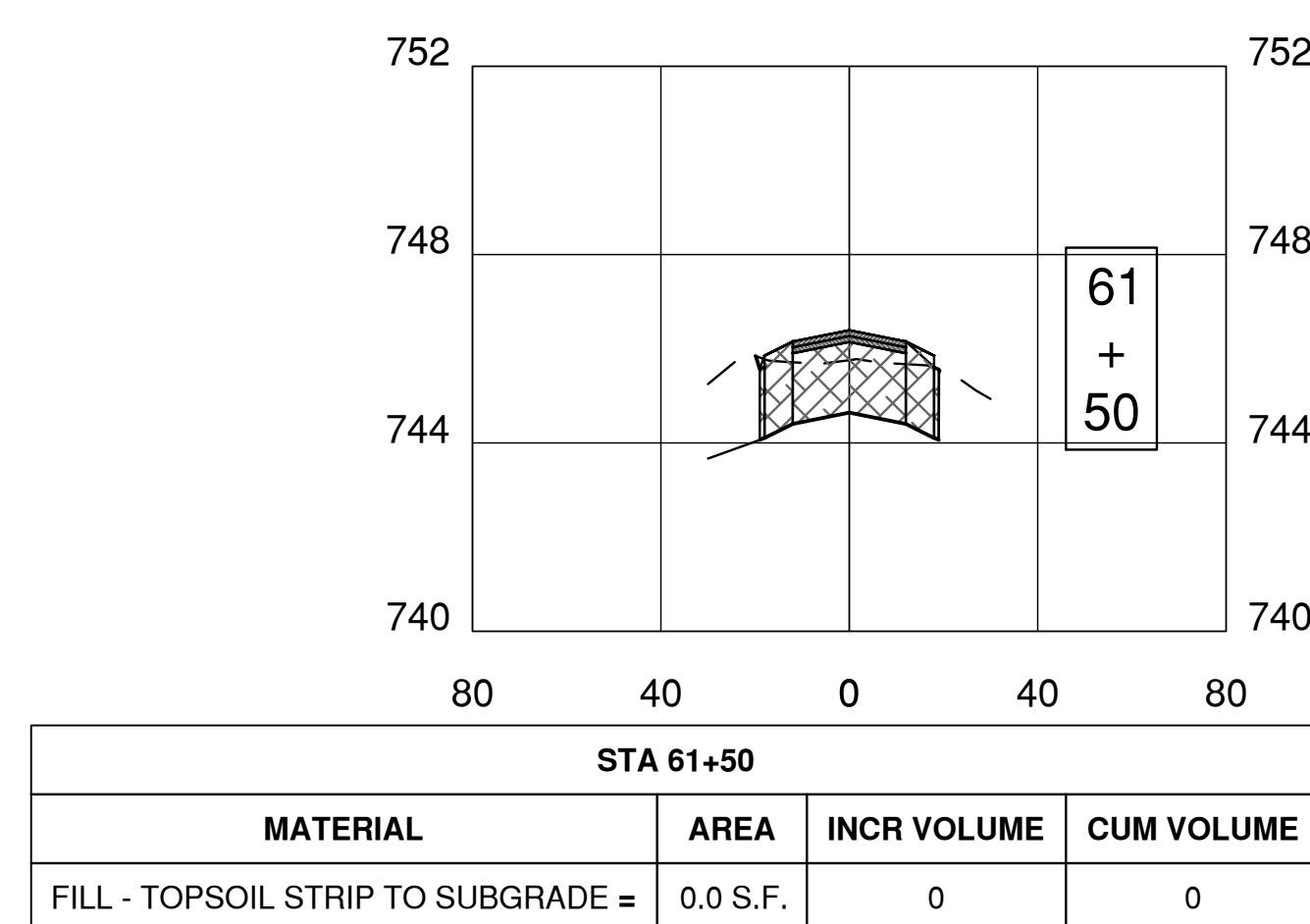
Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
MAIN RING ROAD CROSS SECTIONS
DRAWING NO. **4-3-2** **C-22** REV. **0**

08-16-2018



Thursday, August 16, 2018 12:26:31 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

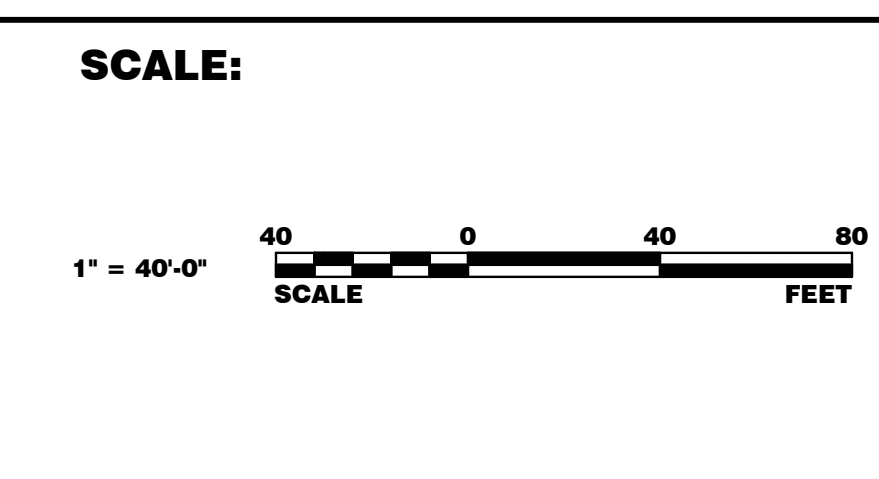
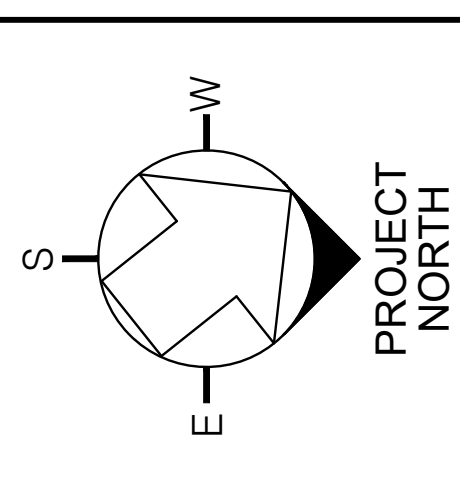
TGRWA
TyRk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

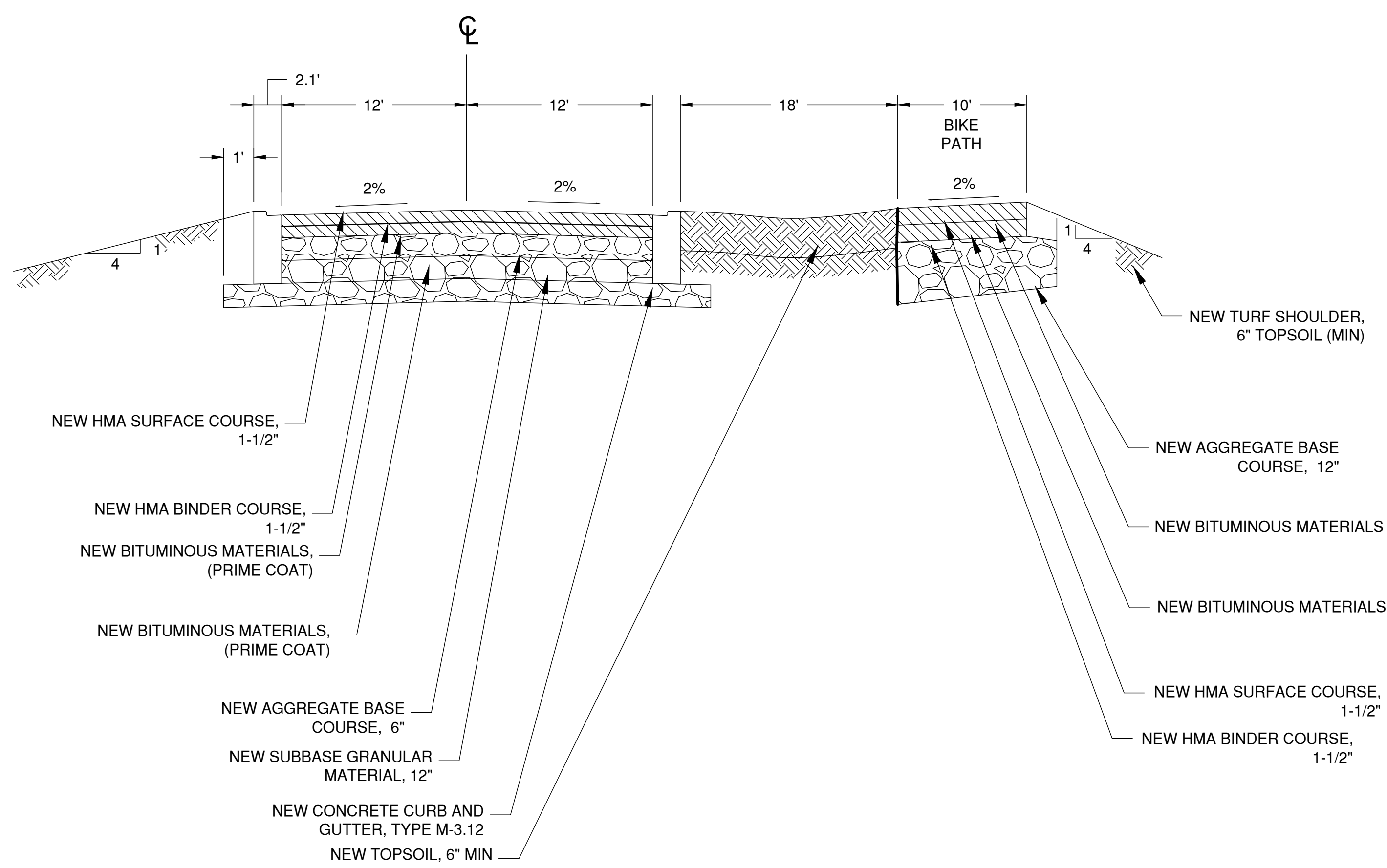
Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



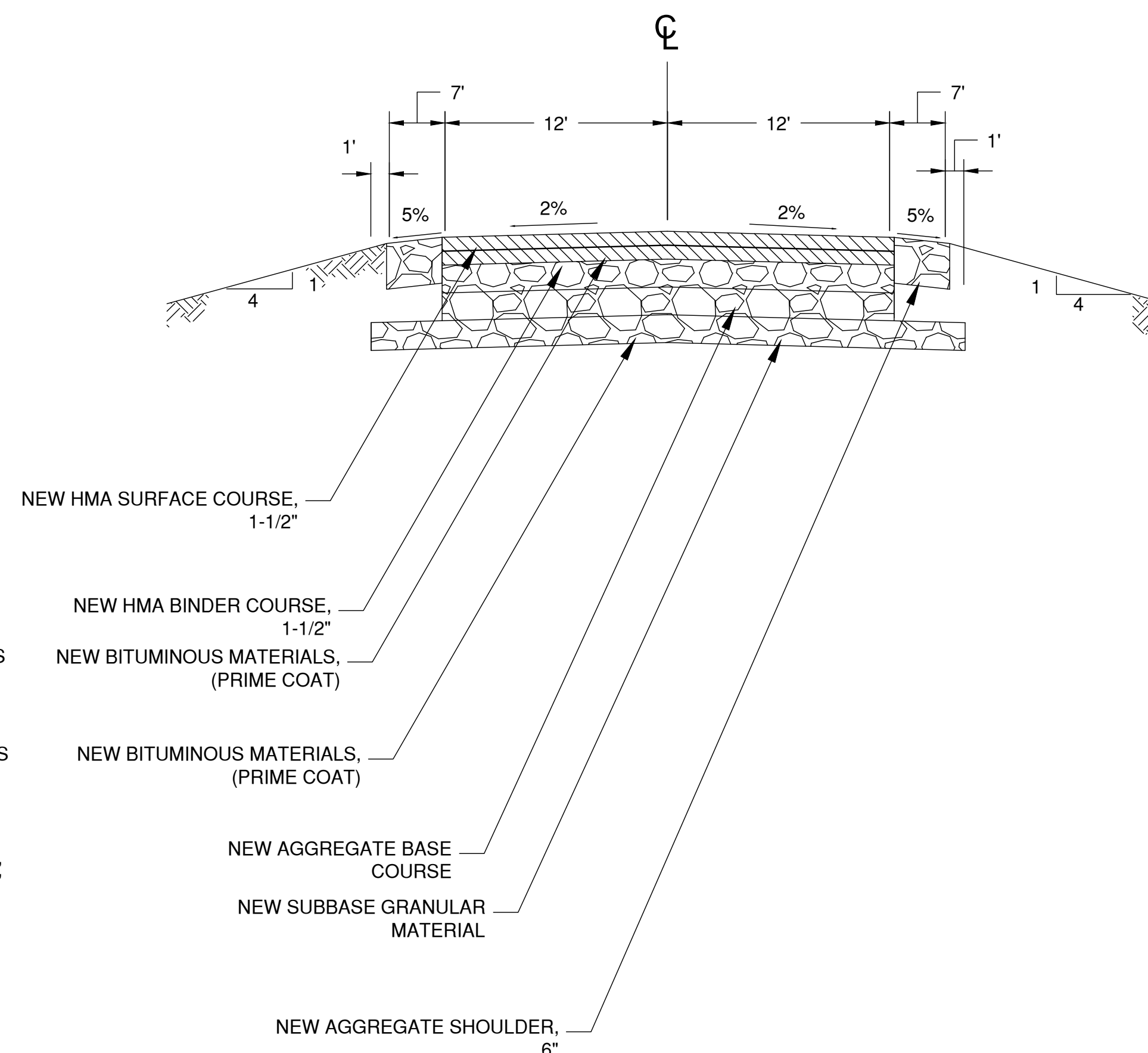
FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW SOUTH BOOSTER ROAD CROSS SECTION
DRAWING NO. **4-3-2** **C-23** REV. 1

08-17-2018



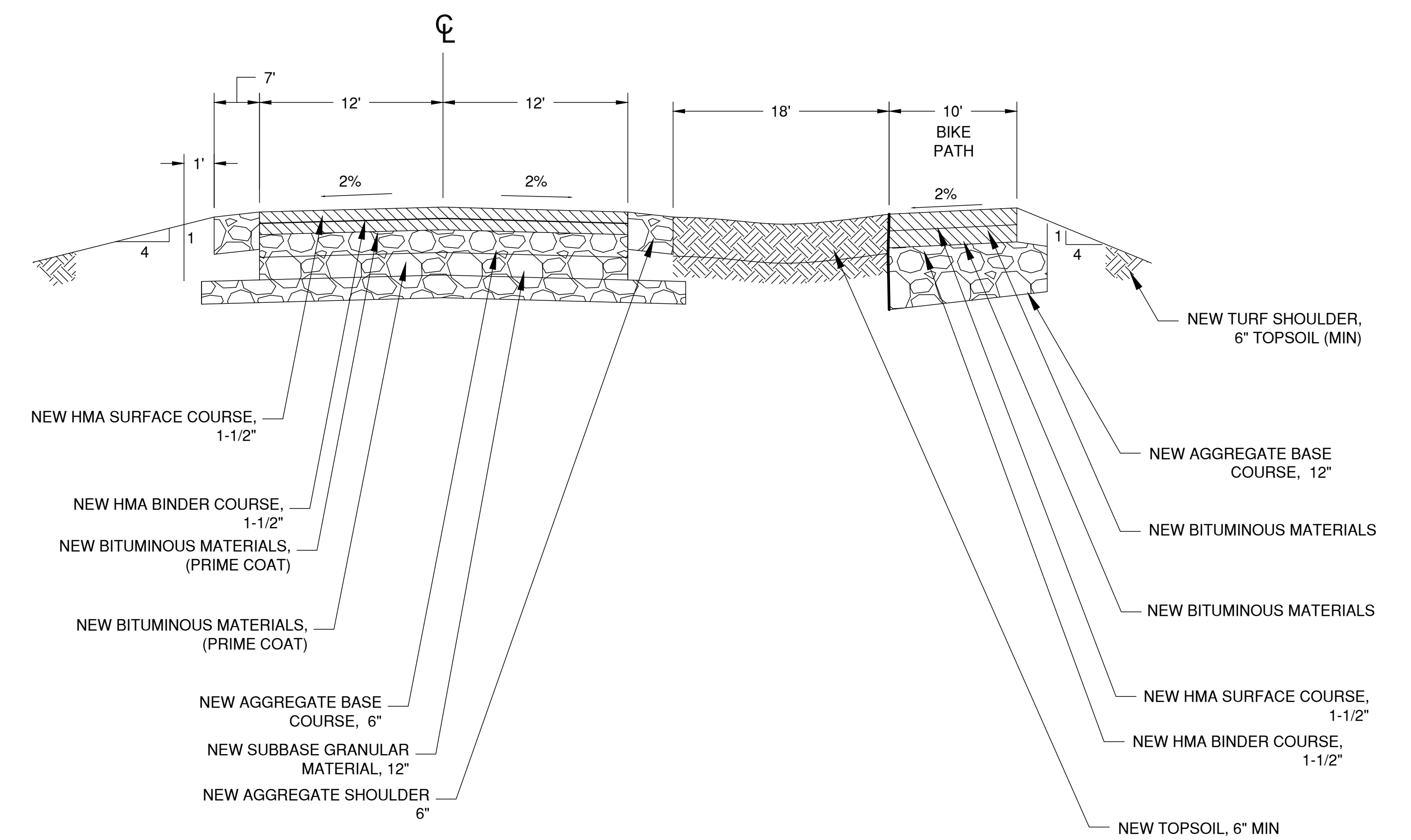
**SECTION WITH CURB AND GUTTER
PIP II CAMPUS ROAD
BOOSTER SOUTH ENTRANCE
NORTH ENTRANCE ROAD
NEW PAVEMENT SECTION**

NO SCALE



**MAIN RING ROAD
BOOSTER SOUTH ENTRANCE
NORTH ENTRANCE ROAD
NEW PAVEMENT SECTION**

NO SCALE



**SECTION WITHOUT CURB
AND GUTTER**

NO SCALE

Thursday, August 16, 2018 12:16:11 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

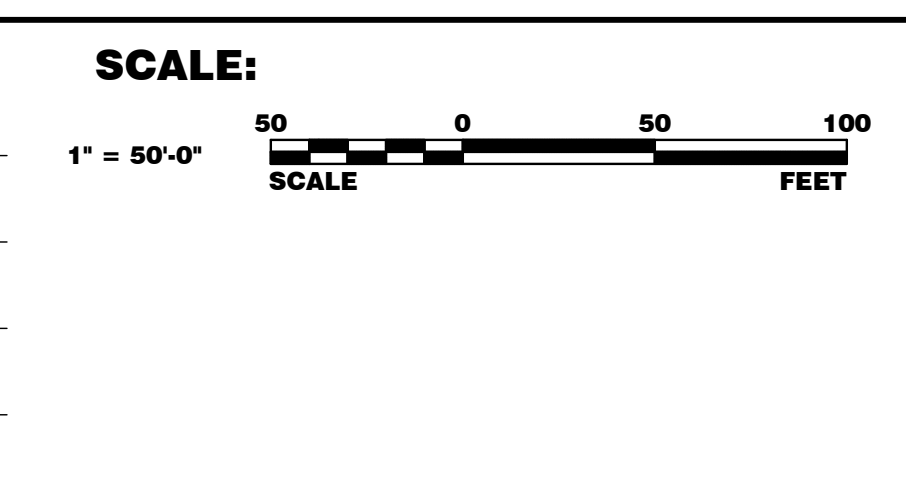
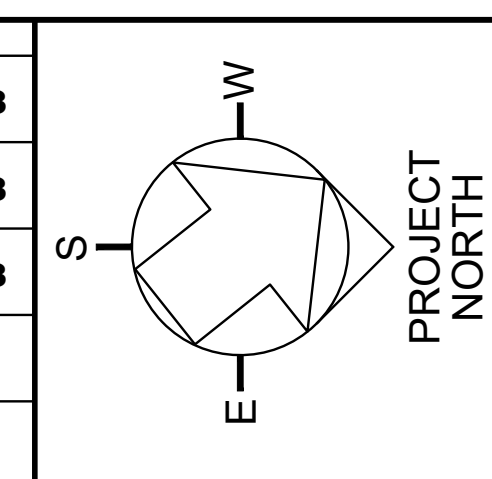
TGRWA
Tyk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
800 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warrenville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

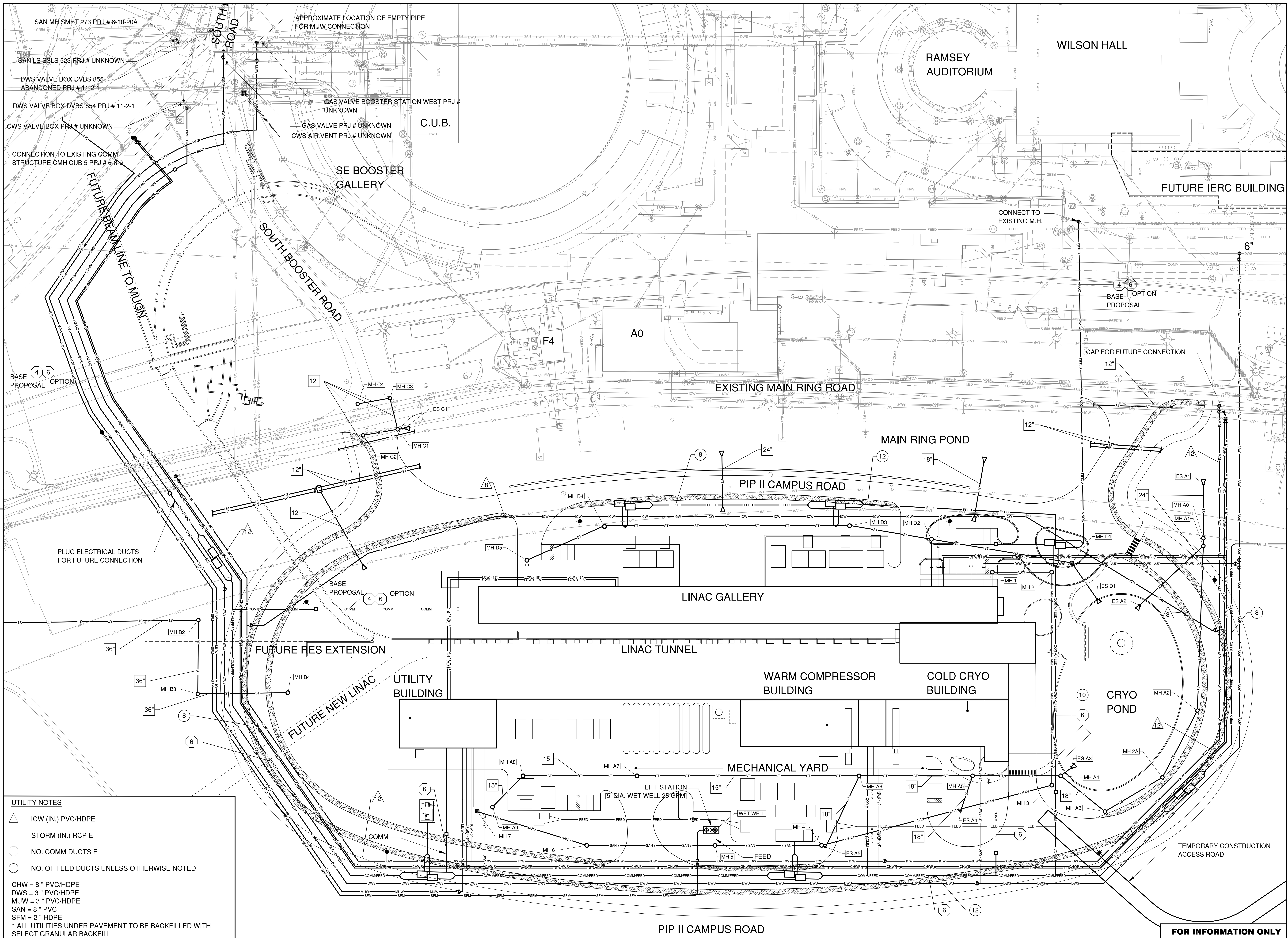
Turner
General Contractor
55 East mamroe St.
Suite 1430
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW ROADWAY TYPICAL SECTIONS
DRAWING NO. **4-3-2** **C-24** REV. 1

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
 DWS = 3" PVC/HDPE
 MUW = 3" PVC/HDPE
 SAN = 8" PVC
 SFM = 2" HDPE
 * ALL UTILITIES UNDER PAVEMENT TO BE BACKFILLED WITH SELECT GRANULAR BACKFILL

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60604
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

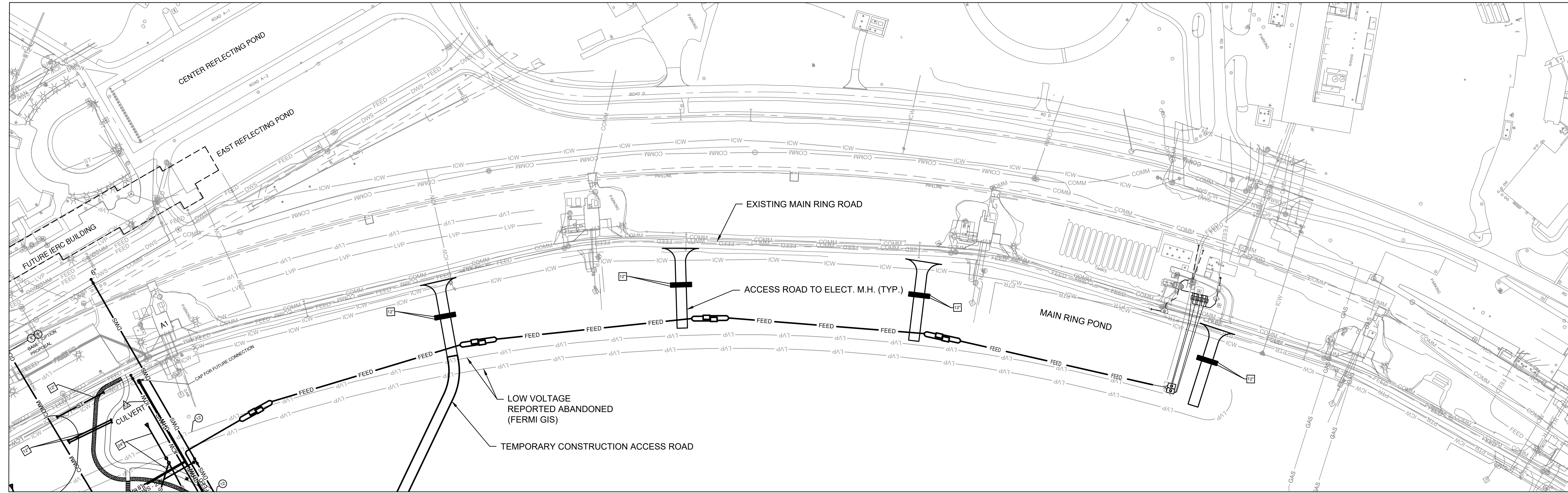
IMEG
 MEP Engineers
 1100 Warrenville Rd.
 Suite 900
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW UTILITY PLAN I
 DRAWING NO. **4-3-2** **C-25** REV. 1

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
 DWS = 3" PVC/HDPE
 MUW = 3" PVC/HDPE
 SAN = 8" PVC
 SFM = 2" HDPE
 * ALL UTILITIES UNDER PAVEMENT TO BE BACKFILLED WITH SELECT GRANULAR BACKFILL

FOR INFORMATION ONLY

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler

Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602

Tel: 312.456.0123
 Fax: 312.456.0124

CMT

Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504

Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA

Tyck Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60607

Tel: 312.341.0055
 Fax: 312.341.9966

IMEG

MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563

Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
 850 West Jackson Blvd.
 Suite 1500
 Chicago, IL 60607

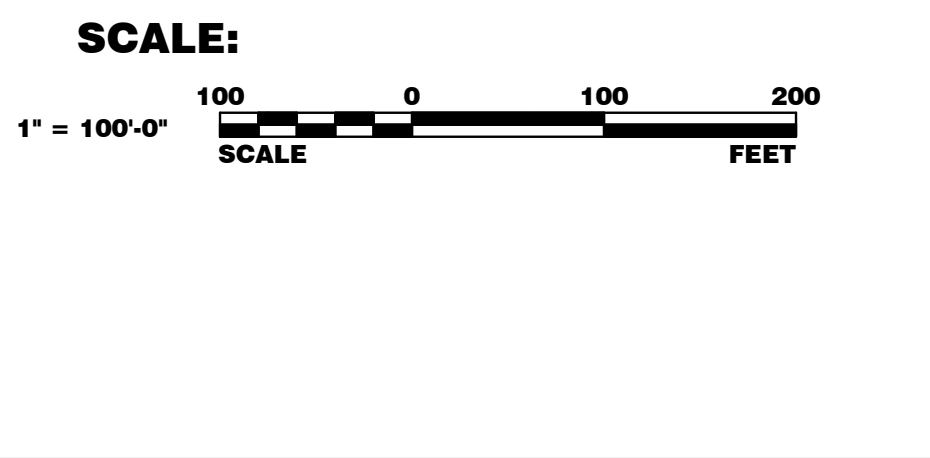
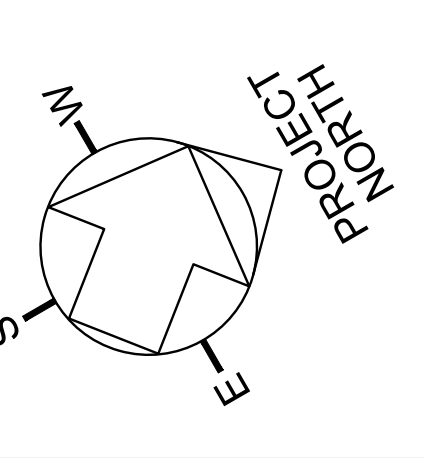
Tel: 312.492.6501
 Fax: 312.492.7101

Turner

General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603

Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION

NEW UTILITY PLAN II

DRAWING NO. **4-3-2** **C-26** REV. 1

Thursday, August 16, 2018 10:12:24 AM

08-17-2018

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

CIVIL - PHASE 1

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX



CIVIL	PHASE 1
C-1	GENERAL CIVIL NOTES AND LEGEND
C-2	OVERALL PIP-II PROJECT PHASING PLAN
C-3	GEOTECHNICAL PLAN
C-4	EXISTING SITE PLAN & GRADING PLAN
C-5	EXISTING UTILITY PLAN
C-6	OVERALL NEW SITE PLAN (FOR INFO. ONLY)
C-7	NEW PHASE I SITE PLAN
C-8	OVERALL NEW ROADWAY PLAN (FOR INFO. ONLY)
C-9	OVERALL NEW UTILITY PLAN II (FOR INFO. ONLY)
C-10	OVERALL NEW UTILITY PLAN II (FOR INFO. ONLY)
C-11	NEW PHASE I UTILITY PLAN I
C-12	NEW PHASE I UTILITY PLAN II
C-13	PROFILE UTILITIES I - ICW
C-14	PROFILE UTILITIES II - CHW-CHWR
C-15	PROFILE UTILITIES III - COMM-FEED
C-16	PROFILE UTILITIES IV - COMM-FEED
C-17	PROFILE UTILITIES V - DWS
C-18	PROFILE UTILITIES VI - MUW
C-19	PROFILE UTILITIES VII - SFM
C-20	PROFILE UTILITIES VIII - STORM
C-21	PROFILE UTILITIES IX - SANITARY
C-22	NEW SANITARY SEWER LIFT STATION - PLAN AND SECTION

REV.	DATE	DESCRIPTIONS	REVISIONS
1	08.17.2018	60% DESIGN DOCUMENTS	

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel : 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel : 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyra Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel : 312.341.0055
 Fax: 312.341.9966

IMEG
 HOERR SCHAUDT
 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel : 630.527.2320
 Fax: 630.527.2321

Turner
 Contractor
 55 East Manroe Street
 Suite 1430
 Chicago, IL 60603
 Tel : 312.327.2770
 Fax: 312.492.7101

Turner
 Landscape Architects
 850 West Jackson Blvd.
 Suite 800
 Chicago, IL 60607
 Tel : 312.492.6501
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	RG	07/18/18
DRAWN	AVA	07/18/18
CHECKED	PJA	07/18/18
APPROVED	BW	07/18/18
SUBMITTED		

SCALE: NOT TO SCALE

FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP-II: SITE PREPERATION
COVER
 DRAWING NO. 4-3-2
 GENSLER NUMBER: 21.0137.004
 C-0 | REV. 1
 17 AUG 2018

GENERAL NOTES:

- THE SUBCONTRACTOR SHALL OBTAIN NOTICE TO PROCEED FROM FERMILAB PRIOR TO START OF CONSTRUCTION. THE FERMILAB CONSTRUCTION COORDINATOR (FCC) IS THE PRIMARY FIELD CONTACT BETWEEN FERMILAB AND THE SUBCONTRACTOR. THE FOLLOWING HAVE OVERSIGHT OVER THIS PROJECT:
 - FERMILAB: PROJECT MANAGER - STEVE DIXON
OFFICE PHONE: (630) 840-8501
FERMILAB SECURITY - (630) 840-3414
FERMILAB EMERGENCY - (630) 840-3131
 - CMT: THERESA O'GRADY - PROJECT MANAGER (630) 907-7028
- UNLESS OTHERWISE NOTED, THE EXISTING UTILITY WILL BE ISOLATED BY FERMILAB PERSONNEL FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. IN ORDER TO MINIMIZE THE IMPACT TO THE OPERATION OF THE ICW SYSTEM, ONLY ONE SHUTDOWN WILL BE ALLOWED AT ANY GIVEN TIME. THE SEQUENCE OF THE PROPOSED IMPROVEMENTS SHALL BE COORDINATED WITH FERMILAB PERSONNEL. NOTE THAT ITEMS WITH PAVEMENT RESTORATION WOULD BE CONSTRUCTED AFTER THE UTILITY HAS BEEN INSTALLED AND THE AREA HAS BEEN RESTORED. ALL ROAD CLOSINGS AND UTILITY SHUTDOWNS SHALL BE COORDINATED THROUGH FERMILAB CONSTRUCTION COORDINATOR (FCC).
- THE SUBCONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL TRAFFIC CONTROL SHALL BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND LOCAL CODES. SIGNAGE AND BARRIERS SHALL BE APPROVED BY THE FCC.
- ALL EXISTING TRAFFIC SIGNS, STREET SIGNS, ETC. WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE NOT NOTED FOR REMOVAL OR DISPOSAL SHALL BE REMOVED AND RESET BY THE SUBCONTRACTOR AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. DAMAGE TO THESE ITEMS SHALL BE REPAIRED BY THE SUBCONTRACTOR AT HIS OWN EXPENSE.
- LAND SURVEY MONUMENTS WHICH ARE DISTURBED BY EXCAVATION SHALL BE RESET BY A LICENSED PROFESSIONAL LAND SURVEYOR. COST SHALL BE INCIDENTAL TO THE CONSTRUCTION CONTRACT.
- THE EXISTING UTILITIES AND THEIR APPURTENANCES ARE SHOWN AS A GUIDE TO THE SUBCONTRACTOR. LOCATIONS OF EXISTING UTILITIES ARE SHOWN BASED ON FERMILAB RECORD DRAWINGS AND SUPPLEMENTED BY LIMITED FIELD SURVEY. ACTUAL LOCATION OF THESE UTILITIES MAY VARY.

THE SUBCONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS IN THE PATH OF THE PROPOSED EXCAVATION AREA. FERMILAB SHALL ASSIST WITH THE LOCATES USING THE FERMILAB JULIE LOCATE PROCESS. SUBCONTRACTOR WILL BE HELD RESPONSIBLE FOR FINAL LOCATION AND PROTECTION OF UTILITIES. IN ADDITION, THE SUBCONTRACTOR SHALL ATTEMPT TO LOCATE ANY OTHER UTILITIES IN THE PROPOSED EXCAVATION AREA USING STANDARD LOCATING METHODS. AT EVERY POINT WHERE THE EXCAVATION PATH CROSSES THE UTILITY THE SUBCONTRACTOR SHALL HAND DIG TO EXPOSE THE IDENTIFIED UTILITY. THE SUBCONTRACTOR IS RESPONSIBLE FOR ROUTING AROUND ALL UTILITIES SHOWN ON THE FINAL EXCAVATION PERMIT.

WHERE THERE IS A POTENTIAL UTILITY CONFLICT THE SUBCONTRACTOR SHALL SUBMIT THIS DATA TO THE FCC FOR RESOLUTION. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND SUPPORTING DURING CONSTRUCTION ALL EXISTING UTILITIES AND APPURTENANCES, AND IF DAMAGED, THEY SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COMPENSATION. NO EXCAVATION WORK IS TO BE CONDUCTED WITHOUT A PROPERLY COMPLETED FERMILAB EXCAVATION PERMIT. THE SUBCONTRACTOR SHALL FILL IN ALL EXCAVATIONS AT THE CLOSE OF EACH WORK DAY. EXCEPTIONS MUST BE APPROVED BY THE FCC. PROPER BARRICADING OF OPEN TRENCHES SHALL BE APPROVED BY THE FCC.
- ALL CONSTRUCTION MEANS, METHODS AND SAFETY ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR, IN ACCORDANCE WITH EXHIBIT A.
- THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROJECT LAYOUT AND ENSURING ELEVATIONS OF STRUCTURES AND PIPING. HORIZONTAL AND VERTICAL CONTROL (H & VC) DATA SHOWN ON THE PLANS IS BASED UPON FERMILAB NATIONAL LABORATORY CONTROL. THE H & VC DATA SHOWN IS INCLUDED FOR THE CONVENIENCE OF THE SUBCONTRACTOR IN LAYING OUT THE PROJECT. FIELD ADJUSTMENTS OF ANY PORTION OF THE WORK SHALL BE MADE ONLY WITH THE PERMISSION OF THE FCC.
- THE SUBCONTRACTOR SHALL PROTECT ALL TREES, SHRUBS, AND LANDSCAPING AGAINST ANY DAMAGES, AND REPAIR/REPLACE ANY DAMAGED MATERIALS/AREAS AT HIS OWN EXPENSE. ANY TREES OR SHRUBS REQUIRING RELOCATION WILL BE NOTED PRIOR TO EXCAVATION AND SHALL BE REMOVED BY FERMILAB UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL GRASS AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED WITH SEEDING AND FERTILIZING PER THE SPECIFICATIONS. DISTURBED AGRICULTURAL FIELDS WILL NOT REQUIRE SEEDING BUT SHOULD BE FINISHED GRADED WITH TOPSOIL AND 50 LBS PER ACRE OF ANNUAL RYE. TOPSOIL SHALL BE REMOVED, STOCKPILED SEPARATELY AND RE-SPREAD FOLLOWING CONSTRUCTION. THOSE AREAS DISTURBED THAT ARE 15 FEET BEYOND THE CENTERLINE OF THE UTILITY SHALL BE REPAIRED AT THE SUBCONTRACTOR'S EXPENSE.
- SUBCONTRACTOR SHALL RE-STRIPE ALL PAVEMENT REPLACED AS A RESULT OF CONSTRUCTION WHERE APPLICABLE.
- IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO USE APPROPRIATE SOIL EROSION CONTROL DEVICES AS SHOWN ON THE PROJECT DRAWING AND EXPLAINED IN THE DETAILS TO PREVENT SEDIMENT FROM ENTERING THE EXISTING STORM SEWER SYSTEM OR SURFACE WATER.
- ANY DEWATERING REQUIRED DURING THE COURSE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR. WATER PUMPED FROM EXCAVATIONS SHALL BE DISCHARGED INTO SEDIMENTATION PITS. WATER SHALL NOT BE DISCHARGED DIRECTLY INTO THE FLOW LINE OF DITCHES, GUTTERS, OR DRAINAGE STRUCTURES UNDER ANY CIRCUMSTANCES.
- AT THE CLOSE OF EACH WORK DAY, OR AS NEEDED, ANY LOOSE MATERIAL DEPOSITED ON ROADWAYS OR IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, SHALL BE REMOVED BY THE SUBCONTRACTOR. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.
- ALL EXCESS EXCAVATED MATERIAL SHALL REMAIN AT FERMILAB WITHIN 2 MILES OF THIS PROJECT.
- RETURN ALL AREAS TO ORIGINAL CONDITIONS, INCLUDING DITCHES, SHOULDERS, ROADBED AND PAVEMENT.
- SUBCONTRACTOR SHALL SUBMIT TO THE FERMILAB CONSTRUCTION COORDINATOR (FCC) SHOP DRAWINGS, MATERIAL SAMPLES, OPERATIONS AND MAINTENANCE MANUALS IN ACCORDANCE WITH ADDENDUM A.
- QUANTITIES ON DRAWINGS SHOWN FOR INFORMATION PURPOSES ONLY.
- SUBCONTRACTOR SHALL COORDINATE GPS POINTS WITH EXHIBIT A. THE SUBCONTRACTOR SHALL PROVIDE ACCURATE AS-BUILT DATA BASED ON DOWNHOLE SURVEY DATA OR A WALKOVER LOCATION SYSTEM THAT INDICATES X, Y AND Z COORDINATES OF THE PIPE AT LEAST EVERY THIRTY (25) FEET ALONG THE ALIGNMENT.
- USE PROPER OSHA TRENCHING AND SHORING METHODS TO MAINTAIN SAFE WORKING CONDITIONS.
- SUBCONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY COLD PATCH FOR ALL ROADWAYS AND DRIVEWAYS OR STONE COVER AT THE DISCRETION OF THE FCC FOR ALL ROAD EXCAVATIONS UNTIL THE FINAL ASPHALT IS COMPLETED. FINAL SURFACE RESTORATION TO BE PAVED ASPHALT AS SHOWN IN DETAILS.

LEGEND

	EXISTING INDUSTRIAL COOLING WATER WATERMAIN
	NEW INDUSTRIAL COOLING WATER WATERMAIN
	NEW INDUSTRIAL COOLING WATER RETURN WATERMAIN
	NEW CHILLED WATER WATERMAIN
	NEW CHILLED WATER RETURN WATERMAIN
	EXISTING COOLING POND WATER SUPPLY
	EXISTING COOLING POND WATER RETURN
	EXISTING DOMESTIC WATER SUPPLY
	NEW DOMESTIC WATER SUPPLY
	EXISTING LOW CONDUCTIVITY WATER WATERMAIN
	NEW LOW CONDUCTIVITY WATER WATERMAIN
	NEW LOW CONDUCTIVITY WATER RETURN WATERMAIN
	EXISTING MAKEUP WATER WATERMAIN
	EXISTING GAS MAIN
	EXISTING SANITARY SEWER
	NEW SANITARY SEWER
	NEW SANITARY FORCEMAIN
	EXISTING STORM SEWER
	NEW STORM SEWER
	EXISTING POND TRANSFER PIPE
	EXISTING OVERHEAD ELECTRIC CABLE
	EXISTING BURIED TELEPHONE CABLE
	EXISTING BURIED ELECTRICAL CONDUIT
	EXISTING 1' CONTOUR
	EXISTING 5' CONTOUR
	EXISTING EDGE OF WATER - SURVEYED
	HISTORICAL EDGE OF WATER
	EXISTING FENCELINE
	EXISTING COMMUNICATION LINE
	NEW COMMUNICATION LINE
	NEW COMMUNICATION/POWER LINE
	EXISTING UNDERGROUND POWER FEEDERS
	NEW UNDERGROUND POWER FEEDERS
	NEW LOW VOLTAGE POWER
	NEW SERVICE LINE AND CAP
	EXISTING VALVE AND VALVE BOX
	NEW VALVE AND VALVE BOX
	EXISTING VALVE AND VAULT
	EXISTING FIRE HYDRANT
	NEW FIRE HYDRANT AND AUXILIARY VALVE
	EXISTING STREET LIGHT
	EXISTING BUMPER POST
	EXISTING STORM SEWER INLET
	NEW COMMUNICATION MANHOLE
	NEW SANITARY/STORM MANHOLE
	EXISTING MANHOLE
	EXISTING VAULT
	EXISTING UTILITY POLE
	EXISTING SIGN
	EXISTING TREE
	EXISTING GUY WIRE ANCHOR
	EXISTING SPLICE BOX
	NEW POWER MANHOLE

Thursday, August 16, 2018 12:14:35 PM

1	08.17.2018	60% DESIGN DOCUMENTS
REV.	DATE	DESCRIPTIONS
		REVISIONS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 630.820.1022
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 600W
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

TyR. Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607

Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East marroee St.
Suite 1420
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	T. O'GRADY	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

SCALE:

SCALE:

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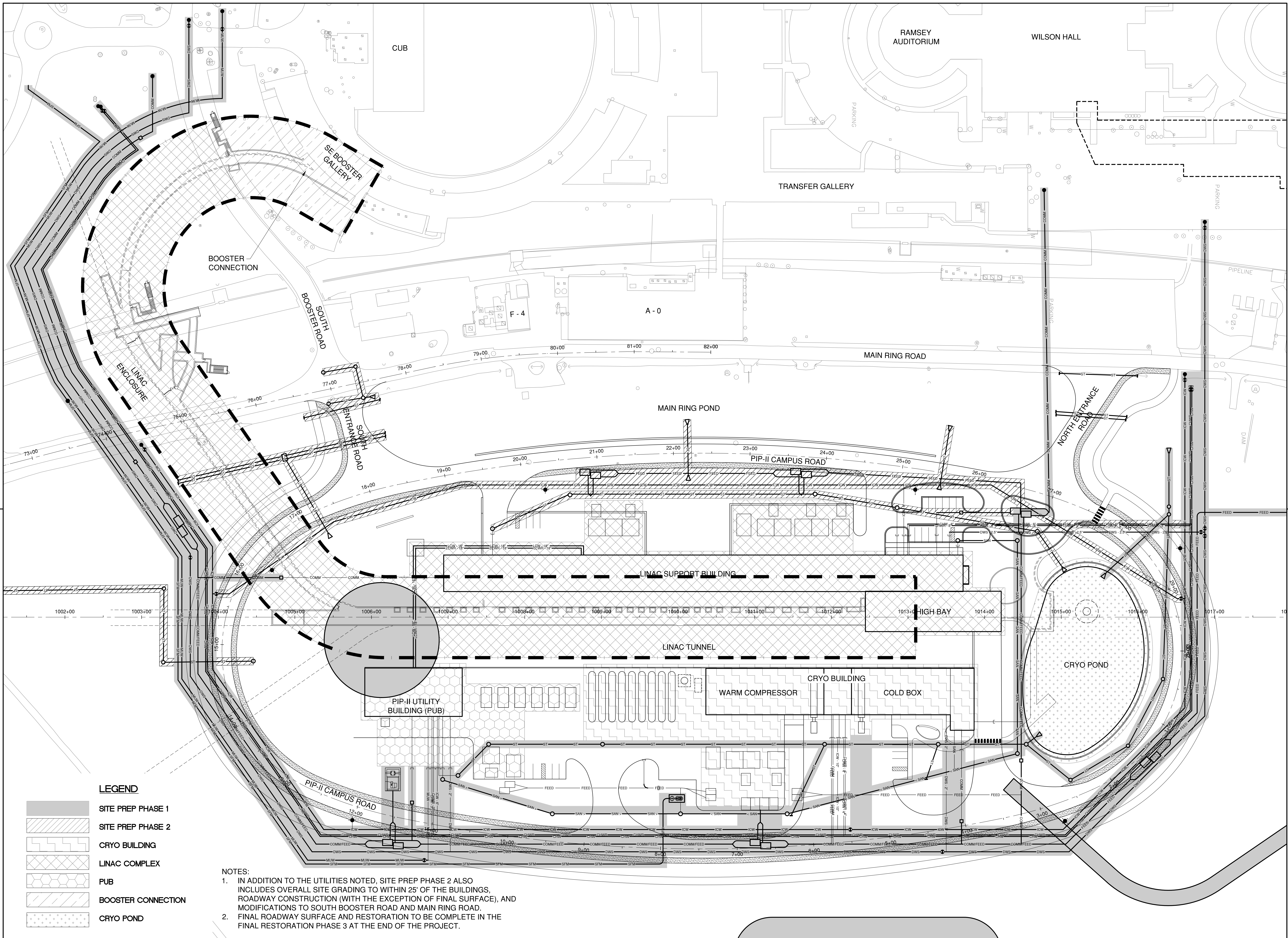
UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION

GENERAL CIVIL NOTES AND LEGEND

DRAWING NO. **4-3-2** **C-1** REV. 1

08-17-2018



LEGEND

- SITE PREP PHASE 1
- SITE PREP PHASE 2
- CRYO BUILDING
- LINAC COMPLEX
- PUB
- BOOSTER CONNECTION
- CRYO POND

NOTES:

1. IN ADDITION TO THE UTILITIES NOTED, SITE PREP PHASE 2 ALSO INCLUDES OVERALL SITE GRADING TO WITHIN 25' OF THE BUILDINGS, ROADWAY CONSTRUCTION (WITH THE EXCEPTION OF FINAL SURFACE), AND MODIFICATIONS TO SOUTH BOOSTER ROAD AND MAIN RING ROAD.
2. FINAL ROADWAY SURFACE AND RESTORATION TO BE COMPLETE IN THE FINAL RESTORATION PHASE 3 AT THE END OF THE PROJECT.

Thursday, August 16, 2018 2:16:41 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60604
 Tel: 630.820.1022
 Fax: 630.820.0350

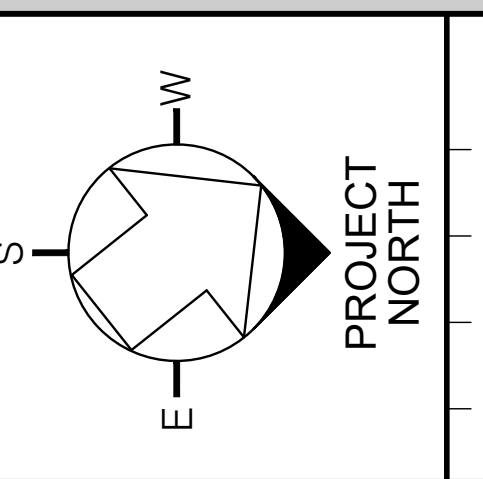
TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 West Jackson Blvd.
 Suite 900
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 East Monroe St.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.327.2770
 Fax: 312.492.7101

NAME	DATE
DESIGNED	
DRAWN	
CHECKED	T. OGRADY
APPROVED	08.16.2018
SUBMITTED	

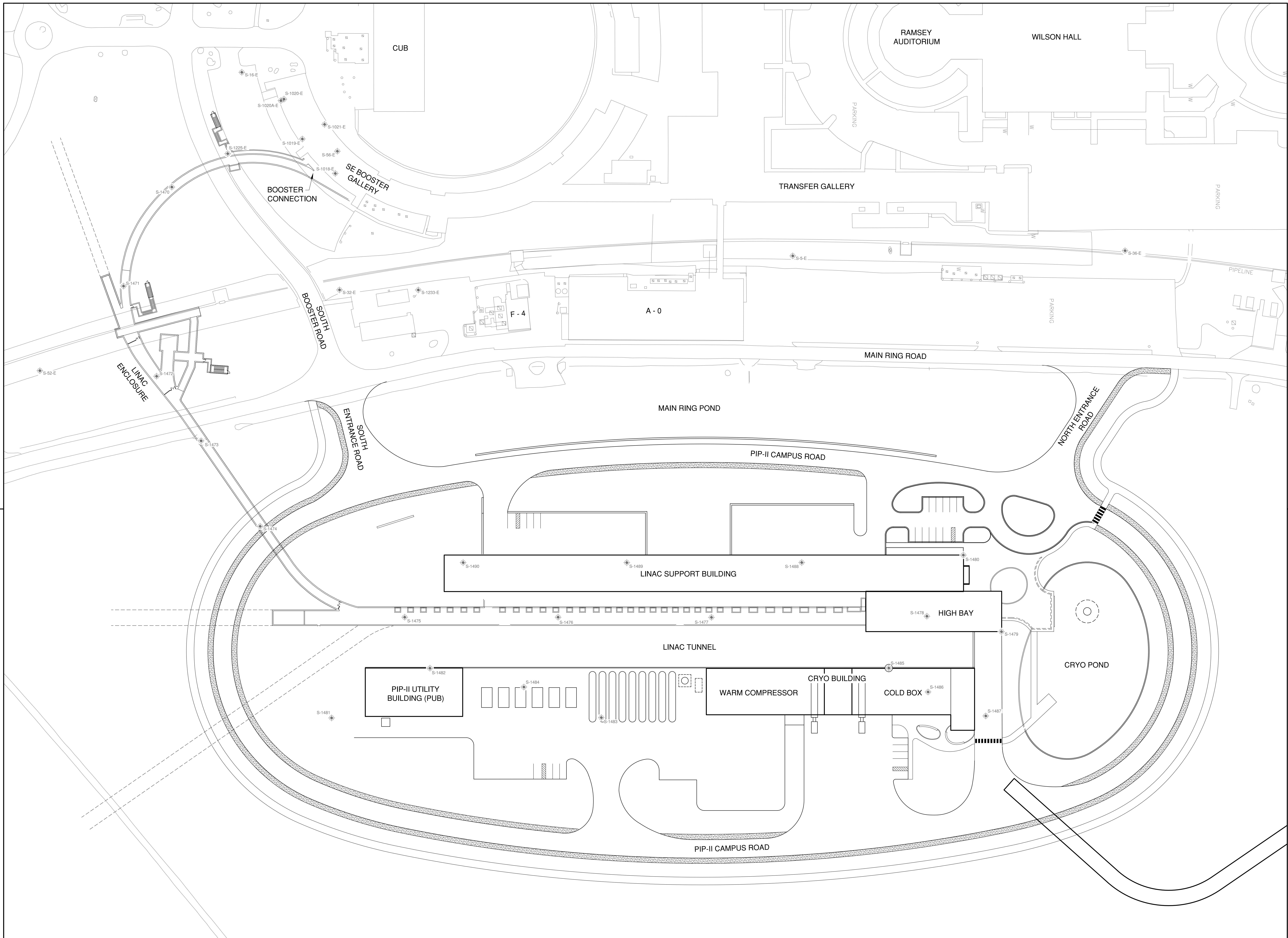


SCALE:
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 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
OVERALL PIP-II PROJECT PHASING PLAN
 DRAWING NO. **4-3-2** **C-2** REV. 1

08-17-2018



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1	08.17.2018	60% DESIGN DOCUMENTS

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 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

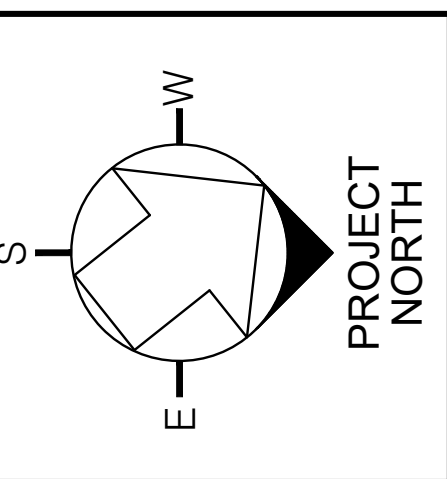
TGRWA
 Tyk, Gustafson, Reckers, Wilson, Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East marion St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	T. O'GRADY	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

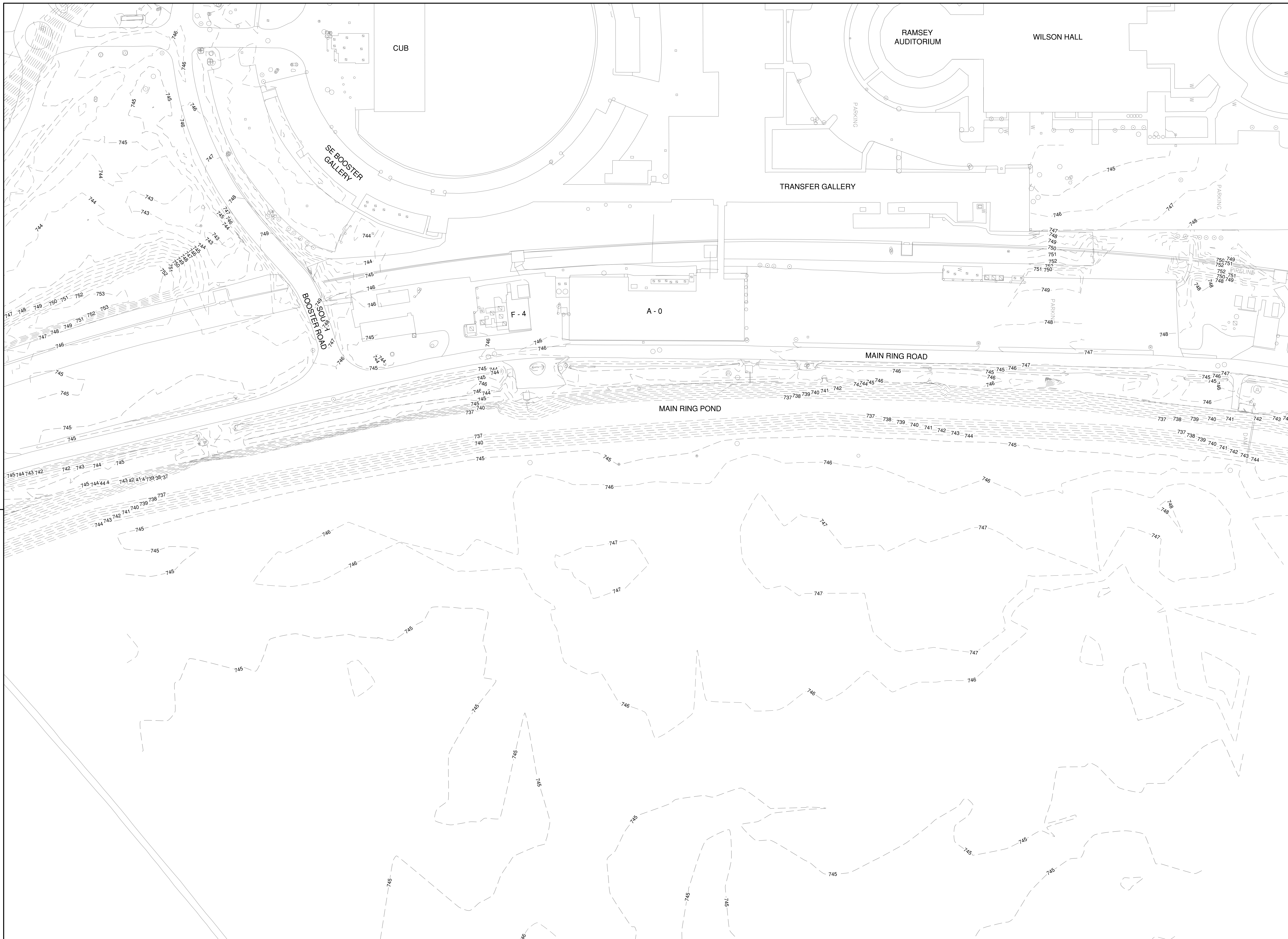


SCALE:
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PIP II SITE PREPARATION
GEOTECHNICAL PLAN
 DRAWING NO. **4-3-2** **C-3** REV. 1

08-17-2018



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 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

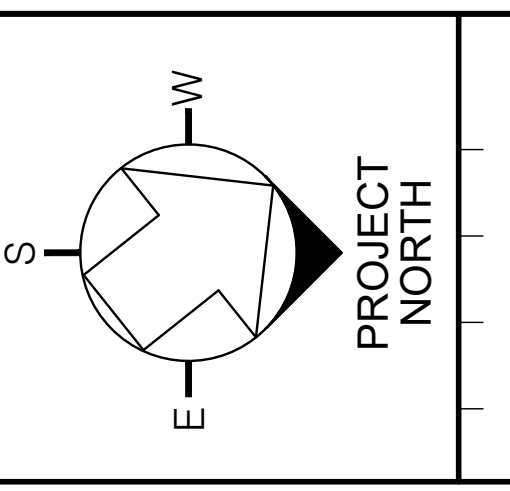
TGRWA
 TyR. Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wienerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	C. DAGIANTIS	08.16.2018
CHECKED	T. OGRADY	08.16.2018
APPROVED		
SUBMITTED		



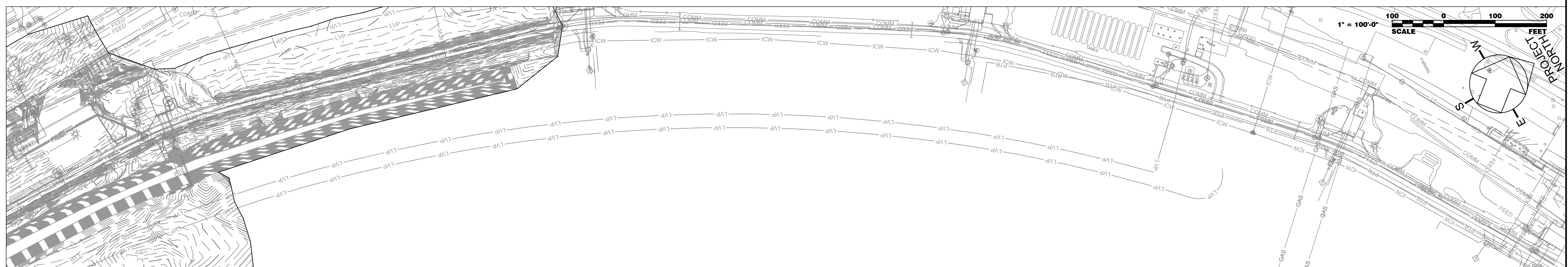
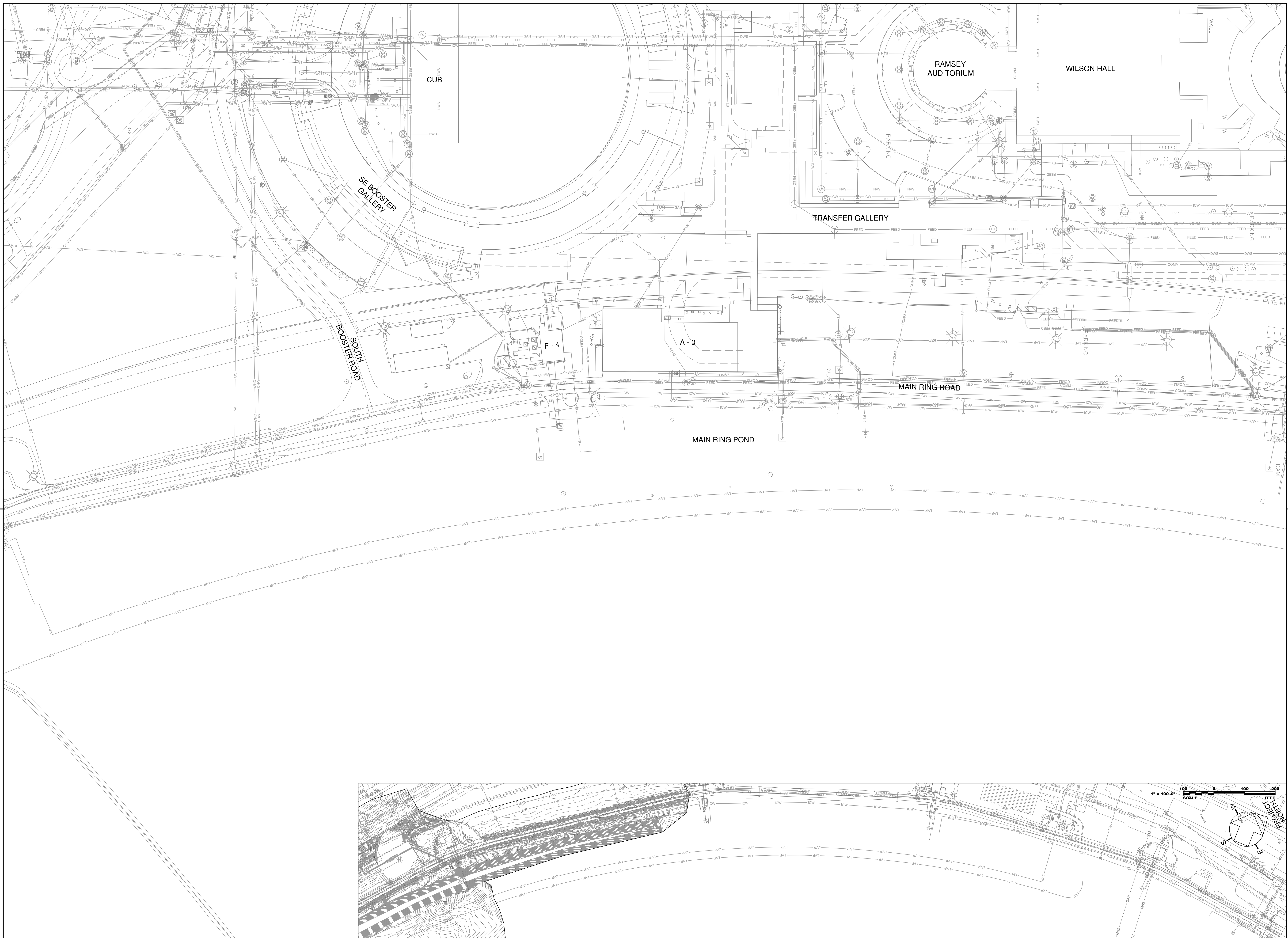
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PIP II SITE PREPARATION
EXISTING SITE & GRADING PLAN
 DRAWING NO. **4-3-2** **C-4** REV. 1

Thursday, August 16, 2018 2:04:12 PM

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 Architects
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 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60604
 Tel: 630.820.1022
 Fax: 630.820.0350

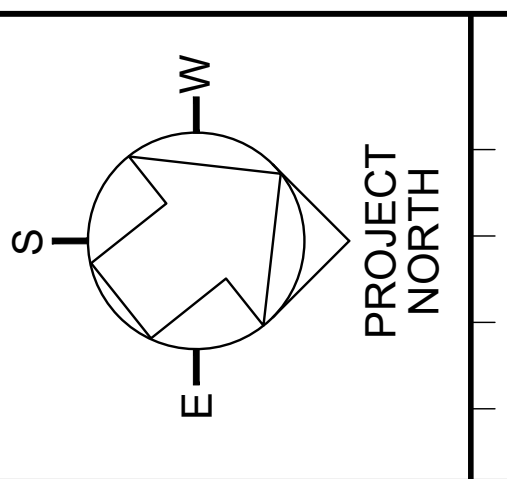
TGRWA
 Tysk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wannerville Rd.
 Suite 400W
 Chicago, IL 60607
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



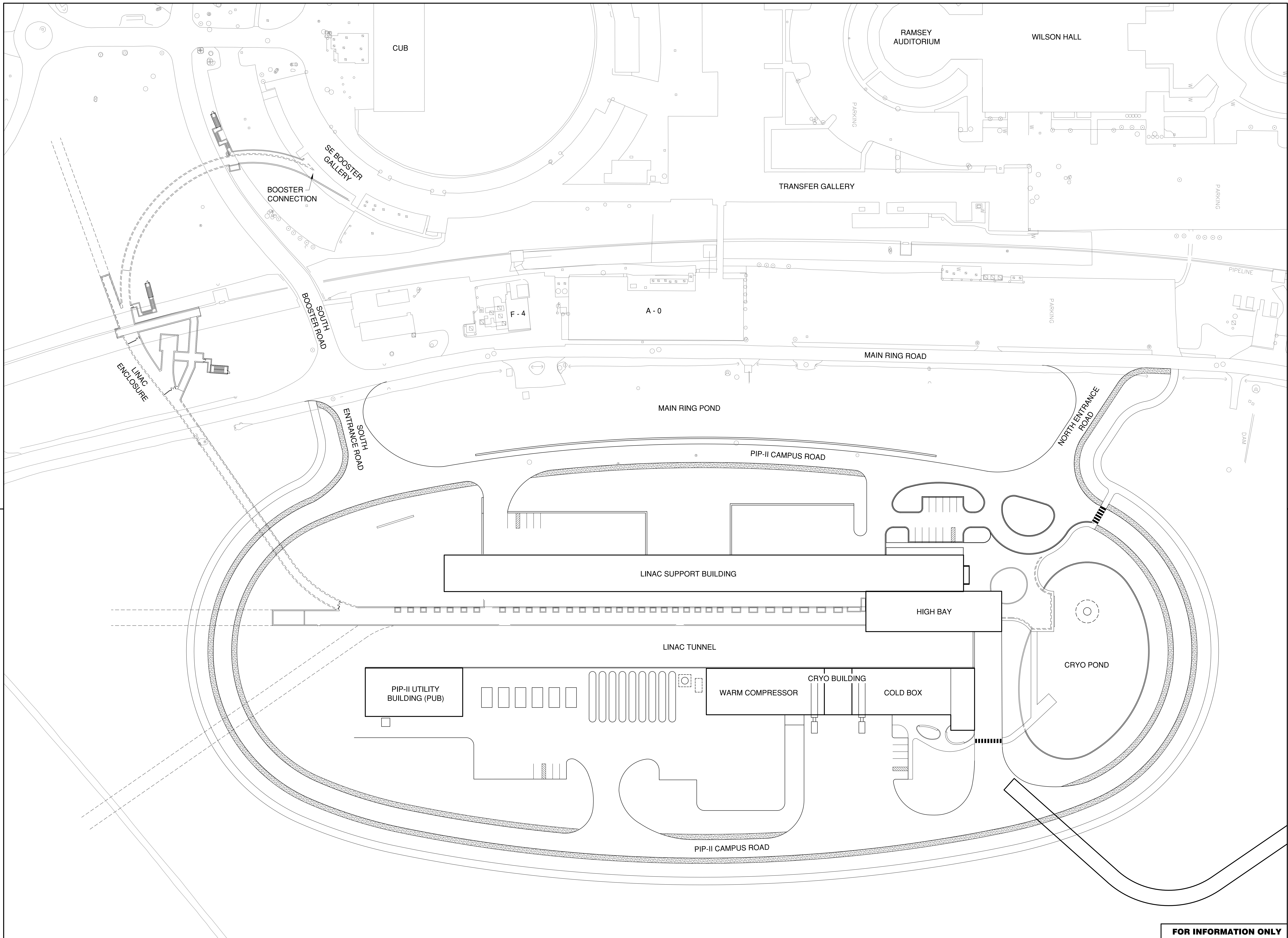
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PIP II SITE PREPARATION
EXISTING UTILITY PLAN
 DRAWING NO. **4-3-2** **C-5** REV. 1

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 Architects
 11 East Madison Street
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 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

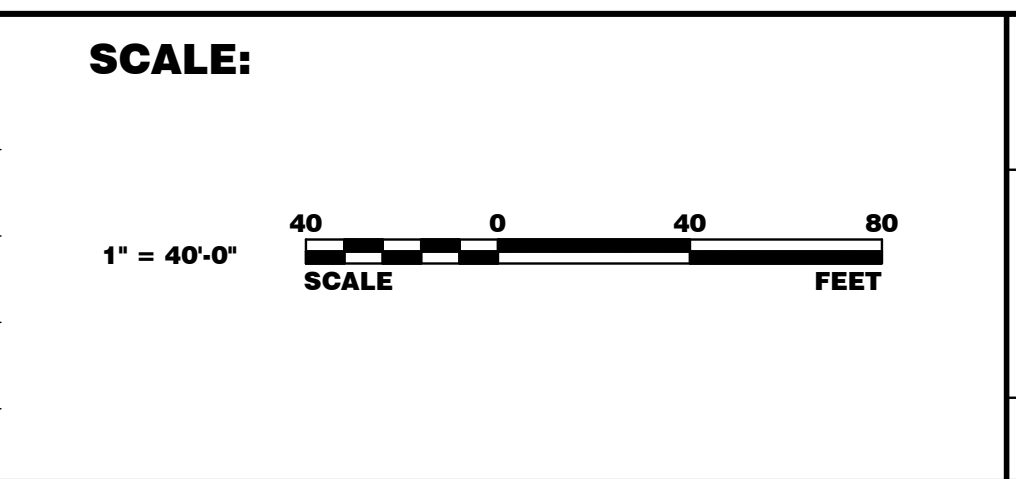
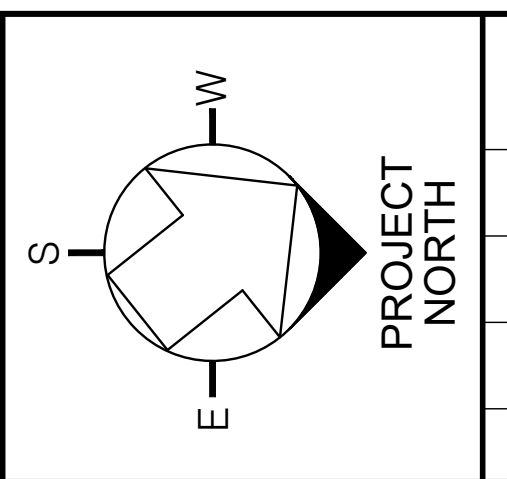
TGRWA
 TyRk Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	T. OGRADY	08.16.2018
DRAWN	J. VAREE	08.16.2018
CHECKED	T. OGRADY	08.16.2018
APPROVED		
SUBMITTED		

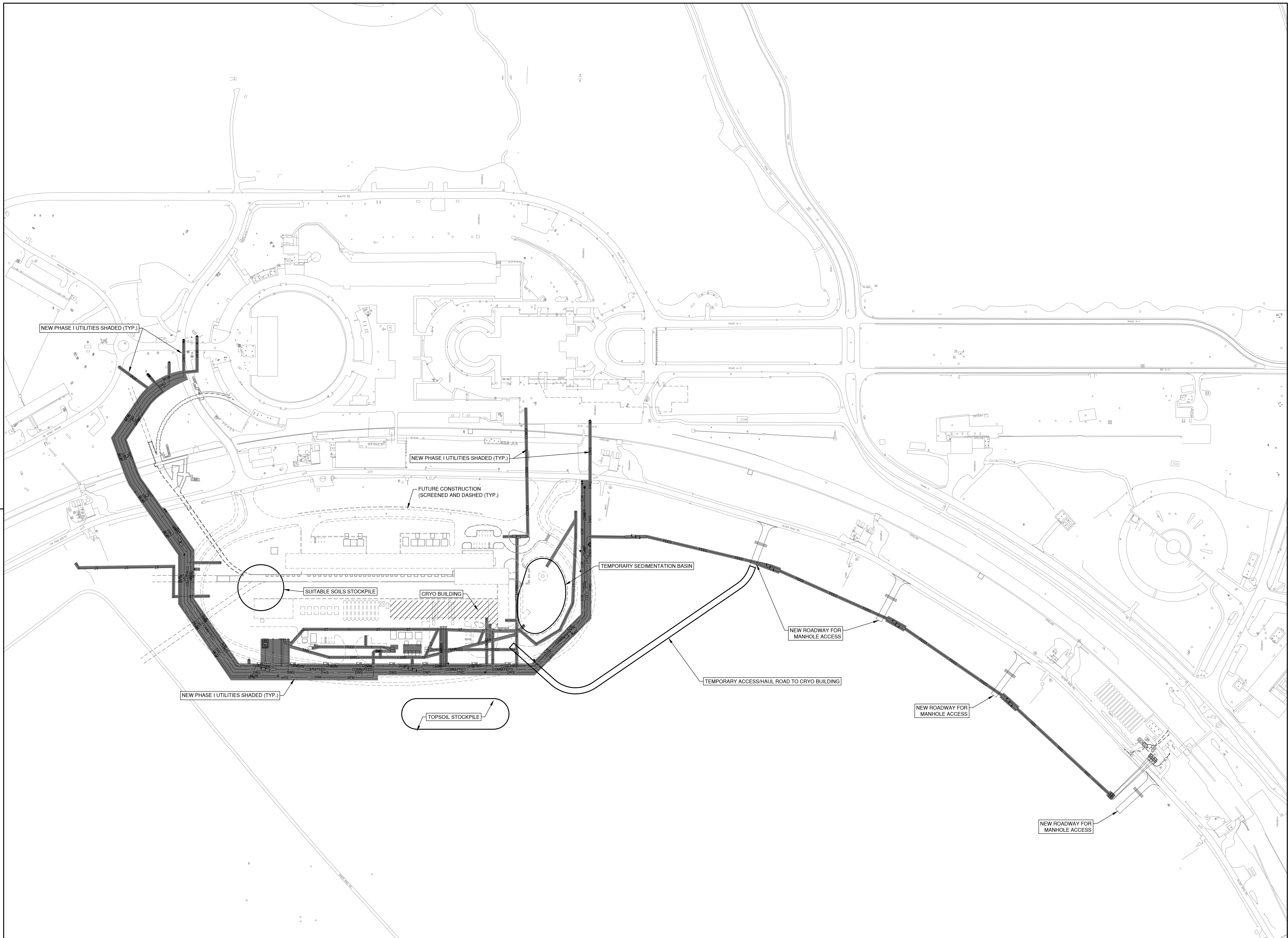


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PIP II SITE PREPARATION
OVERALL NEW SITE PLAN
 DRAWING NO. **4-3-2** **C-6** REV. 1

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

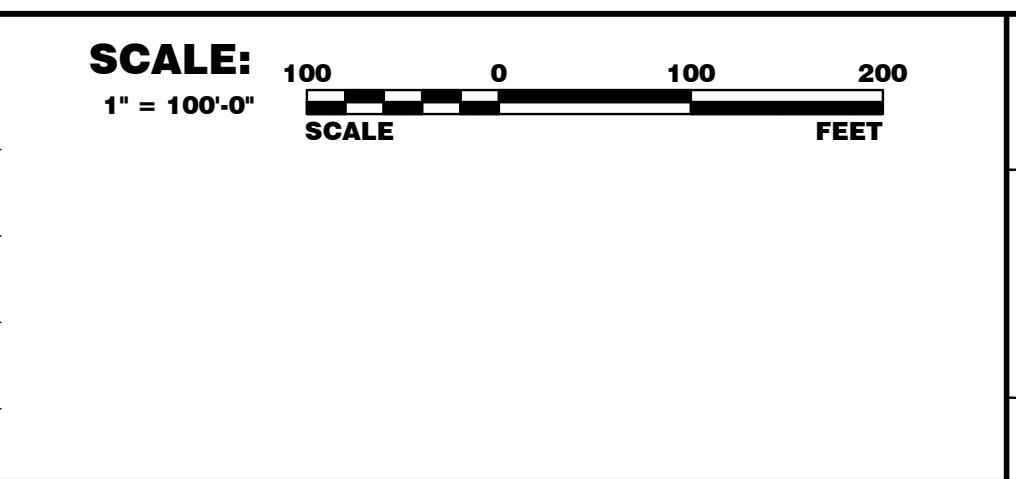
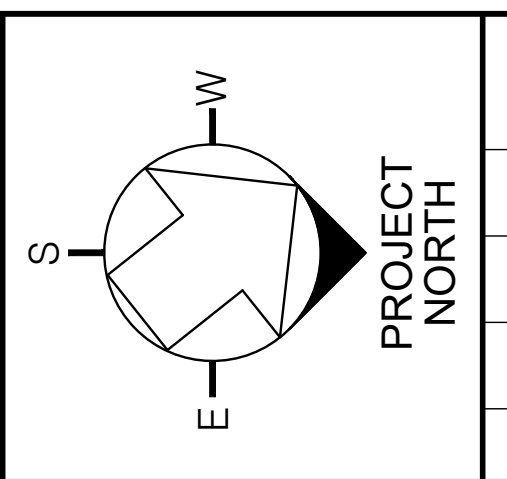
TGRWA
 TyR, Gustafson, Reckers, Wilson, Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	T. O'GRADY	0.8.16.2018
DRAWN	J. VAREE	0.8.16.2018
CHECKED	T. O'GRADY	0.8.16.2018
APPROVED		
SUBMITTED		



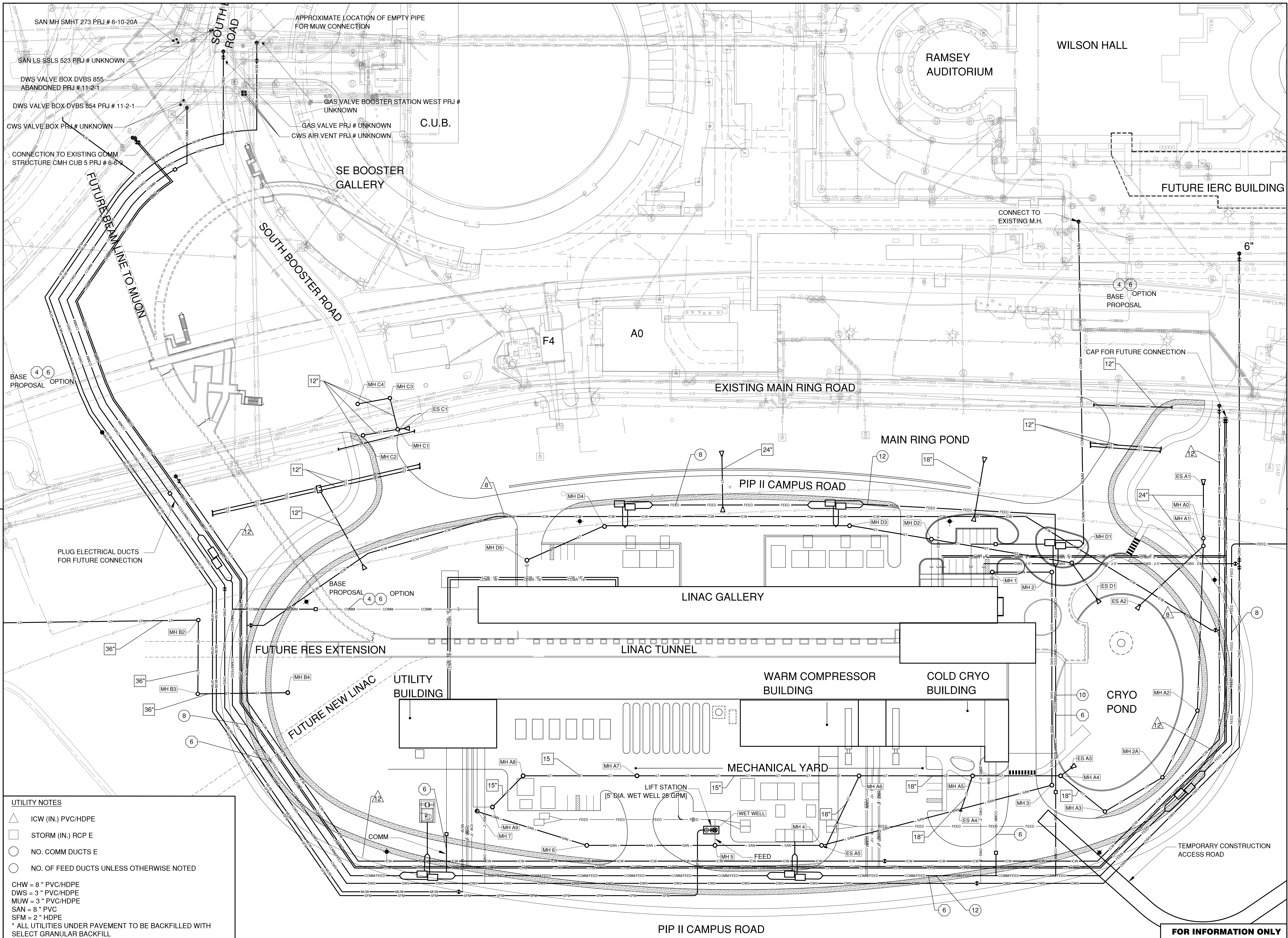
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PIP II SITE PREPARATION
NEW PHASE I SITE PLAN

DRAWING NO. **4-3-2** **C-7** REV. 1

Thursday, August 16, 2018 2:24:55 PM

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
 DWS = 3" PVC/HDPE
 MUW = 3" PVC/HDPE
 SAN = 8" PVC
 SFM = 2" HDPE
 * ALL UTILITIES UNDER PAVEMENT TO BE BACKFILLED WITH SELECT GRANULAR BACKFILL

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler

Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT

Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60604
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA

Tyck Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
 800 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG

MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

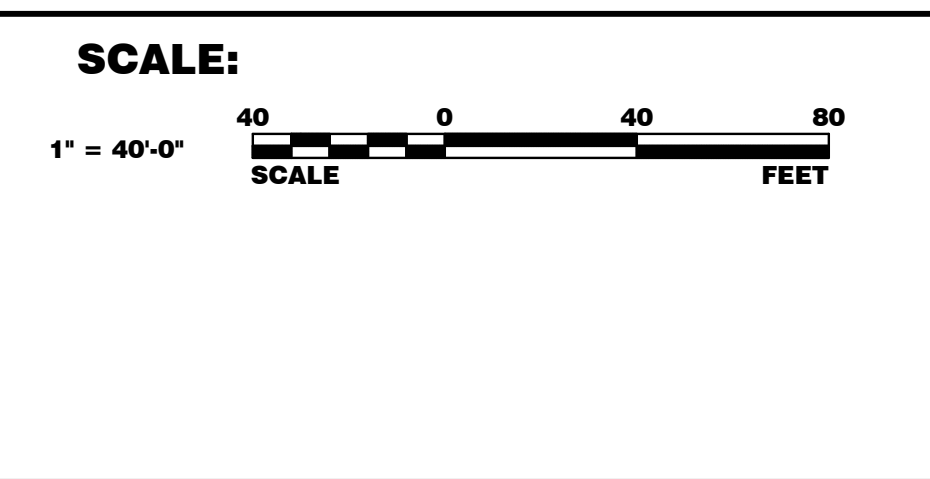
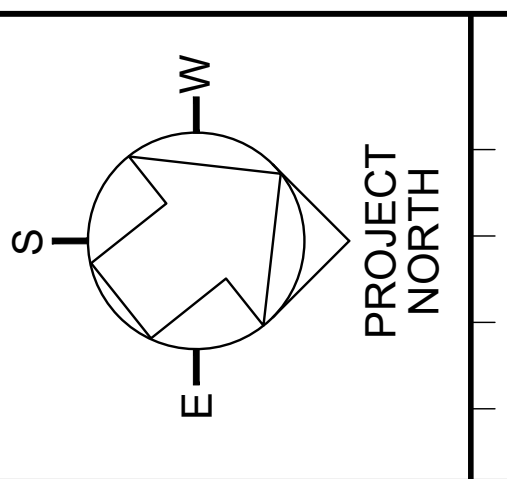
HOERR SCHAUDT

Landscape Architects
 850 West Jackson Blvd.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.422.6501
 Fax: 312.422.7101

Turner

General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60607
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



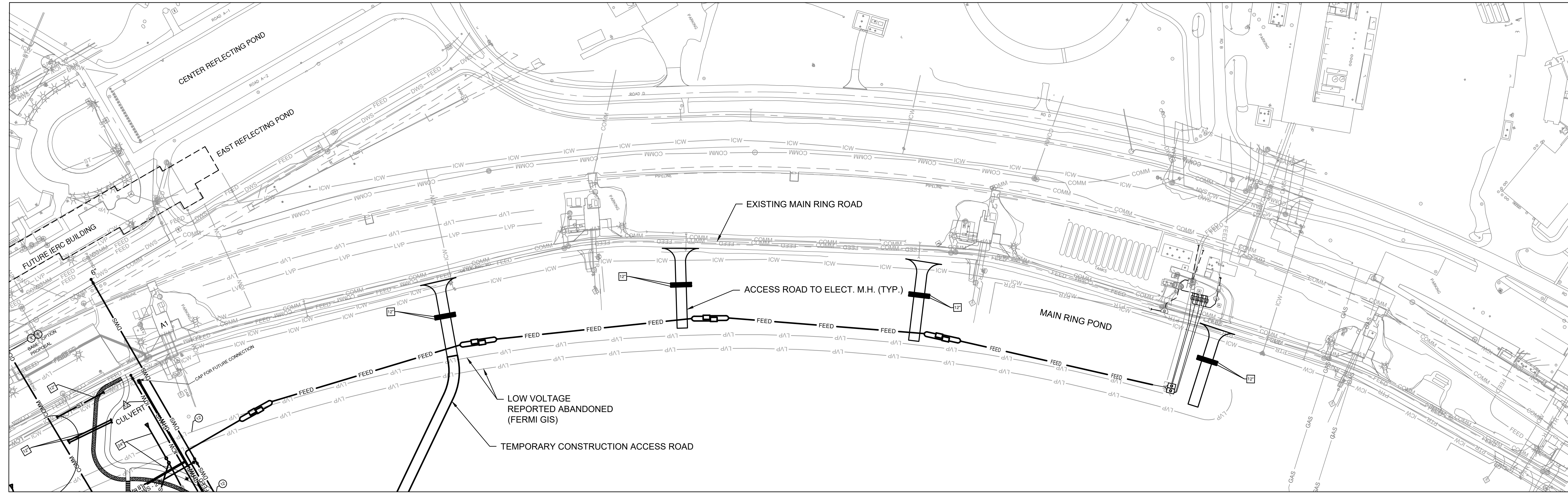
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PIP II SITE PREPARATION
OVERALL NEW UTILITY PLAN I

DRAWING NO. **4-3-2** **C-9** REV. 1

Thursday, August 16, 2018 2:06:48 PM

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
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REV.	DATE	DESCRIPTIONS
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Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

Tyck Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrenville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607

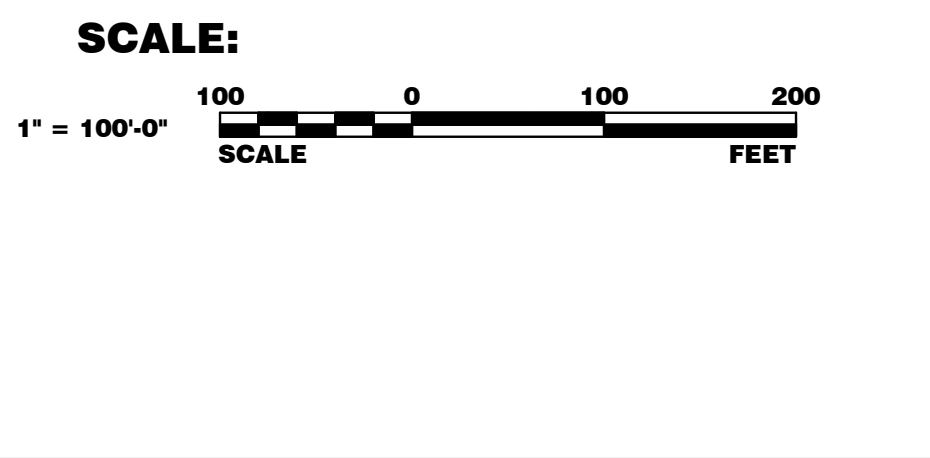
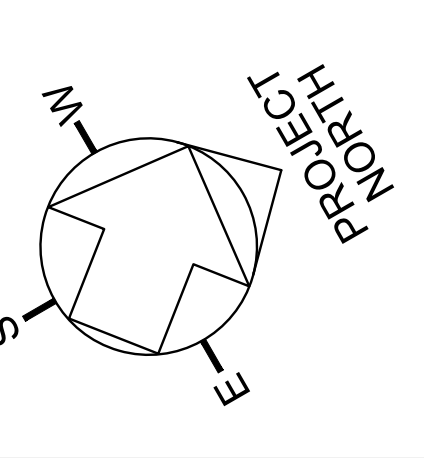
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1430
Chicago, IL 60607

Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
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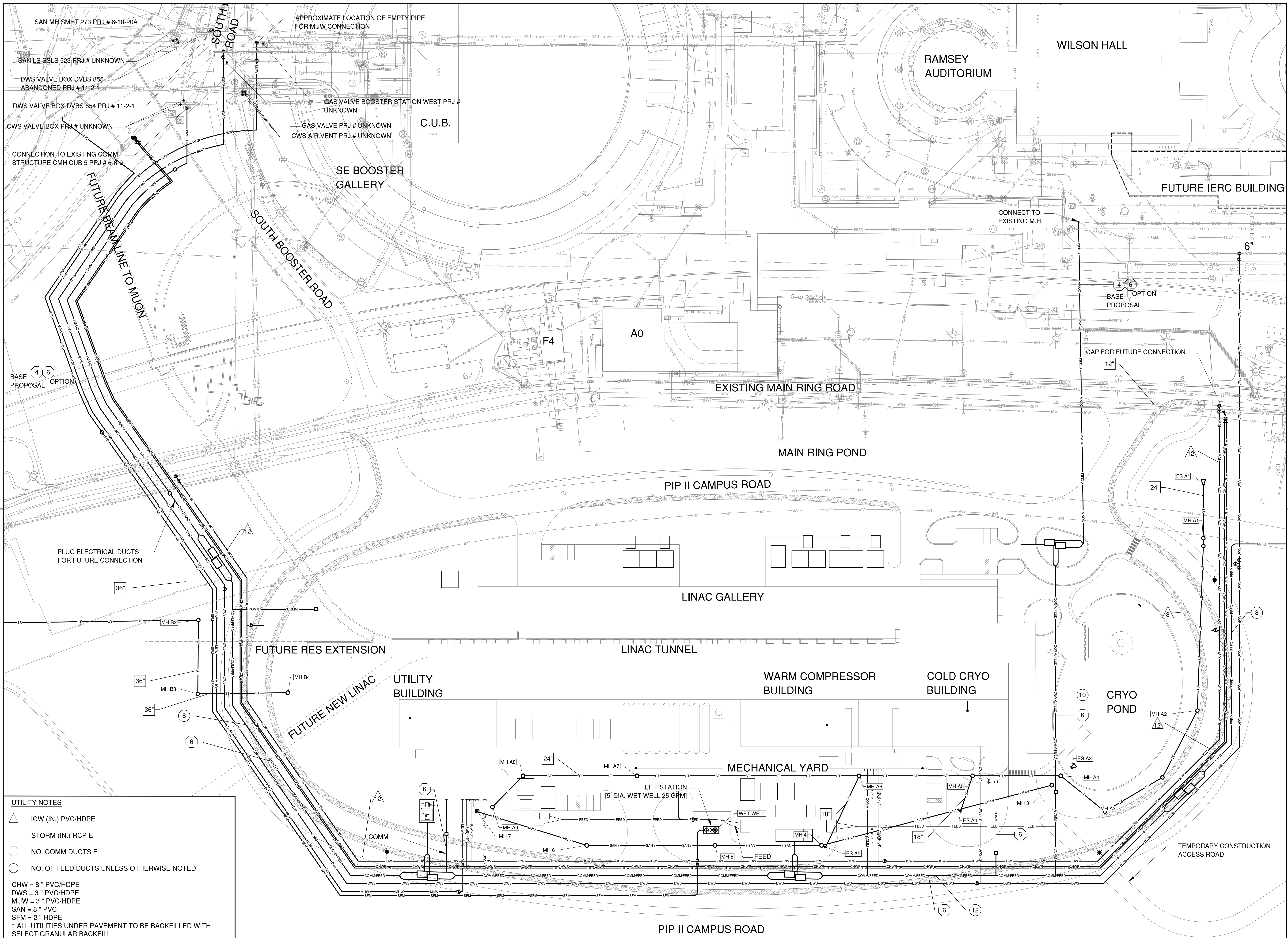
PIP II SITE PREPARATION

OVERALL NEW UTILITY PLAN II

DRAWING NO. **4-3-2** **C-10** REV. 1

Thursday, August 16, 2018 2:08:57 PM

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
 DWS = 3" PVC/HDPE
 MUW = 3" PVC/HDPE
 SAN = 8" PVC
 SFM = 2" HDPE
 * ALL UTILITIES UNDER PAVEMENT TO BE BACKFILLED WITH SELECT GRANULAR BACKFILL

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 115
Aurora, IL 60604

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

Tyck Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
800 West Van Buren
Suite 900
Naperville, IL 60563

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrenville Rd.
Suite 900
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607

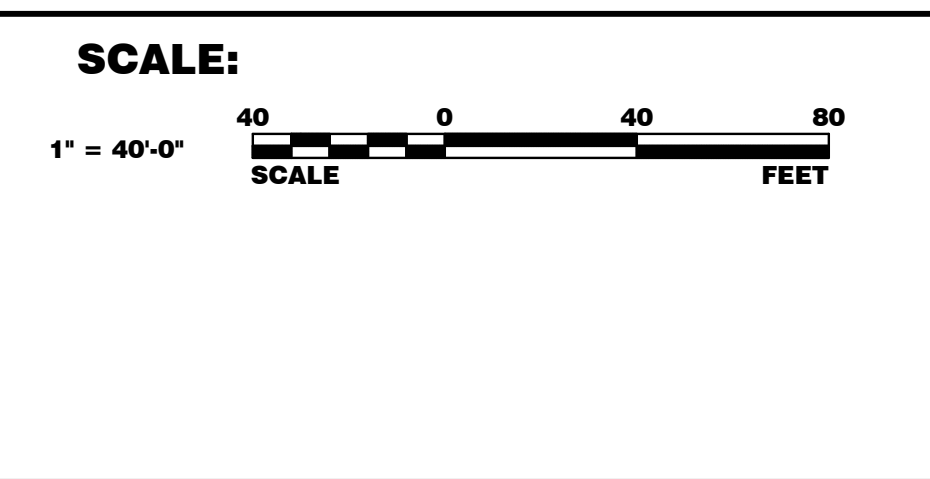
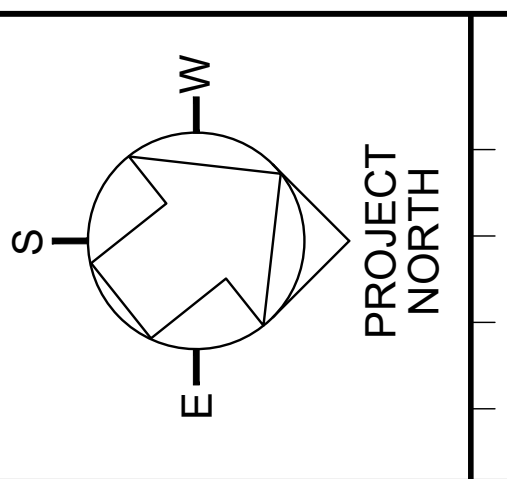
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1430
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	C. DAGIANTIS	08.16.2018
DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



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UNITED STATES DEPARTMENT OF ENERGY

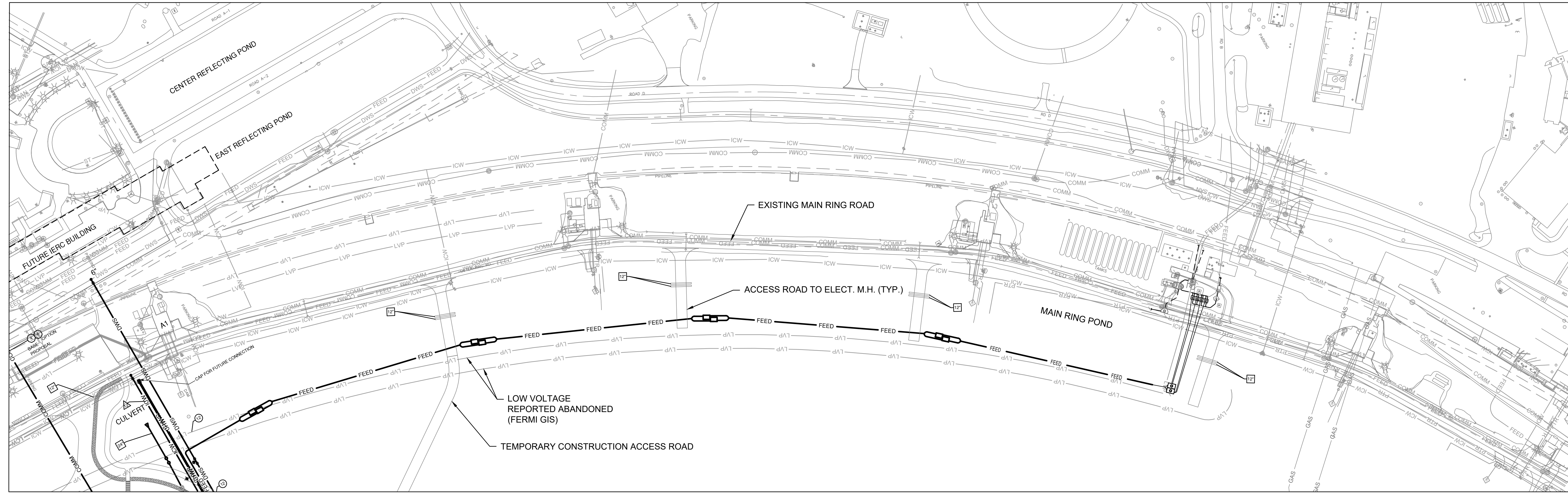
PIP II SITE PREPARATION

NEW PHASE I UTIL PLAN I

DRAWING NO. **4-3-2** **C-11** REV. 1

Thursday, August 16, 2018 2:08:29 PM

08-17-2018



UTILITY NOTES

- △ ICW (IN.) PVC/HDPE
- STORM (IN.) RCP E
- NO. COMM DUCTS E
- NO. OF FEED DUCTS UNLESS OTHERWISE NOTED

CHW = 8" PVC/HDPE
 DWS = 3" PVC/HDPE
 MUW = 3" PVC/HDPE
 SAN = 8" PVC
 SFM = 2" HDPE
 * ALL UTILITIES UNDER PAVEMENT TO BE BACKFILLED WITH SELECT GRANULAR BACKFILL

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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 11 East Madison Street
 Suite 300
 Chicago IL 60602

Tel: 312.456.0123
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Consulting Engineers
 550 North Commons Drive
 Suite 115
 Aurora, IL 60504

Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA

Tyck Gustafson Rockers Wilson Andrews, LLC

Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607

Tel: 312.341.0055
 Fax: 312.341.9966

IMEG

MEP Engineers
 1100 Wannerville Rd.
 Suite 400W
 Naperville, IL 60563

Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607

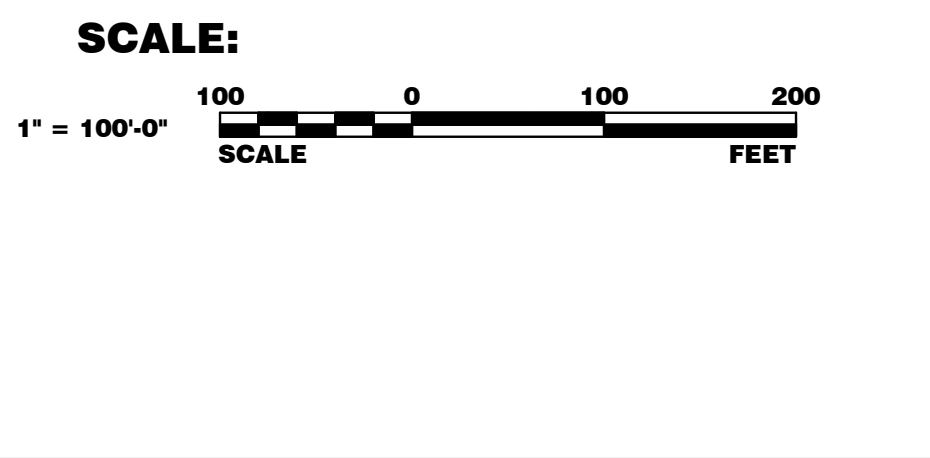
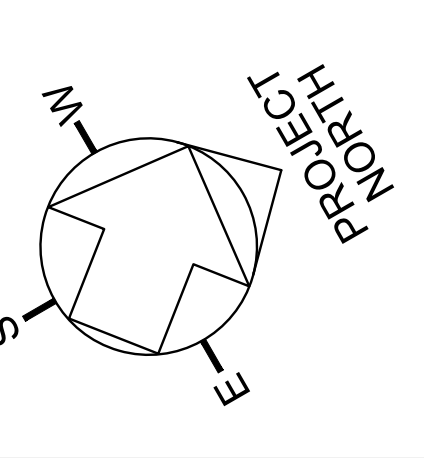
Tel: 312.492.6501
 Fax: 312.492.7101

Turner

General Contractor
 55 East Monroe St.
 Suite 1430
 Chicago, IL 60607

Tel: 312.327.2770
 Fax: 312.492.7101

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DRAWN	M. ARMOUTI	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		



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UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION

NEW PHASE I UTILITY PLAN II

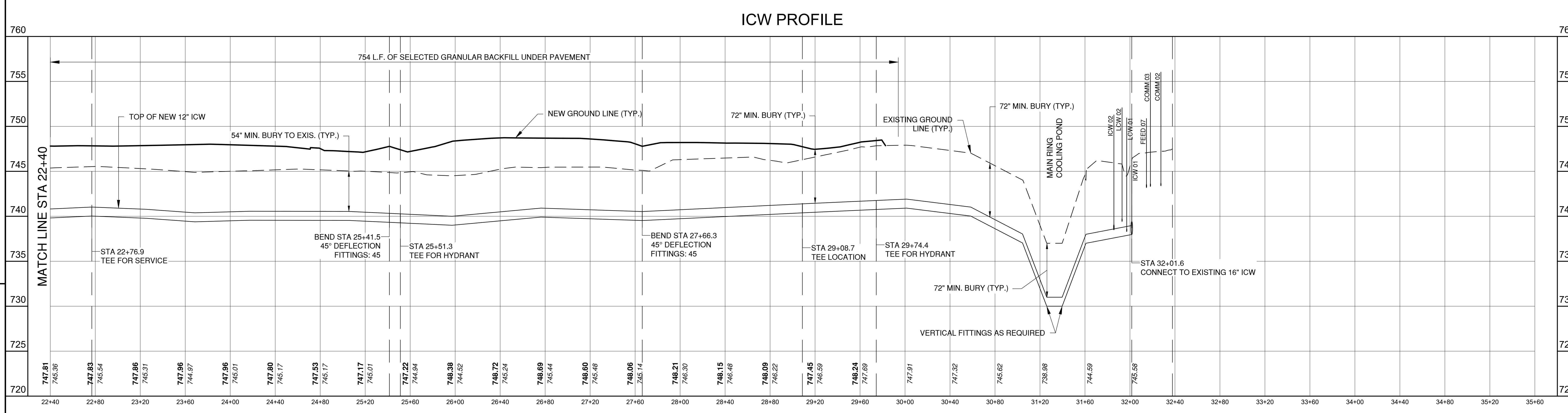
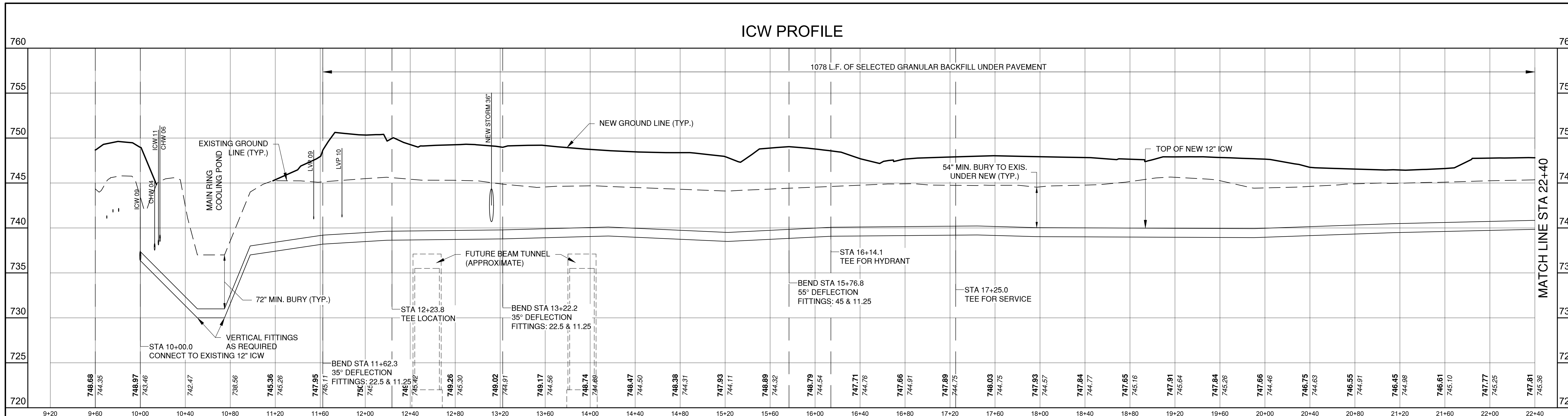
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08-17-2018

GENERAL SHEET NOTES

- 1. TEXT
- 2. TEXT
- 3. TEXT



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Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

TyR. Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

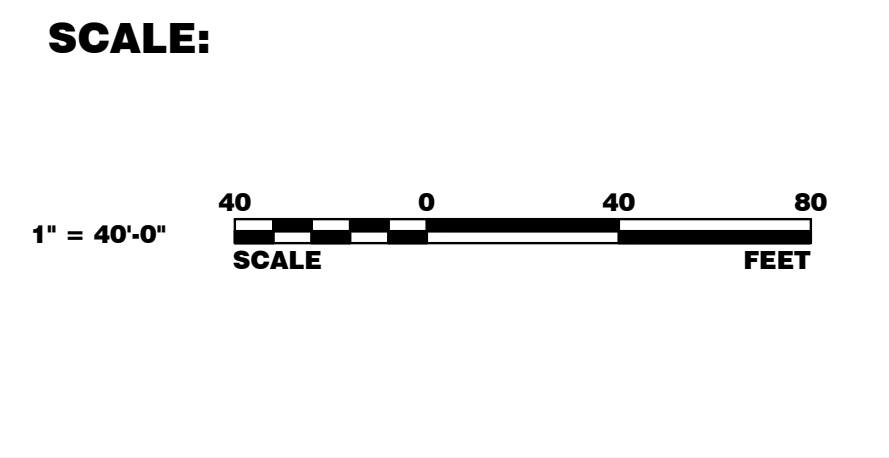
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60603
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

	NAME	DATE



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UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION

PROFILE UTILITIES I - ICW

DRAWING NO. **4-3-2** **C-13** REV. 1

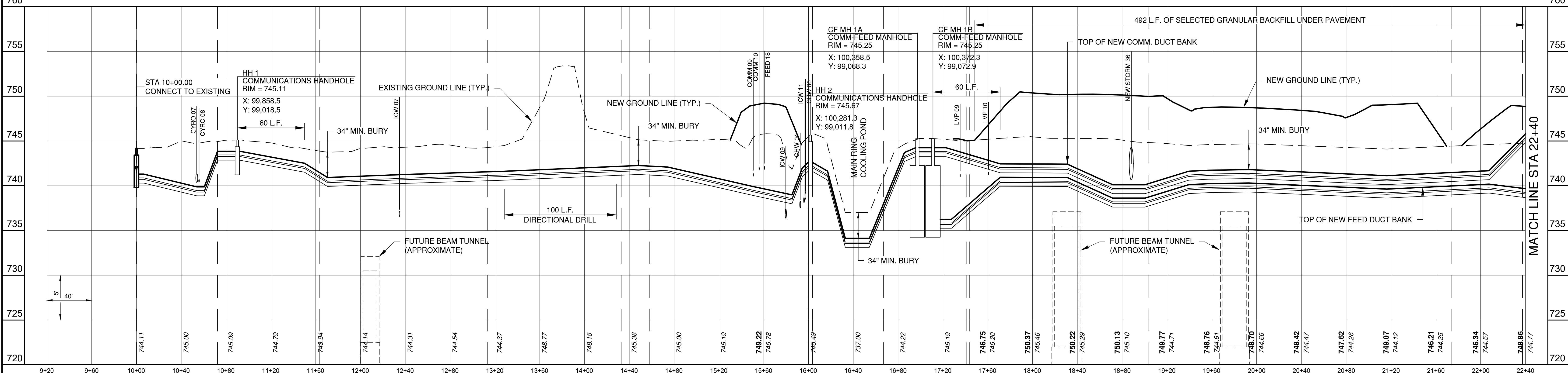
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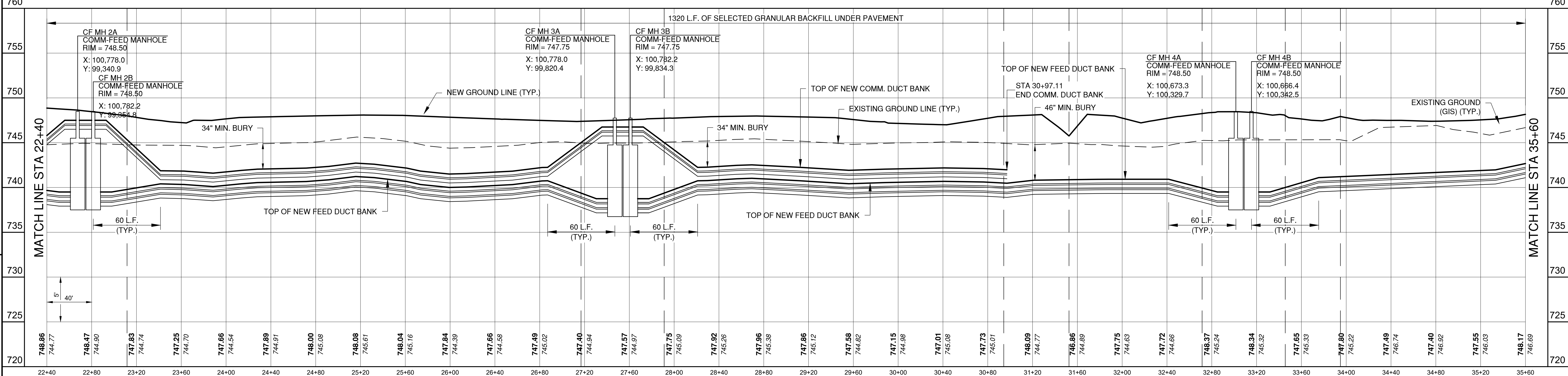
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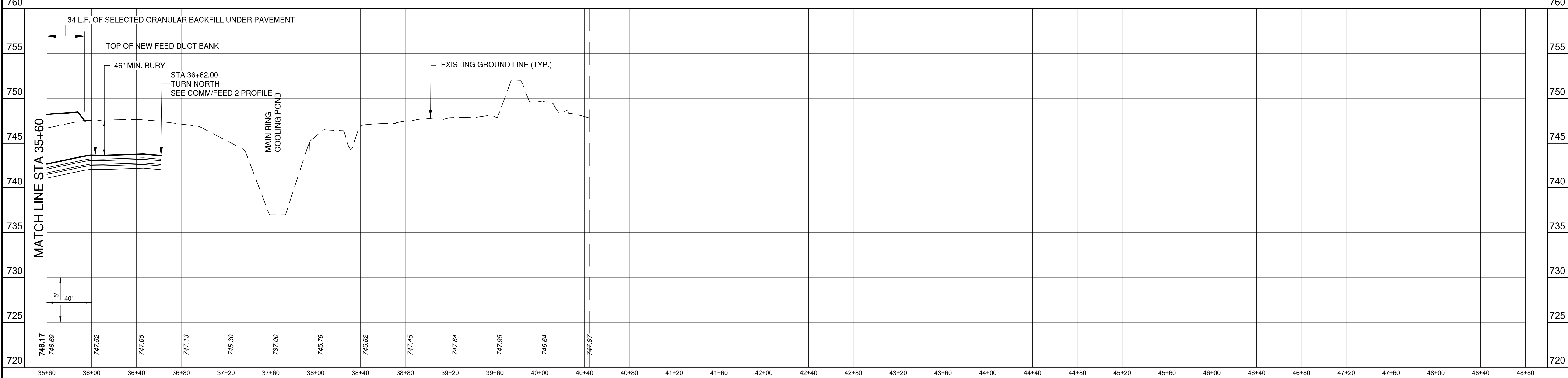
COMM-FEED 1 PROFILE



COMM-FEED 1 PROFILE



COMM-FEED 1 PROFILE



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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Architects
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Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tyk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

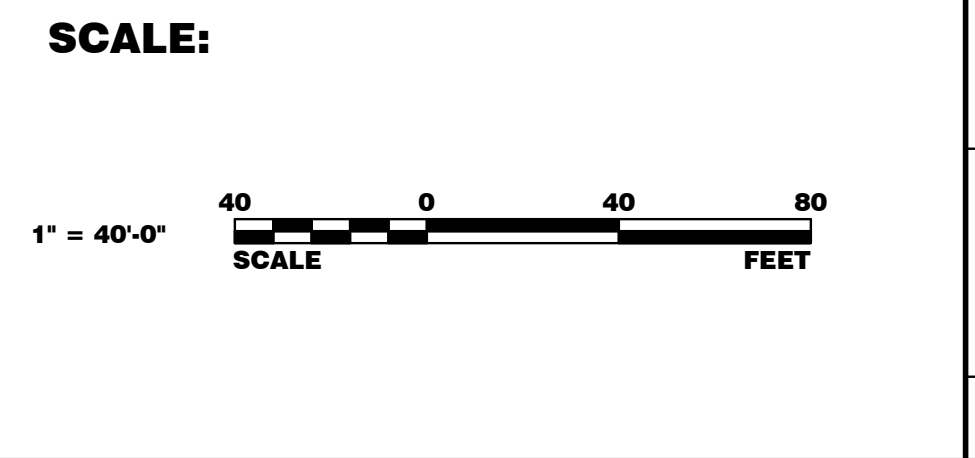
IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1420
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

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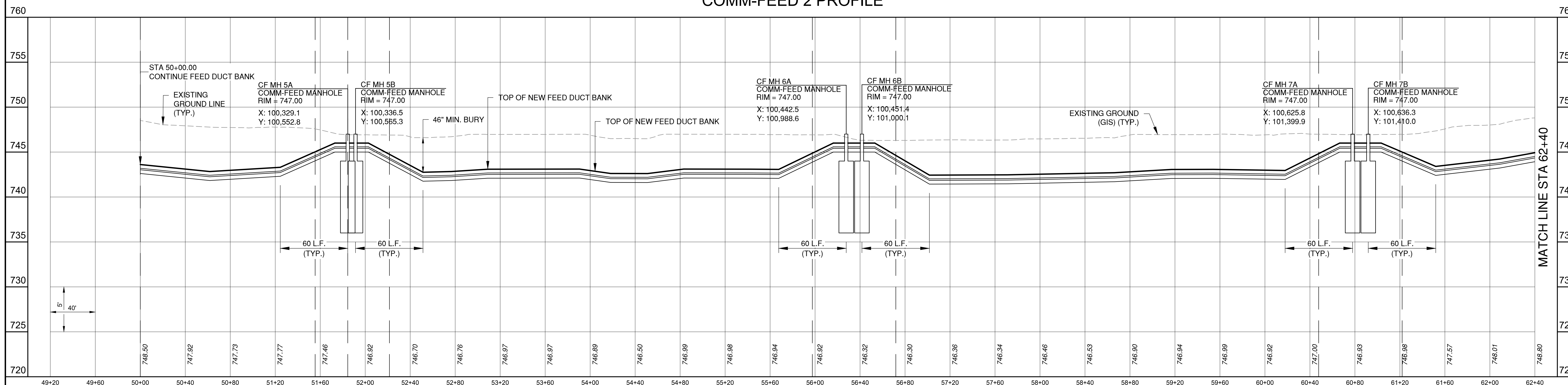


FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
PROFILE UTILITIES III - COMM-FEED
DRAWING NO. **4-3-2** **C-15** REV. 1

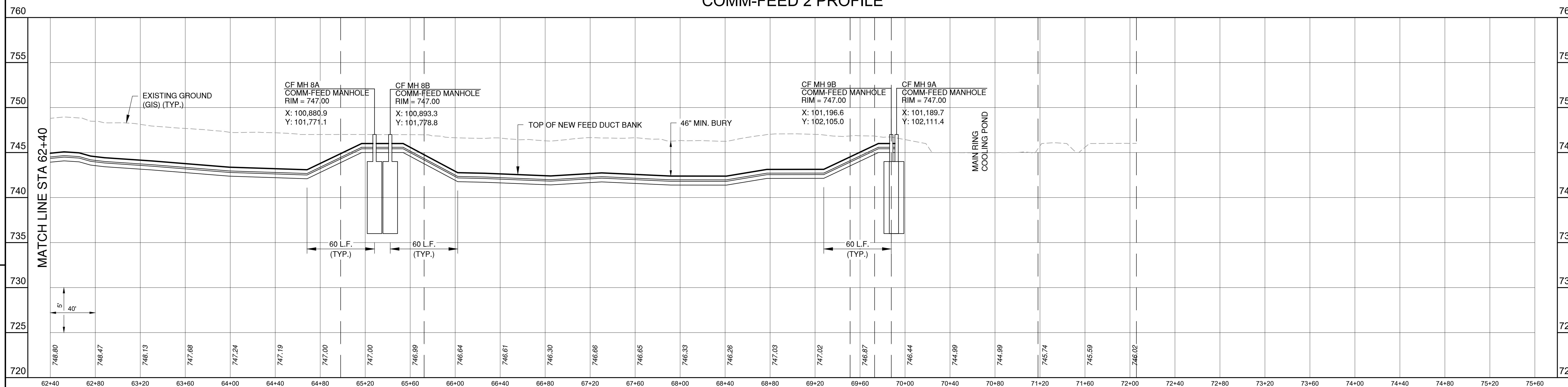
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08-17-2018

COMM-FEED 2 PROFILE



COMM-FEED 2 PROFILE



GENERAL SHEET NOTES

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- 2. TEXT
- 3. TEXT

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REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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 Architects
 11 East Madison Street
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 Chicago, IL 60602
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 Fax: 312.456.0124

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 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 TyR Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

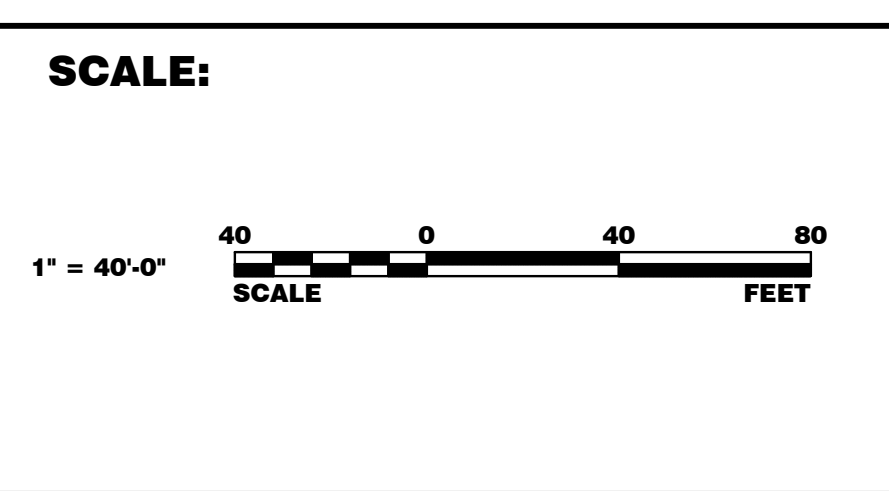
IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 500
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

DESIGNED	J. KOENIG	DATE	08.16.2018
DRAWN	T. LONDON	DATE	08.16.2018
CHECKED	T. O'GRADY	DATE	08.16.2018
APPROVED			
SUBMITTED			

NAME	DATE
J. KOENIG	08.16.2018
T. LONDON	08.16.2018
T. O'GRADY	08.16.2018



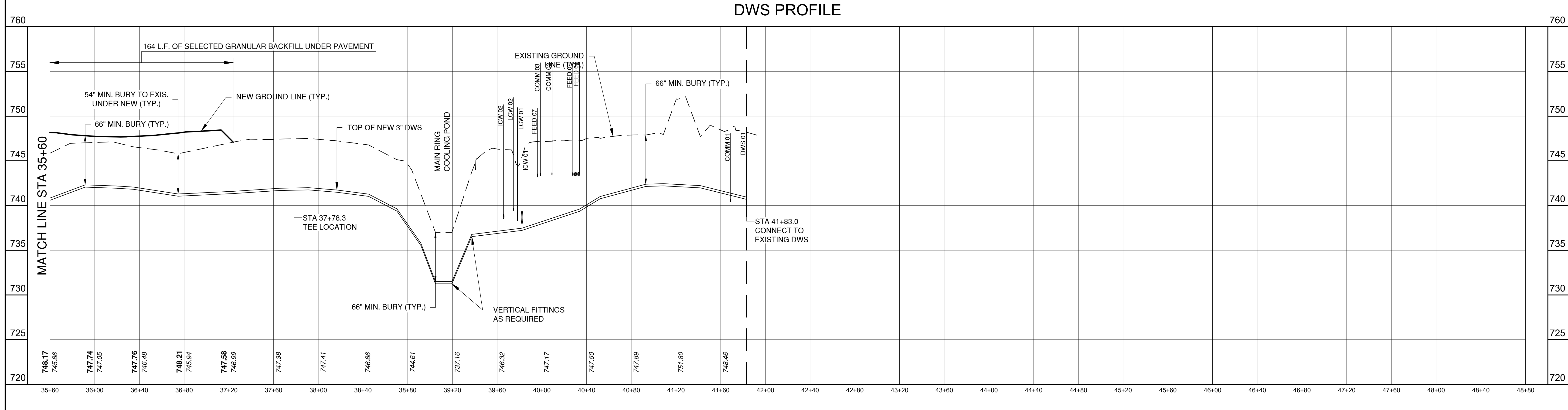
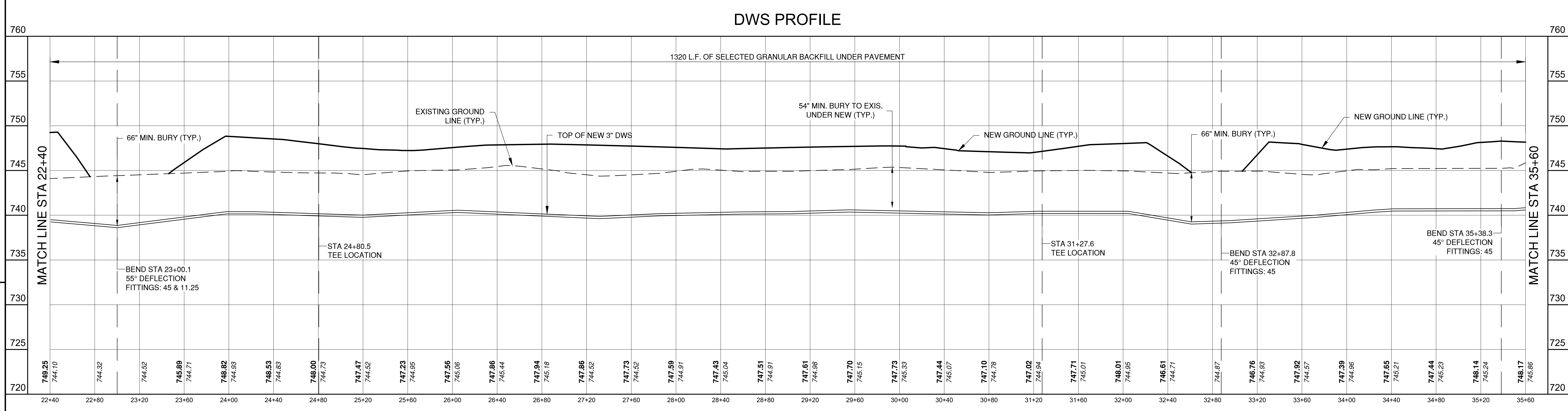
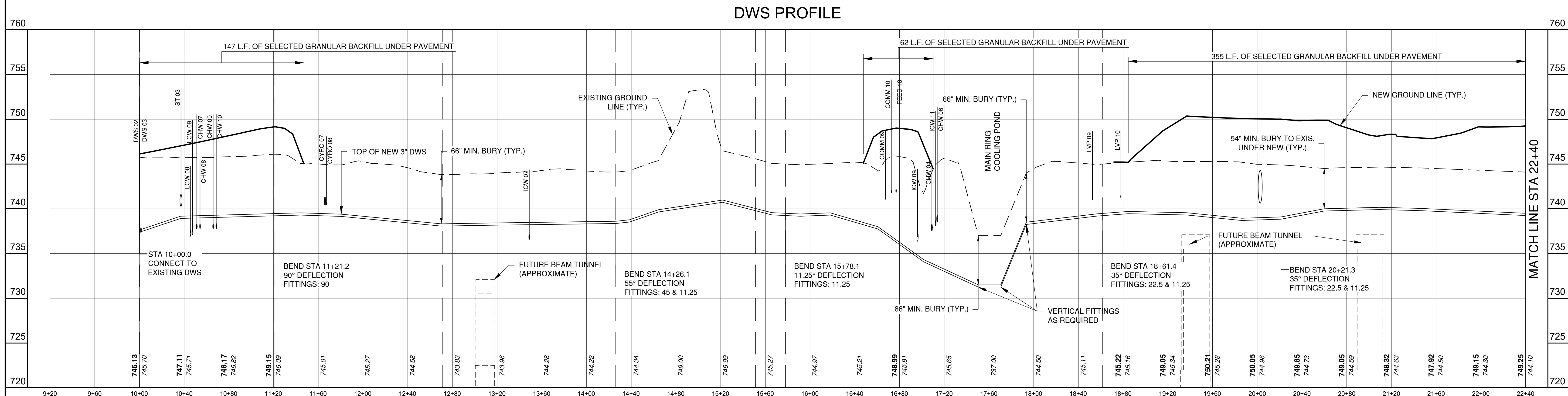
FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
PROFILE UTILITIES IV - COMM-FEED
 DRAWING NO. **4-3-2** **C-16** REV. 1

08-17-2018

GENERAL SHEET NOTES

- 1. TEXT
- 2. TEXT
- 3. TEXT



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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 Architects
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 550 North Van Buren
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

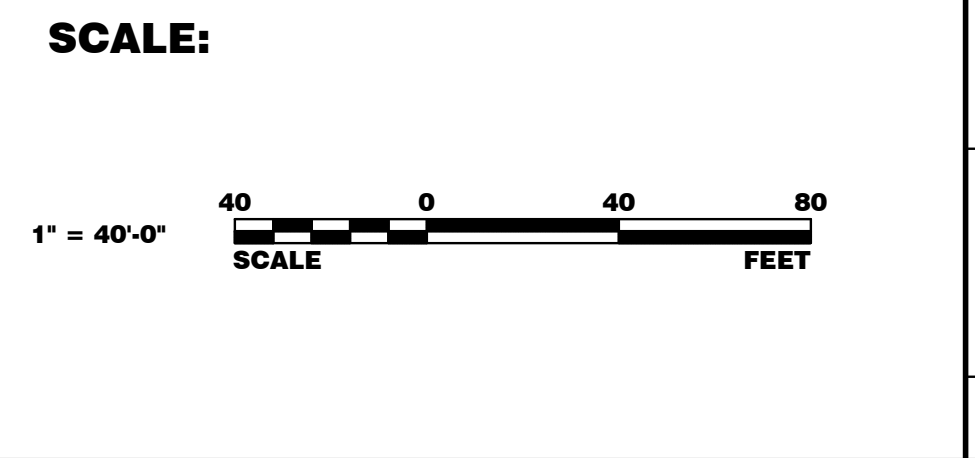
IMEG
 MEP Engineers
 1100 Wernerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

SCALE:
1" = 40'-0"



FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
PROFILE UTILITIES V - DWS
 DRAWING NO. **4-3-2** **C-17** REV. 1

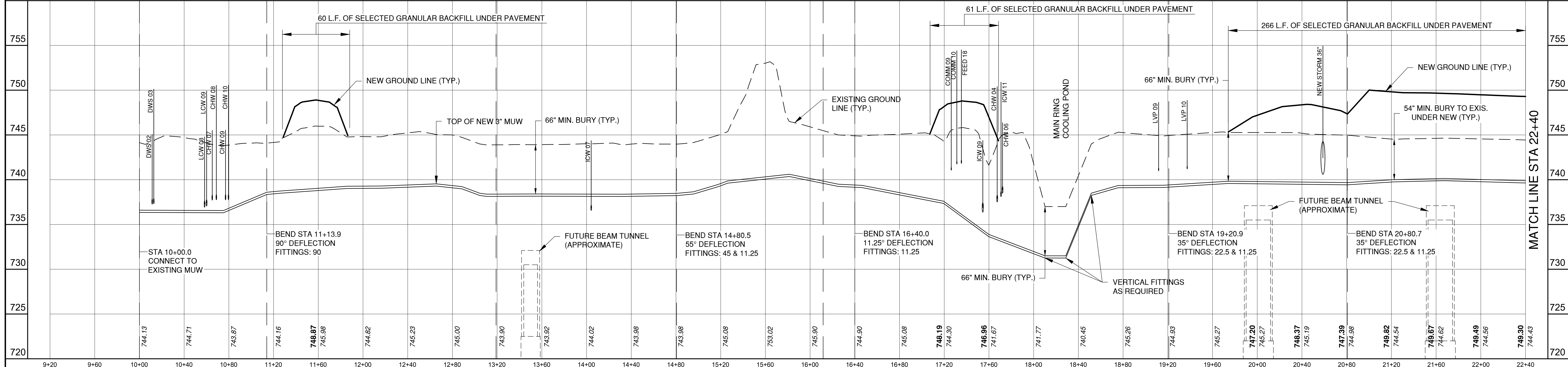
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08-17-2018

760

MUW PROFILE

760



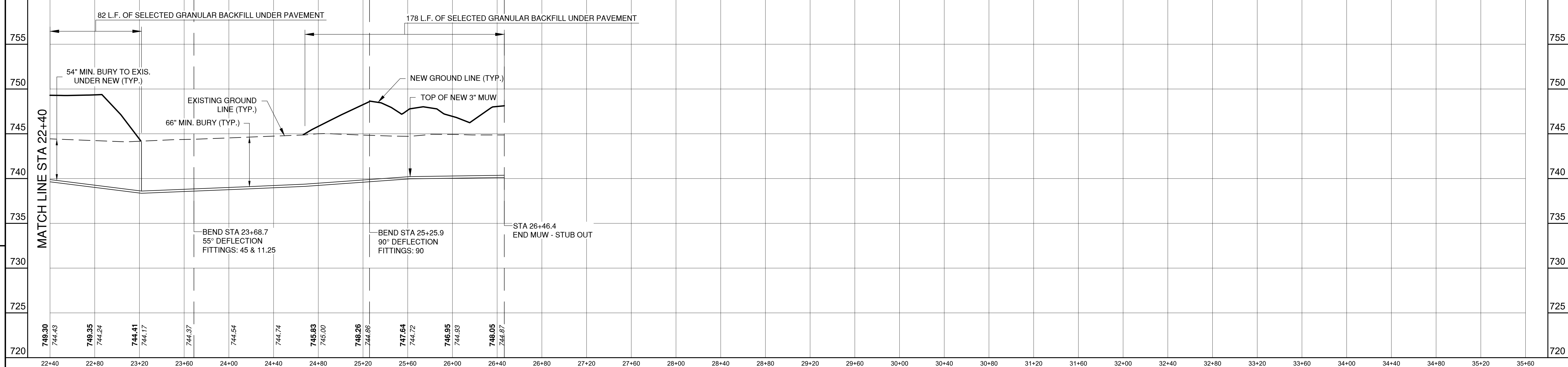
GENERAL SHEET NOTES

- 1. TEXT
- 2. TEXT
- 3. TEXT

760

MUW PROFILE

760



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS
REVISIONS		

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Van Buren
Suite 500
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tyk, Gustafson, Rockers, Wilson, Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
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HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 900
Chicago, IL 60607
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Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

SCALE:
1" = 40'-0"
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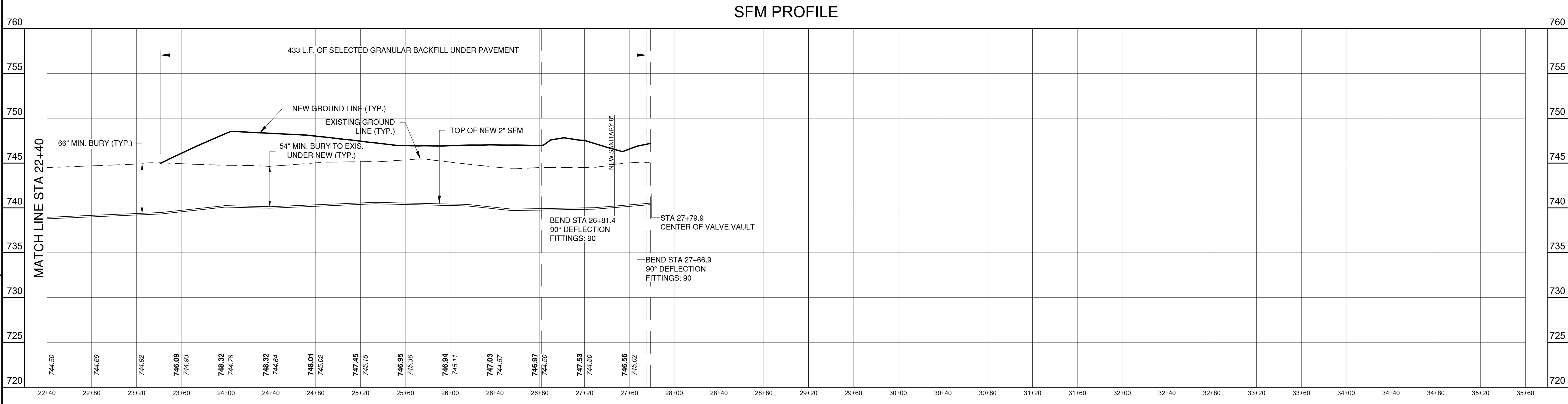
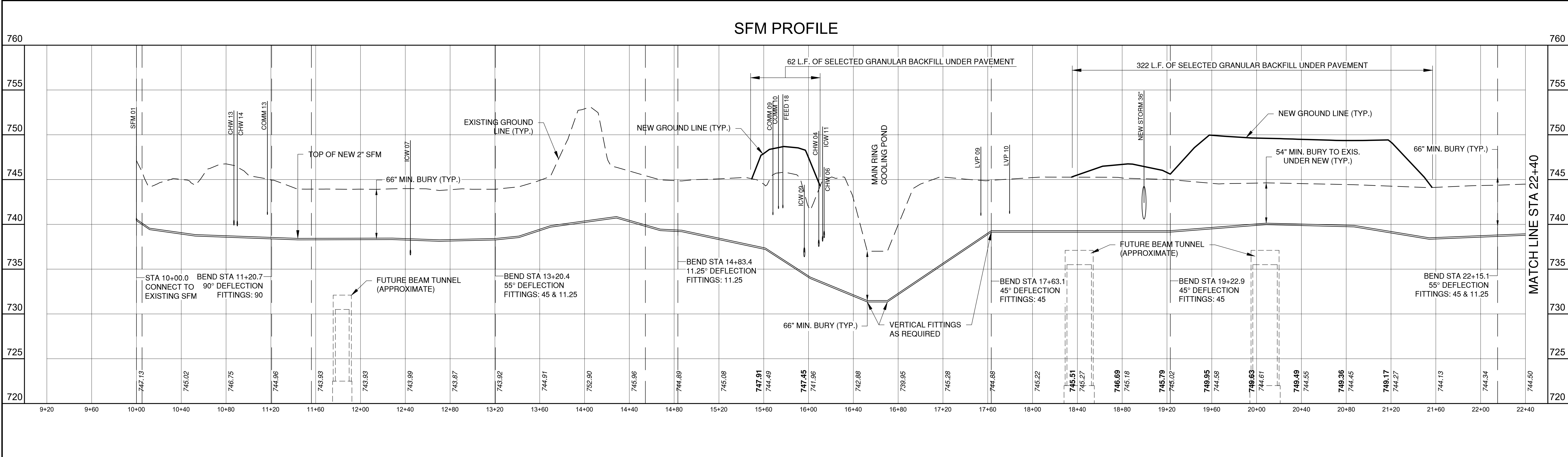
FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
PROFILE UTILITIES VI - MUW
DRAWING NO. **4-3-2** **C-18** REV. 1

Thursday, August 16, 2018 12:19:11 PM

08-17-2018

GENERAL SHEET NOTES

- 1. TEXT
- 2. TEXT
- 3. TEXT



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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 Architects
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 Aurora, IL 60504
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 Structural Engineers
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 Naperville, IL 60563
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 Fax: 312.341.9966

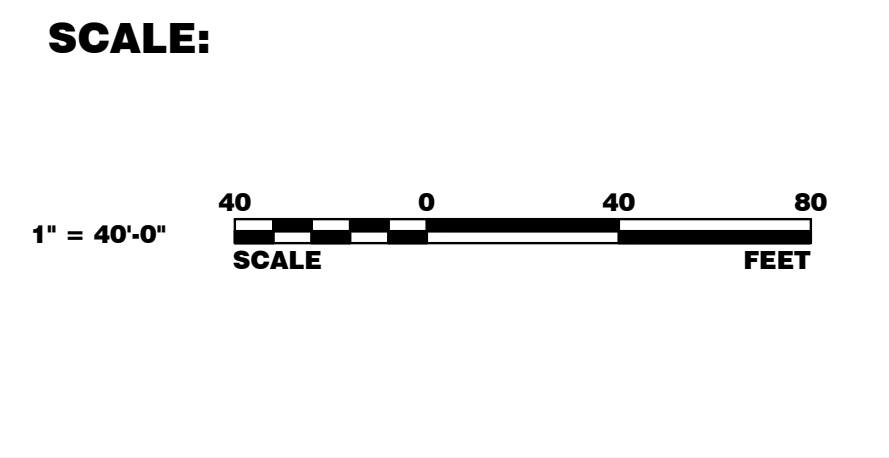
IMEG
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 1100 Wilmerville Rd.
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 Naperville, IL 60563
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 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

	NAME	DATE



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 UNITED STATES DEPARTMENT OF ENERGY

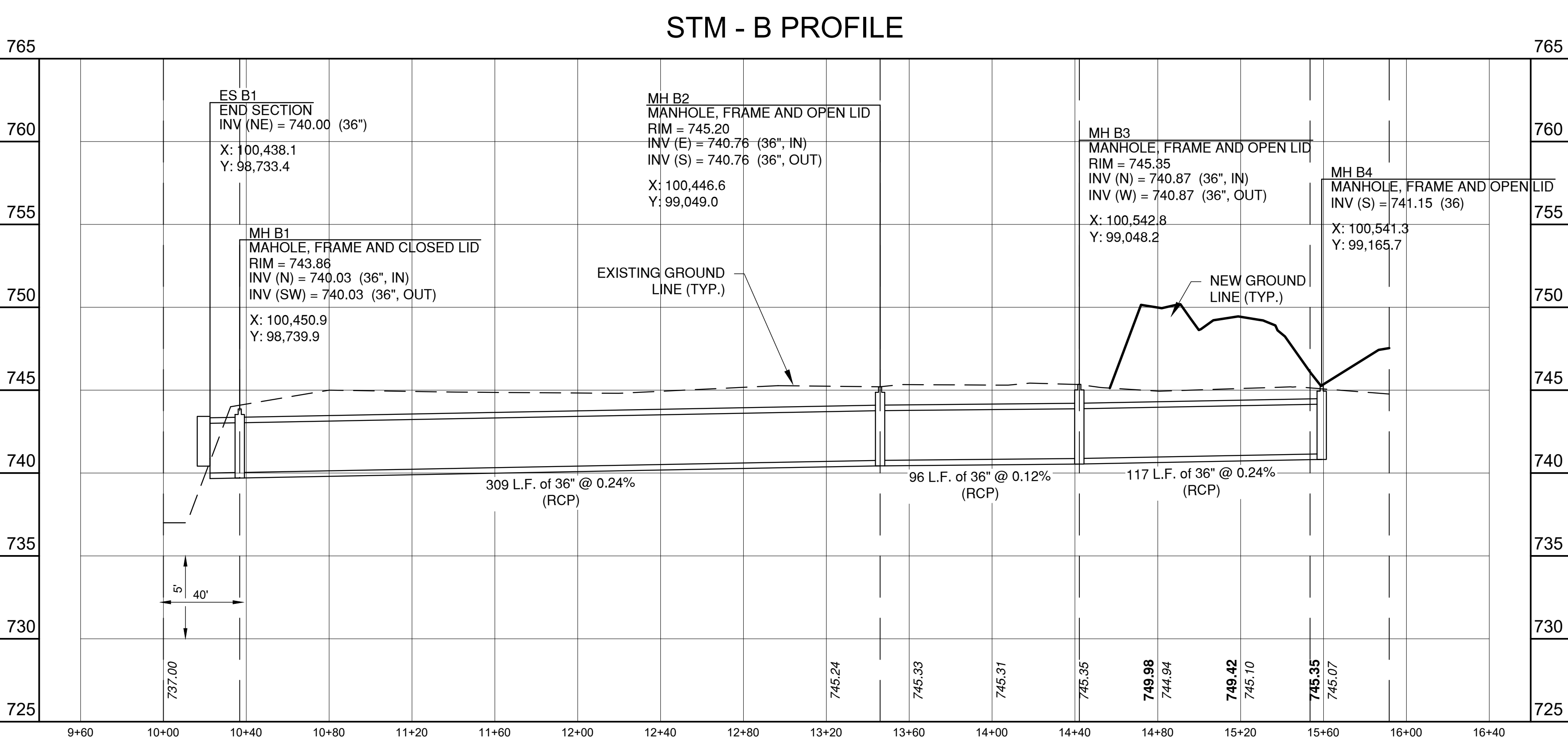
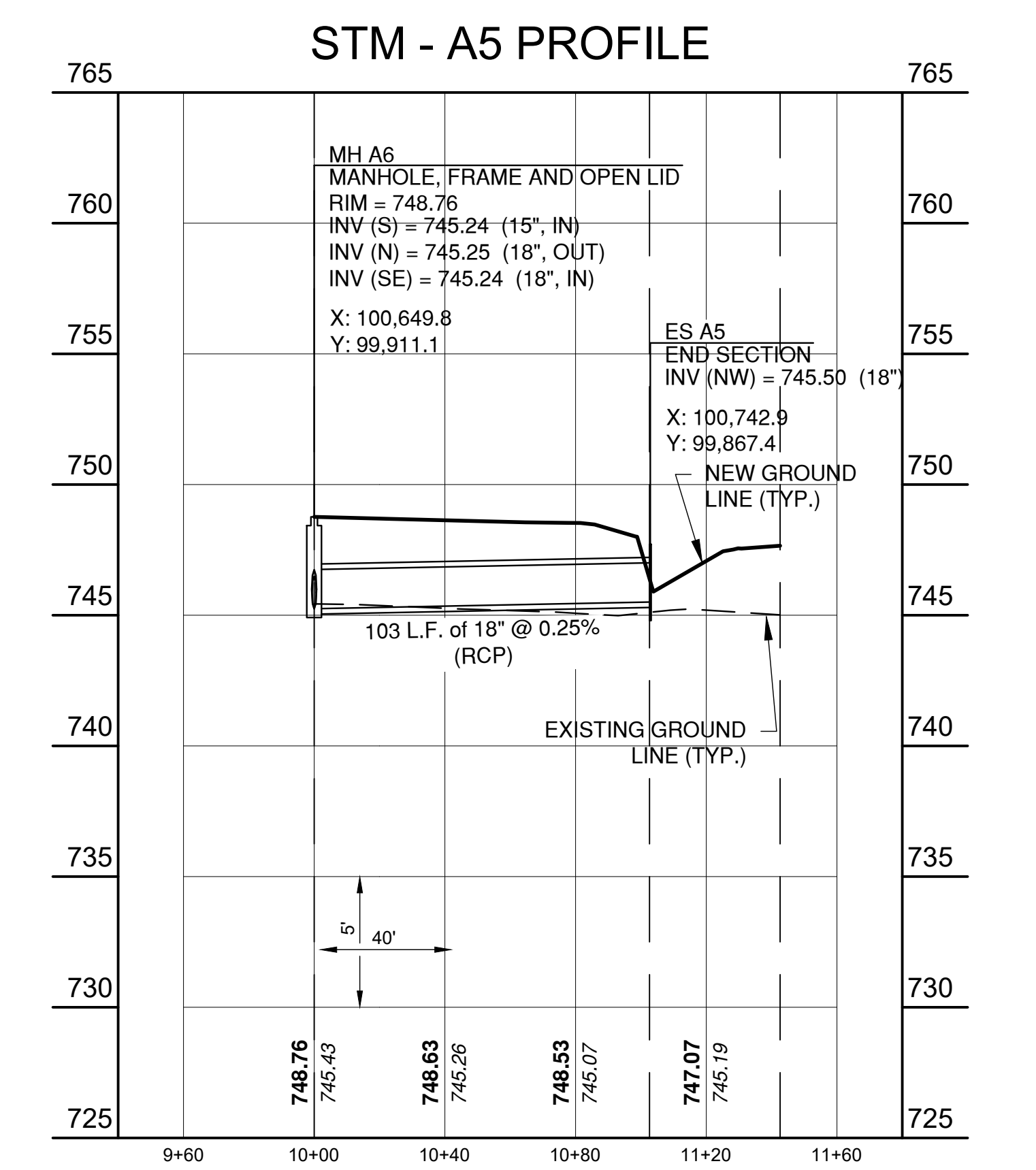
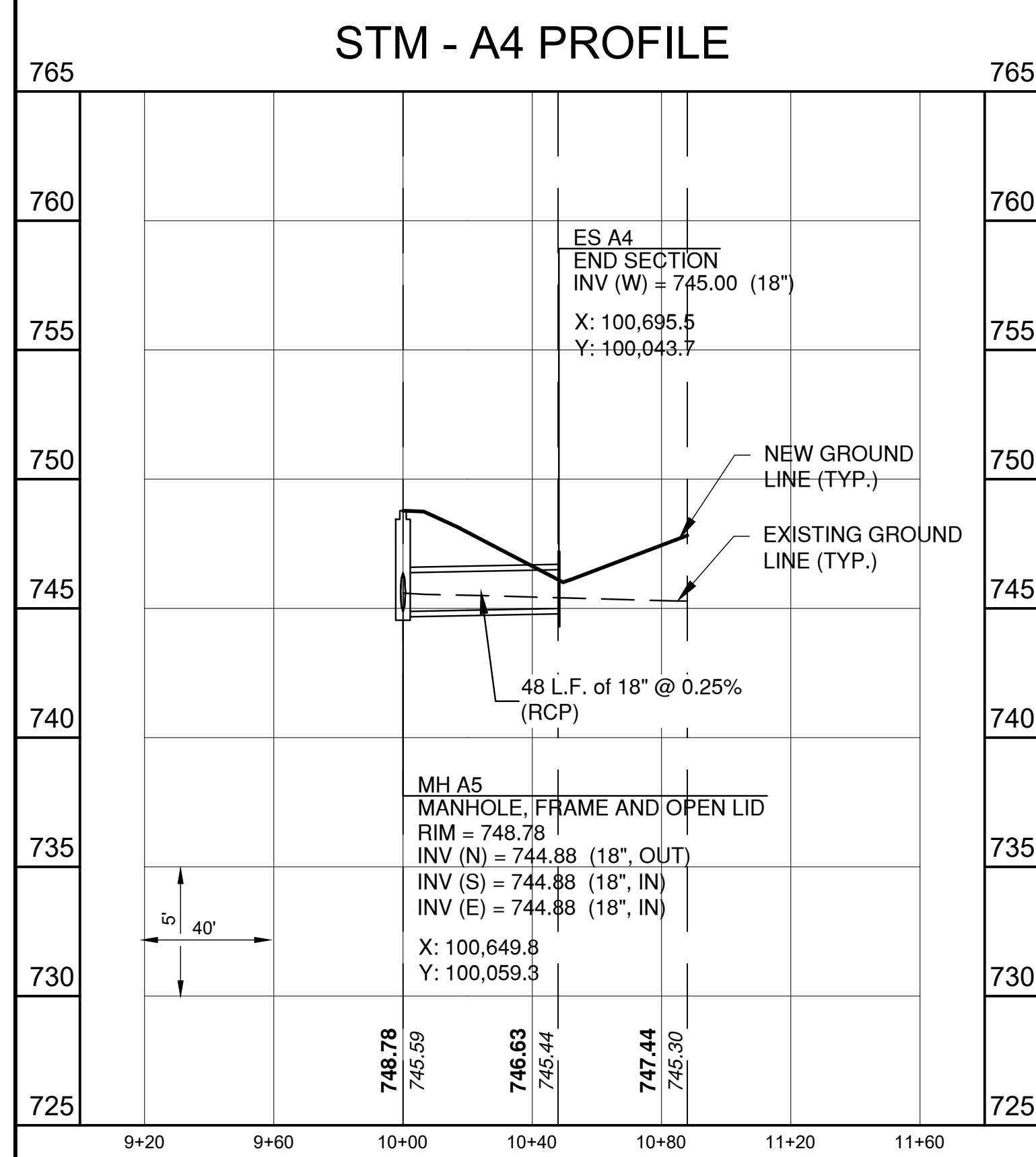
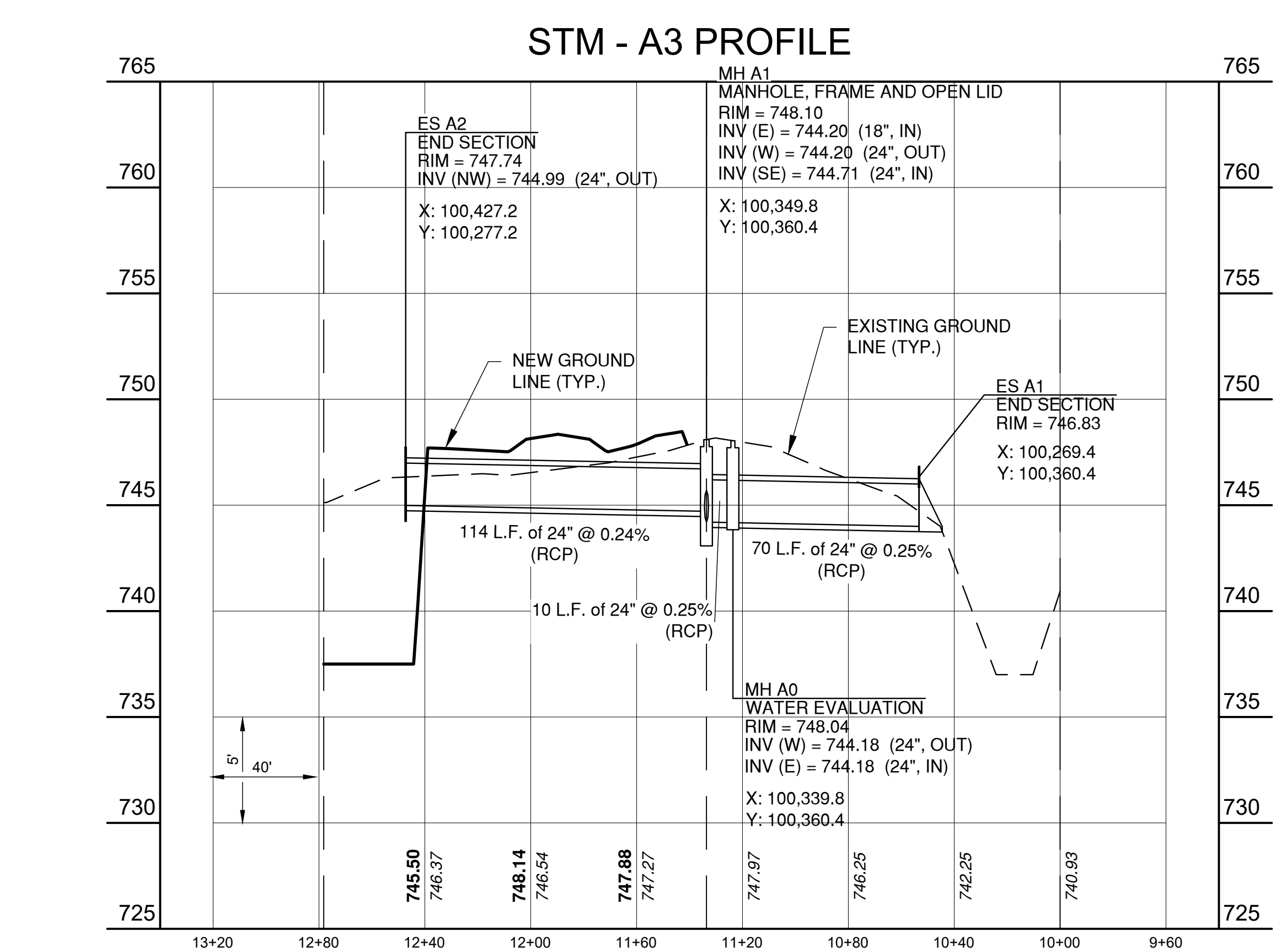
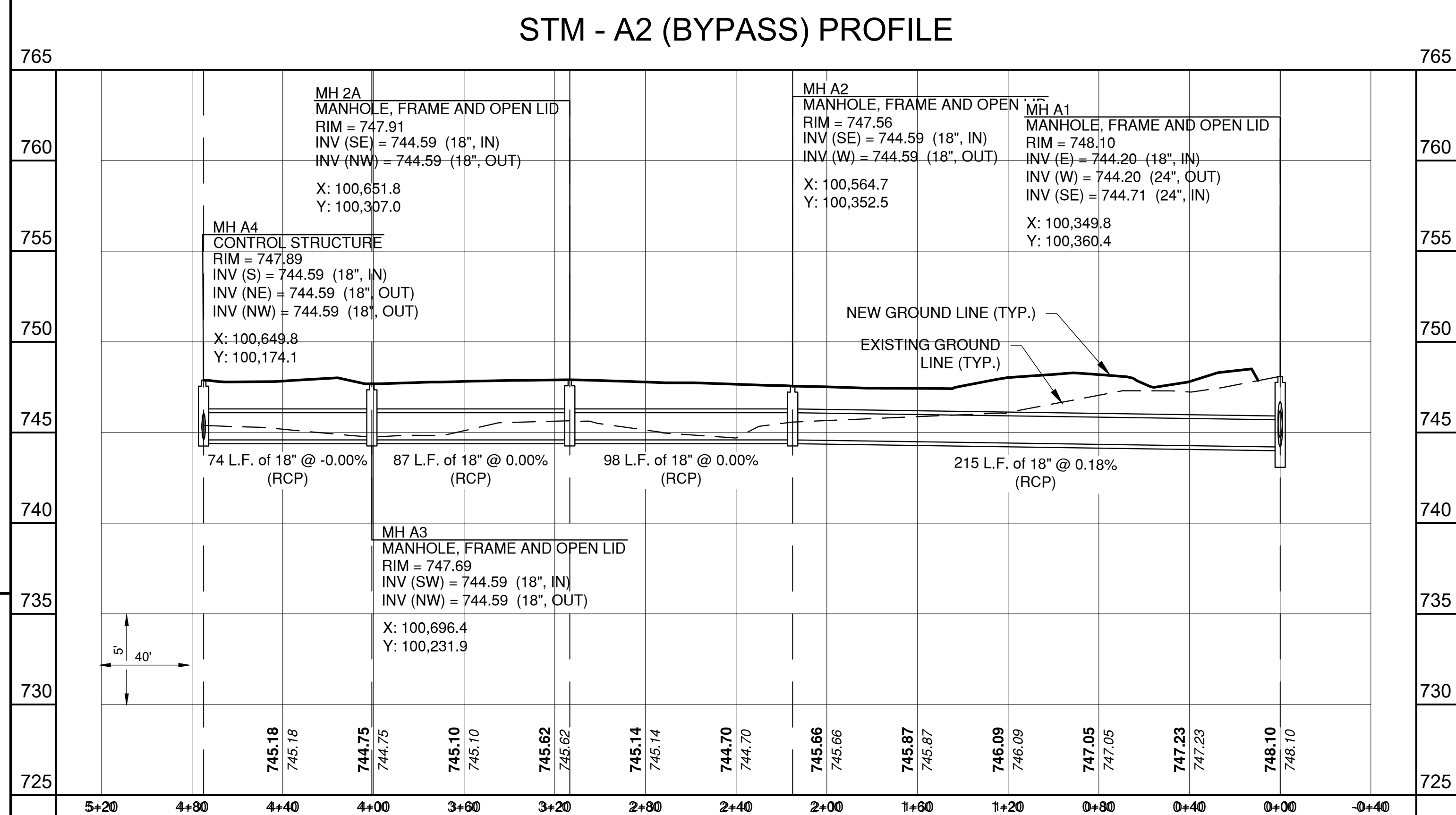
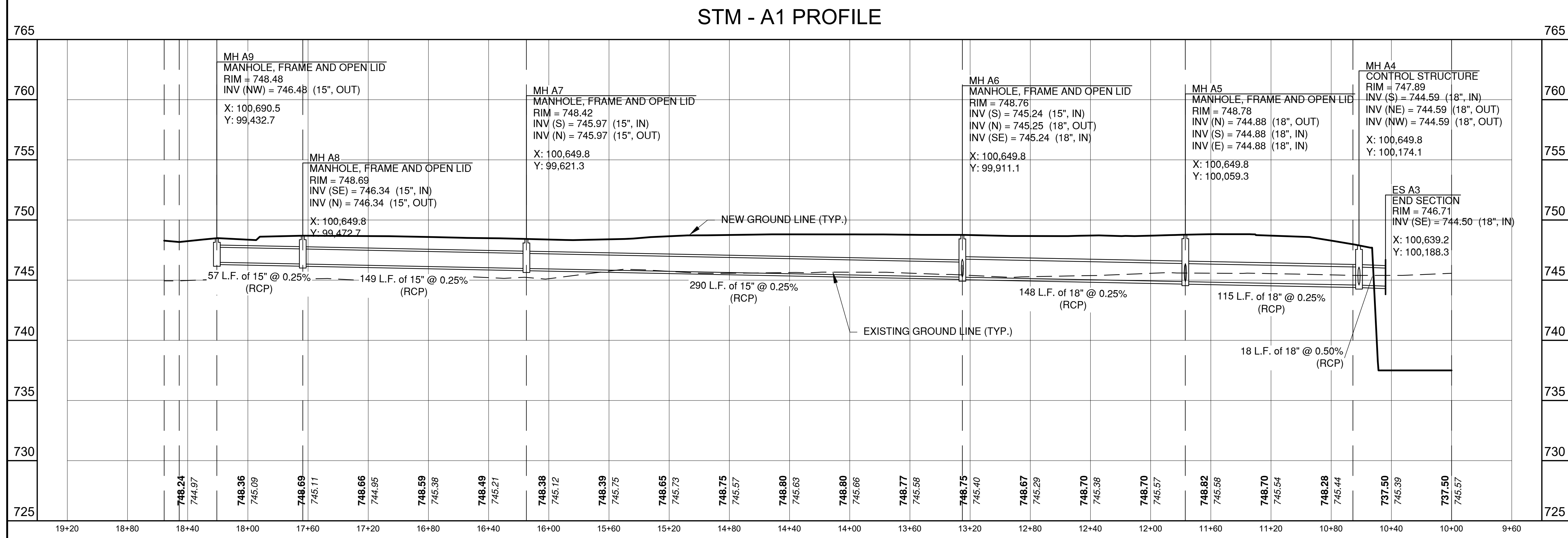
PIP II SITE PREPARATION
PROFILE UTILITIES VII - SFM
 DRAWING NO. **4-3-2** **C-19** REV. 1

Thursday, August 16, 2018 12:19:16 PM

08-17-2018

GENERAL SHEET NOTES

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1	08.17.2018	60% DESIGN DOCUMENTS

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Architects
11 East Madison Street
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Chicago, IL 60602
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Aurora, IL 60504
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TGRWA
Tyk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wimmerman Rd.
Suite 600W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
550 West Jackson Blvd.
Suite 1400
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
Suite 1400
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

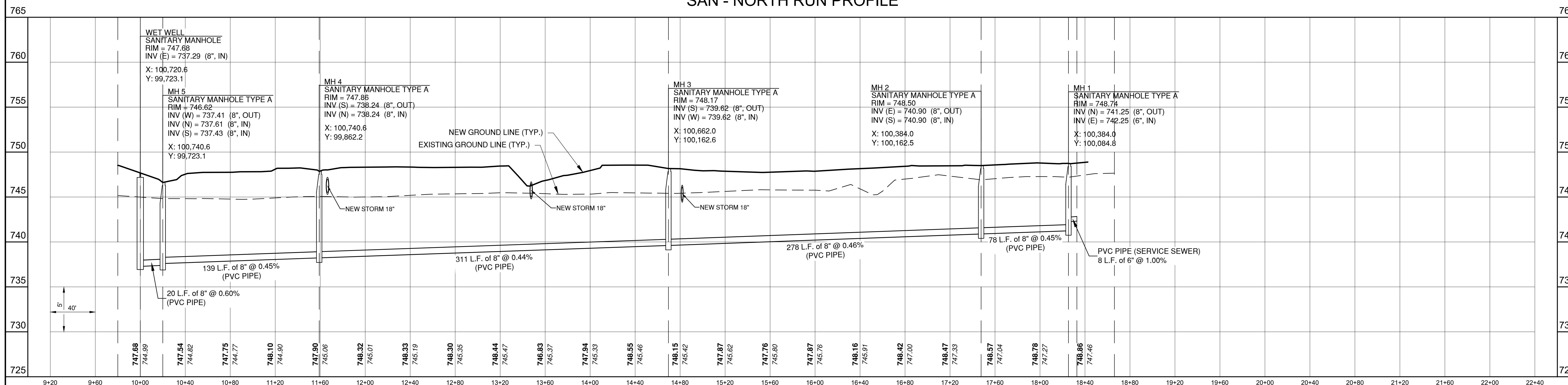
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UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
PROFILE UTILITIES VIII - STORM
DRAWING NO. **4-3-2** **C-20** REV. 1

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08-17-2018

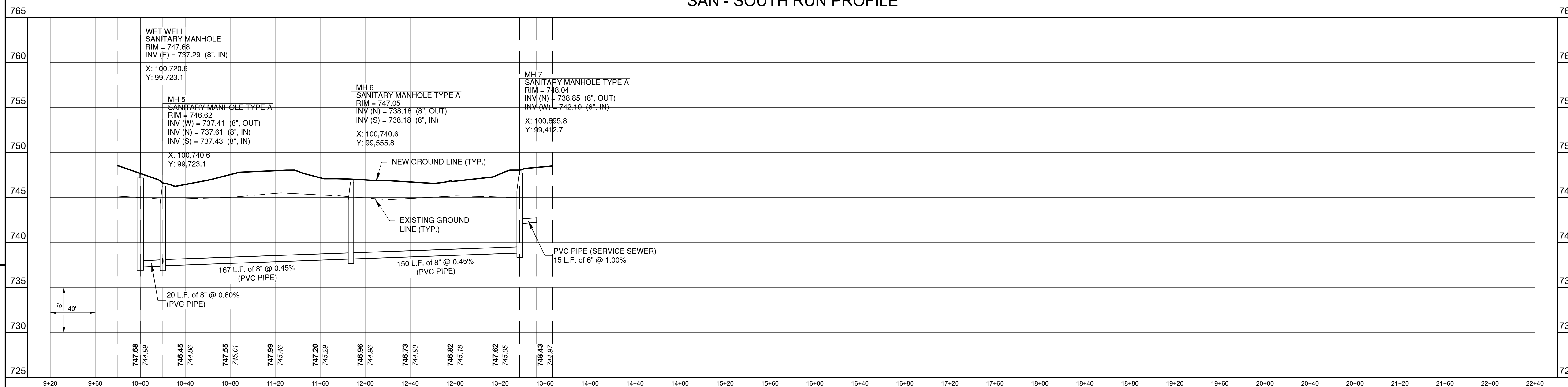
SAN - NORTH RUN PROFILE



GENERAL SHEET NOTES

- 1. TEXT
- 2. TEXT
- 3. TEXT

SAN - SOUTH RUN PROFILE



REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

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 Architects
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 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Van Buren
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyk Gustafson Rockers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

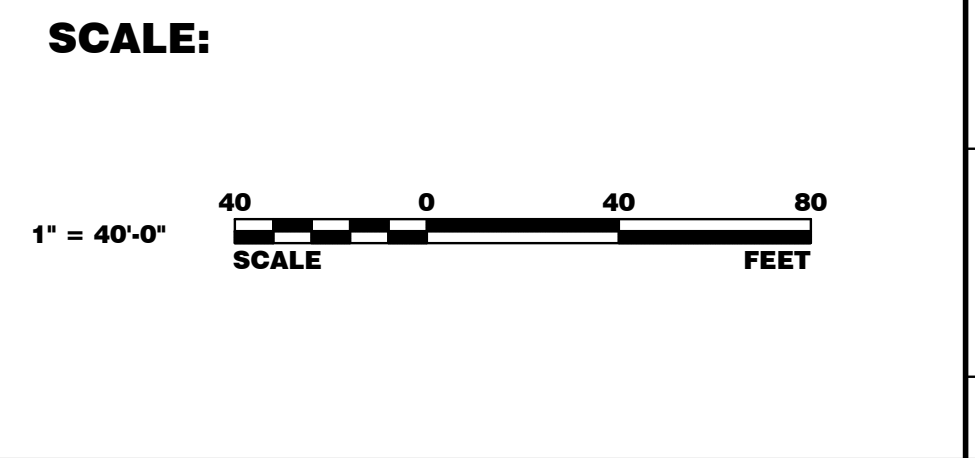
IMEG
 MEP Engineers
 1100 Wienerville Rd.
 Suite 600W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 550 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 General Contractor
 55 East Monroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	J. KOENIG	08.16.2018
DRAWN	T. LANDON	08.16.2018
CHECKED	T. O'GRADY	08.16.2018
APPROVED		
SUBMITTED		

SCALE:
1" = 40'-0"



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 UNITED STATES DEPARTMENT OF ENERGY

PIP II SITE PREPARATION
PROFILE UTILITIES IX - SANITARY
 DRAWING NO. **4-3-2** **C-21** REV. 1

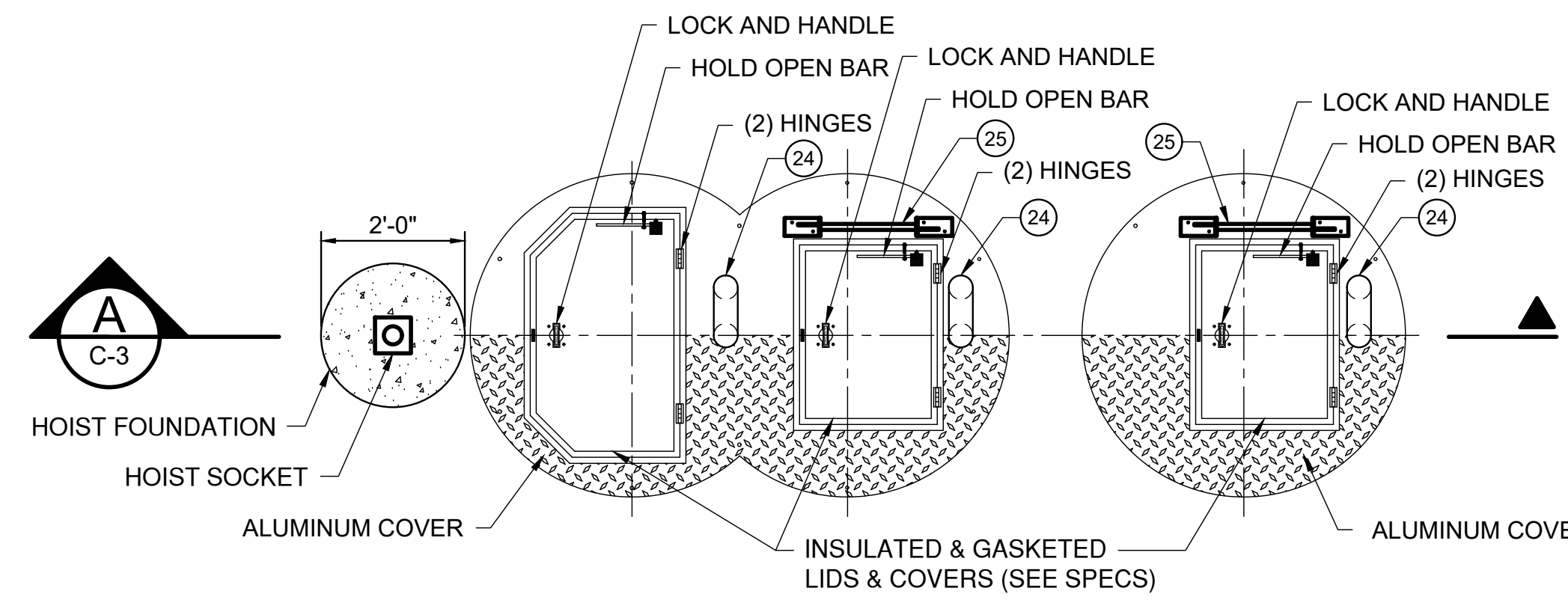
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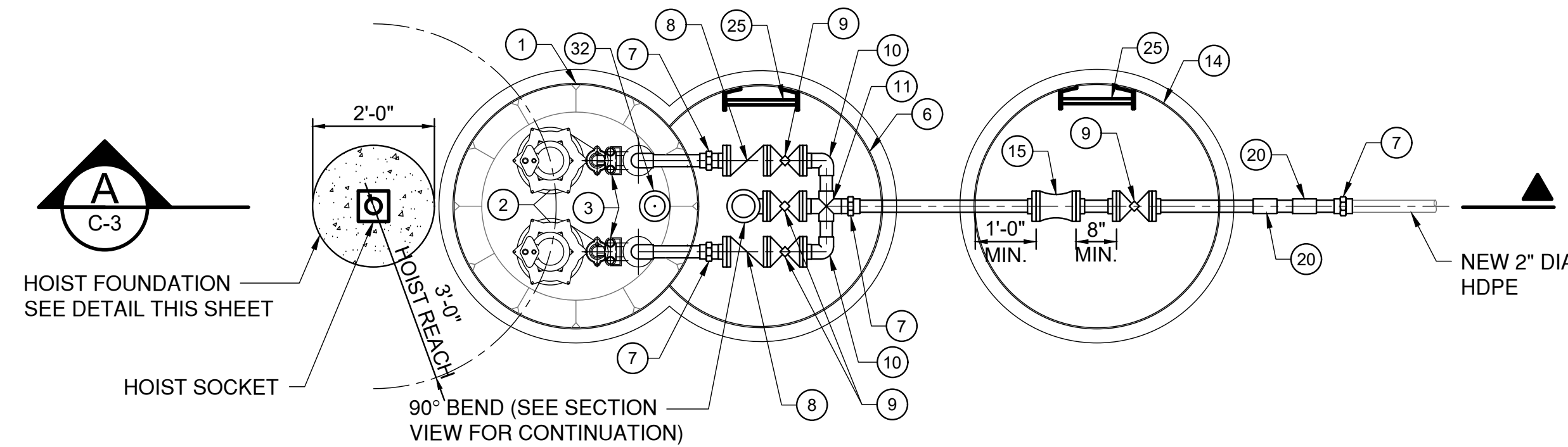
NOMENCLATURE

- ① 4' DIA.X10.02' FRP WET WELL
- ② PUMP
- ③ WEIL BASE 90°, 2" DIA.
- ④ FLOAT/ANCHOR SYSTEM (4 FLOATS) WITH ANCHOR/S.S. CHAIN
- ⑤ 2" DIA. SCHEDULE 80 PVC WITH SOCKET WELD
- ⑥ 4' DIA.x6.5' FRP VALVE VAULT
- ⑦ 2" DIA. SCHEDULE 80 PVC UNION
- ⑧ 2" DIA. CHECK VALVE WITH 125# FLANGE MUELLER, C.I. LEVER/WEIGHT
- ⑨ 2" DIA. PLUG VALVE WITH 125# FLANGE, DEZURICK, C.I. BODY
- ⑩ 2" SCHEDULE 80 PVC 90°, SOCKET
- ⑪ 2" DIA. SCHEDULE 80 PVC CROSS, SOCKET
- ⑫ 2"x4" SCHEDULE 80 INCREASER SOCK/NPTM
- ⑬ 4" NPT CAMLOCK COUPLER (FEMALE)
- ⑭ ' DIA.x ' FRP VALVE VAULT
- ⑮ 2" DIA. KROHNE OPTIFLUX 2000 MAGMETER
- ⑯ SUMP PUMP, ZOELLER MX161, C.I. 115 VAC, ½ HP, 1.5" DIA. DISCHARGE
- ⑰ 1½" SCH. 80 PVC IN-LINE CHECK VALVE AND BALL VALVE
- ⑱ S.S. GUIDE RAILS - BY PUMP MFR.
- ⑲ S.S. LIFTING CHAIN
- ⑳ 2" DIA. SCHEDULE 80 PVC 45°, SOCKET
- ㉑ 1" DIA. SCHEDULE 80 PVC DRAIN WITH FLEXIBLE ENTRY BOOTS
- ㉒ FLEXIBLE ENTRY BOOT, 2" & 1.5" OPW-EBF0200F
- ㉓ LIFTING HOOKS
- ㉔ 4" SCHEDULE 80 PVC WITH 40 MESH S.S. SCREEN CUT TO FIT IN OUTLET
- ㉕ ALUMINUM LADDER AND GRAB RAIL, HALLIDAY PRODUCTS, L1D & L1T
- ㉖ ADJUSTABLE PIPE SUPPORTS WITH BASE, STAINLESS STEEL, COOPER/B-LINE B3095 AND B3093 (5 TOTAL)
- ㉗ FRP SUMP WITH VENTED BOLT DOWN LID & 1" CORD OPENING
- ㉘ 2" FORD COUPLING FOR PVC PIPE, STYLE FE1, EPOXY COATED WITH STAINLESS STEEL NUTS AND BOLTS
- ㉙ FILLET SLOPE 1:1, 8" WIDE, BY SUB-CONTRACTOR
- ㉚ 6'-6" DIA. X 12" THICK PRECAST CONCRETE BASE SLAB FOR ANTI-FLOATATION WITH 4 - 3/4" THREADED STAINLESS STL. HILTI HVA ANCHORS
- ㉛ 5'-0" DIA. X 12" THICK PRECAST CONCRETE BASE SLAB FOR ANTI-FLOATATION WITH 4 - 3/4" THREADED STAINLESS STL. HILTI HVA ANCHORS
- ㉜ SUBMERSIBLE PRESSURE TRANSDUCER AND STILLING WELL, SEE DETAIL ON SHEET E-1

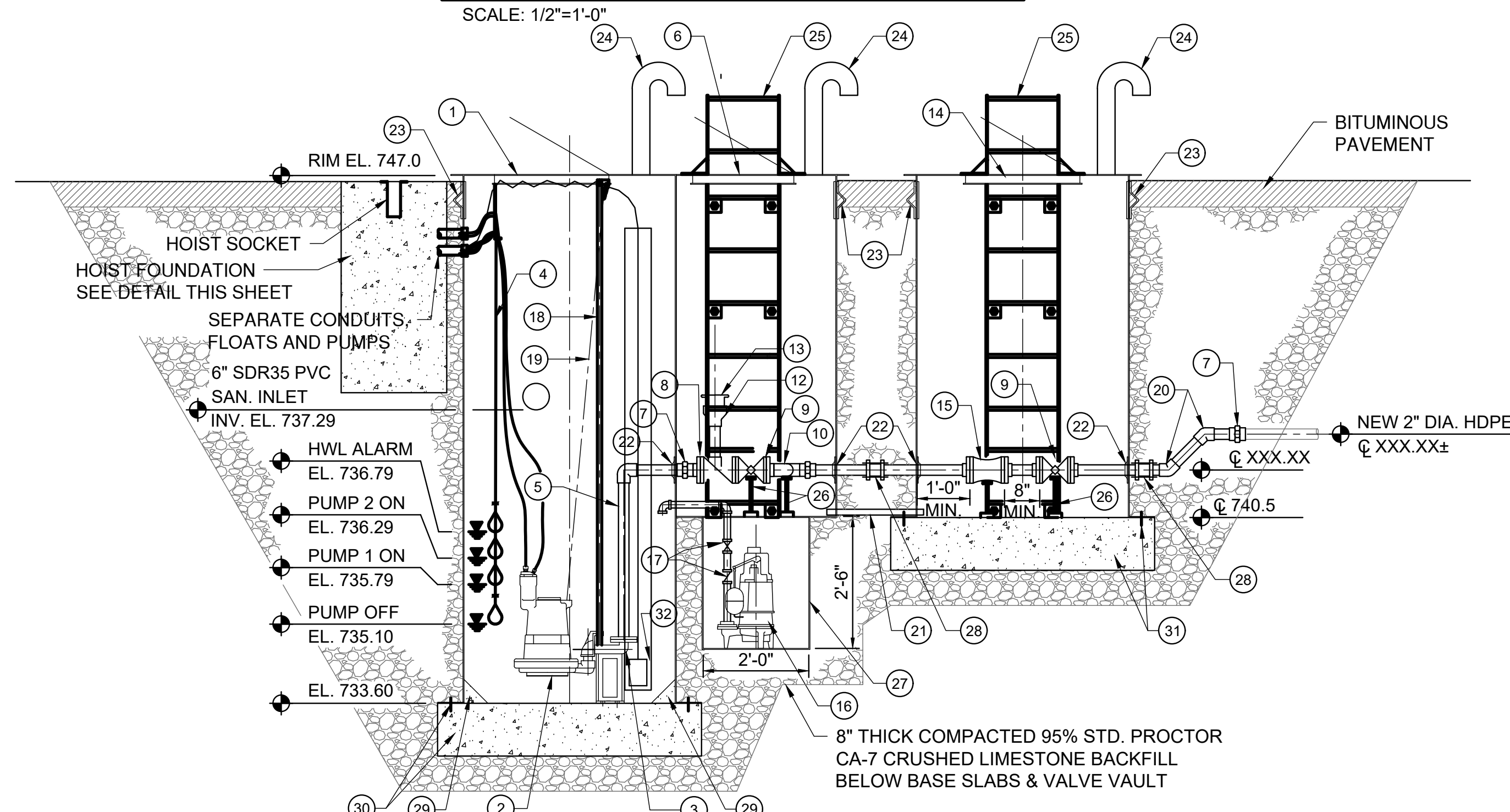
NOTE:
SUBCONTRACTOR TO INSTALL HEAT TRACE ON ALL PIPING IN VALVE AND METER VAULTS. (SEE ELECTRICAL SPECS)



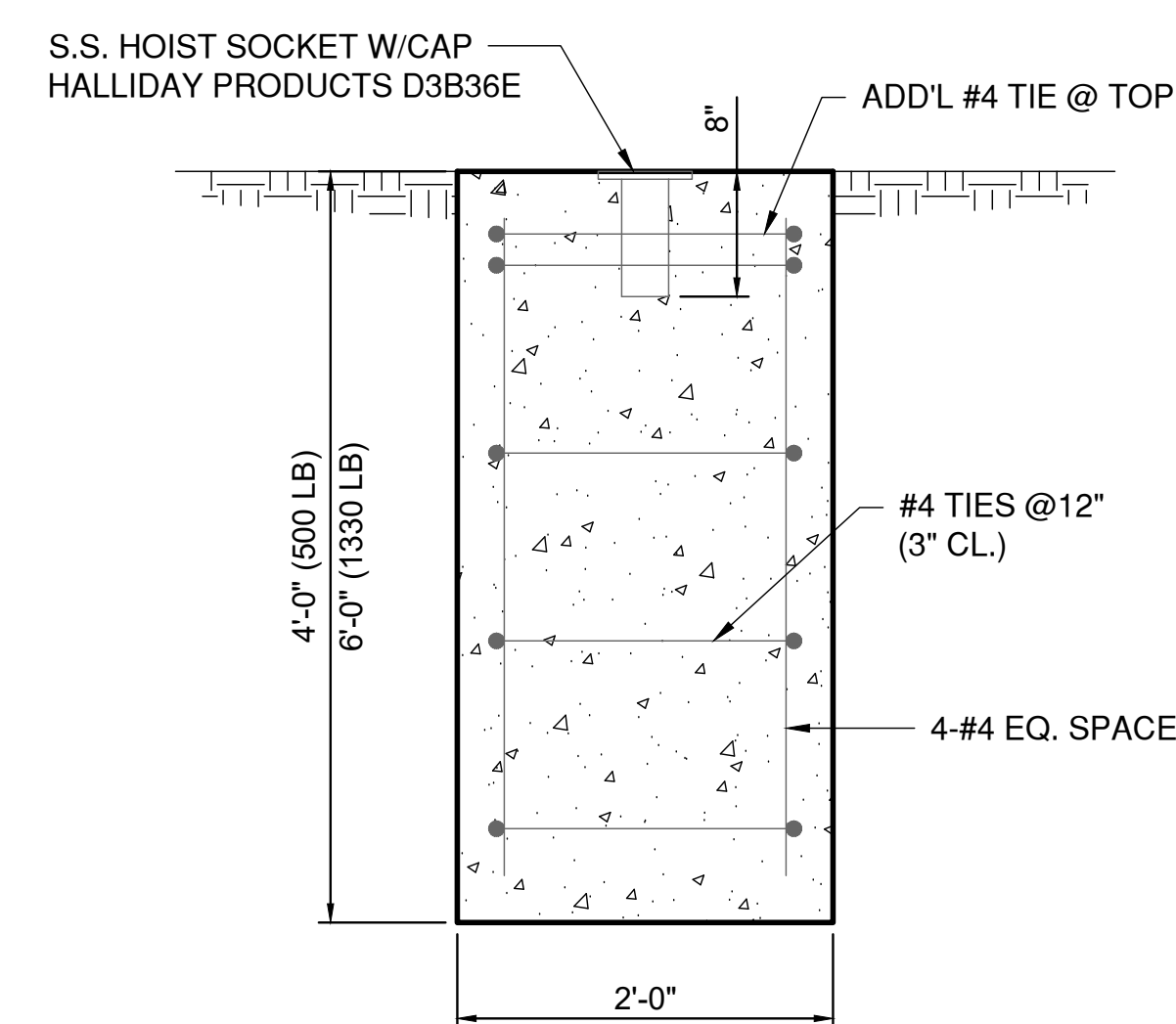
LIFT STATION TOP PLAN
SCALE: 1/2"=1'-0"



LIFT STATION PLAN VIEW
SCALE: 1/2"=1'-0"



LIFT STATION SECTION VIEW
SCALE: 1/2"=1'-0"



HOIST FOUNDATION DETAIL
SCALE: 1"=1'-0"

Thursday, August 16, 2018 12:34:25 PM

REV.	DATE	DESCRIPTIONS
1	08.17.2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 115
Aurora, IL 60604
Tel: 630.820.1022
Fax: 630.820.0350

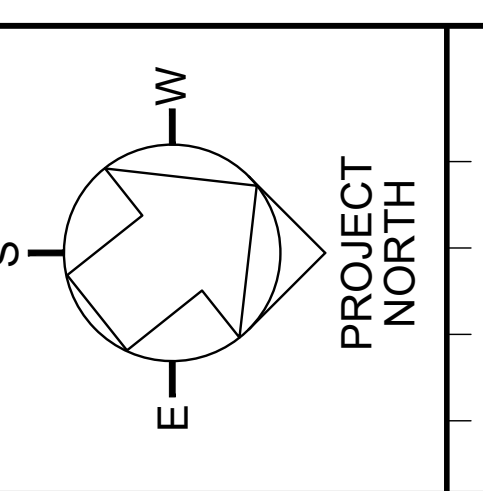
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Tjyk Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
800 West Van Buren
Suite 900
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wannerville Rd.
Suite 400W
Chicago, IL 60607
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 1430
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East Monroe St.
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Chicago, IL 60603
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Fax: 312.492.7101

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APPROVED		
SUBMITTED		



SCALE:
1/2"=1'-0"
1"=1'-0"
SCALE 0 1 2 3 4 5 FEET
SCALE 0 1 2 FEET

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UNITED STATES DEPARTMENT OF ENERGY
PIP II SITE PREPARATION
NEW SANITARY SEWER LIFT STATION - PLAN AND SECTION
DRAWING NO. **4-3-2** **C-22** REV. 1

08-17-2018

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

LANDSCAPE - CRYO POND

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX

LANDSCAPE	POND PACKAGE
L-1	GENERAL NOTES
L-2	OVERALL LANDSCAPE PLAN
L-3	SOILS AND DRAINAGE PLAN
L-4	MATERIALS PLAN
L-5	PLANTING PLAN
L-6	SITE DETAILS - PLANTING
L-7	SITE SECTIONS
L-8	SITE DETAILS - CRYO POND WATER FEATURE DETAILS
L-9	SITE DETAILS - POND DETAILS
L-10	SITE DETAILS - RAILING
L-11	SITE DETAILS - BOARDWALK
L-12	SITE DETAILS - BOARDWALK



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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel : 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel : 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyra Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel : 312.341.0055
 Fax: 312.341.9966

IMEG
 HOERR SCHAUDT
 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel : 630.527.2320
 Fax: 630.527.2321

Turner
 Landscape Architects
 850 West Jackson Blvd.
 Suite 800
 Chicago, IL 60607
 Tel : 312.492.6501
 Fax: 312.492.7101

Turner
 Contractor
 55 East Manroe Street
 Suite 1430
 Chicago, IL 60603
 Tel : 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	RG	07/18/18
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CHECKED	PJA	07/18/18
APPROVED	BW	07/18/18
SUBMITTED		

SCALE: NOT TO SCALE

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 UNITED STATES DEPARTMENT OF ENERGY



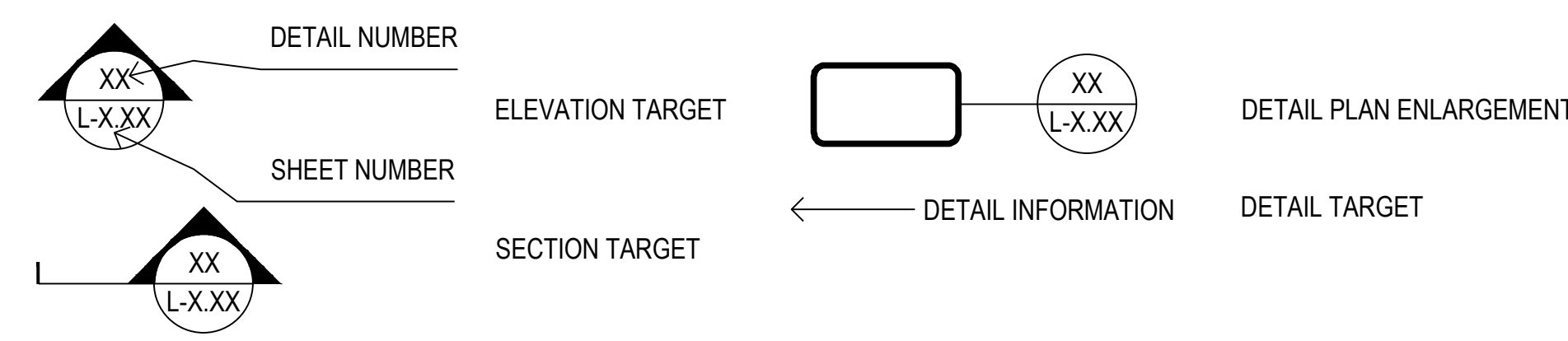
PIP-II: SITE PREPERATION
COVER

DRAWING NO. **4-3-2** L-0 REV. 1
 GENSLER NUMBER: 21.0137.004

ABBREVIATIONS

&	AND	FG	FINISH GRADE	POB	POINT OF BEGINNING
@	AT			PR	PAIR
AD	AREA DRAIN	GA	GAUGE	PREFAB	PREFABRICATED
ADJ	ADJACENT FINISH	GALV	GALVANIZED	PSF	POUNDS PER SQUARE FOOT
AF	ABOVE FINISHED FLOOR	GB	GLAZED BLOCK	PSI	POUNDS PER SQUARE INCH
ALS	ACRYLIC LATEX SEALANT	GC	GENERAL CONTRACTOR	2-PUMS	POLYURETHANE SEALANT (TWO PART)
ALUM	ALUMINIUM	GL	GLASS	PTD	PAINTED FINISH
ANOD	ANODIZED	GRND	GROUND		
AP	ACCESS PANEL	G	GUTTER	QTY	QUANTITY
APPROX	APPROXIMATELY				
ARCH	ARCHITECTURAL	HDW	HARDWARE	R	RADIUS
		HNCG	HOLLOW NEOPRENE COMPRESSION GASKET	RD	ROOF DRAIN
B-B	BACK TO BACK			REF	REFERENCE
BC	BOTTOM OF CURB	HORIZ	HORIZONTAL	REINF	REINFORCED
BJF	BITUMINOUS JOINT FILLER	HM	HOLLOW METAL	REQ'D	REQUIRED
BLK	BLOCK (WOOD BLOCKING)	HP	HIGH POINT	REV	REVISION
BMT	BUTYLMASTIC TAPE SEALANT	HR	HOURS	RM	ROOM
BRK	BRICK	HT	HEIGHT	RO	ROUGH OPENING
BRS	BUTYL RUBBER SEALANT				
BS	BOTTOM OF SLAB	INV	INVERT		
BT	BOTTOM OF TRENCH	ID	INSIDE DIAMTER	SECT	SECTION
BW	BOTTOM OF WALL	IN	INCH	SG	SOIL GRADE
		INLET	DRAIN INLET	SHT	SHEET
C/C	CENTER TO CENTER	INFO	INFORMATION	SIM	SIMILAR
CB	CATCH BASIN	INSUL	INSULATION	SPEC	SPECIFICATION
CJ	CONTROL JOINT	INT	INTERIOR	SQ	SQUARE
CJF	CORK JOINT FILLER			SS	STAINLESS STEEL
CL	CENTER LINE	LAM	LAMINATED	SRS	SILICONE RUBBER SEALANT
CLR	CLEAR OPENING	LBS, #	POUNDS	ST	SEALANT TAPE
COL	COLUMN	LP	LOW POINT	STD	STANDARD
CONC	CONCRETE			STL	STEEL
CONCP	CONCRETE PAINTED	MACH	MACHINE	STOR	STORAGE
CONST	CONSTRUCTION	MATL	MATERIAL	STRUCT	STRUCTURAL
CONTR	CONTRACTOR	MAX	MAXIMUM	SUSP	SUSPENDED
CONT	CONTINUOUS	MECH	MECHANICAL		
CMU	CONCRETE MASONRY UNIT	MED	MEDIUM	T	TREAD
		MFR	MANUFACTURER	T/	TOP OF
CMUP	CONCRETE MASONRY UNIT PAINTED	MH	MANHOLE	TC	TOP OF CURB
		MIN	MINIMUM	TEL	TELEPHONE
CO	CLEAN OUT	MISC	MISCELLANEOUS	THK	THICK
		MO	MASONRY OPENING	TS	TOP OF SLAB
DF	DRINKING FOUNTAIN	MTL	METAL	TT	TRAFFIC TOPPING
DI	DUCTILE IRON			TW	TOP OF WALL
DIA	DIAMETER	NIC	NOT IN CONTRACT	TYP	TYPICAL
DIM	DIMENSION	NO	NUMBER		
DN	DOWN	NOM	NOMINAL		
DTL	DETAIL	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING				
		OA	OVERALL	VERT	VERTICAL
EA	EACH	OC	ON CENTER	VIF	VERIFY IN FIELD
EC	EXPOSED CONSTRUCTION	OD	OUTSIDE DIAMETER		
ECP	EXPOSED CONSTRUCTION PAINTED	OPNG	OPENING		
		OPP	OPPOSITE	W/	WITH
EFTS	EXPANDING FOAM TAPE SEALANT			W/O	WITHOUT
		P.C.C.	PORTLAND CEMENT CONCRETE	WC	WATER CLOSET
EL	ELEVATION			WD	WOOD
EJ	EXPANSION JOINT	PERP	PERPENDICULAR	WP	WORK POINT
EQ	EQUAL	PLBG	PLUMBING	WPR	WATERPROOFING
EX	EXISTING	PLWD	PLYWOOD	WT	WEIGHT

ANNOTATIONS



DRAWING INDEX

Sheet Number	Sheet Title	ISSUE FOR 60% 08-17-18
L-1	GENERAL NOTES	●
L-2	OVERALL LANDSCAPE PLAN	●
L-3	SOILS AND DRAINAGE PLAN	●
L-4	MATERIAL PLAN	●
L-5	PLANTING PLAN	●
L-6	SITE DETAILS - PLANTING	●
L-7	SITE SECTIONS	●
L-8	SITE DETAILS - CRYO POND WATER FEATURE DETAILS	●
L-9	SITE DETAILS - POND DETAILS	●
L-10	SITE DETAILS - RAILING	●
L-11	SITE DETAILS - BOARDWALK	●
L-12	SITE DETAILS - BOARDWALK	●

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1	08/17/2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 500 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
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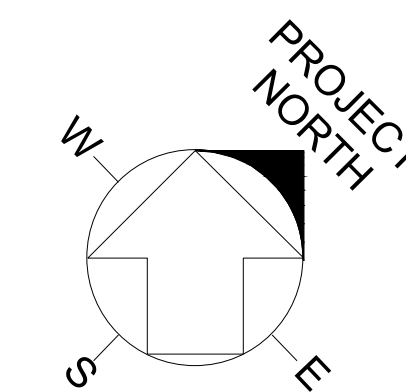
TGRWA
 Tjck Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warronville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.482.6501
 Fax: 312.482.7101

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 55 East mahroe St.
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 Chicago, IL 60603
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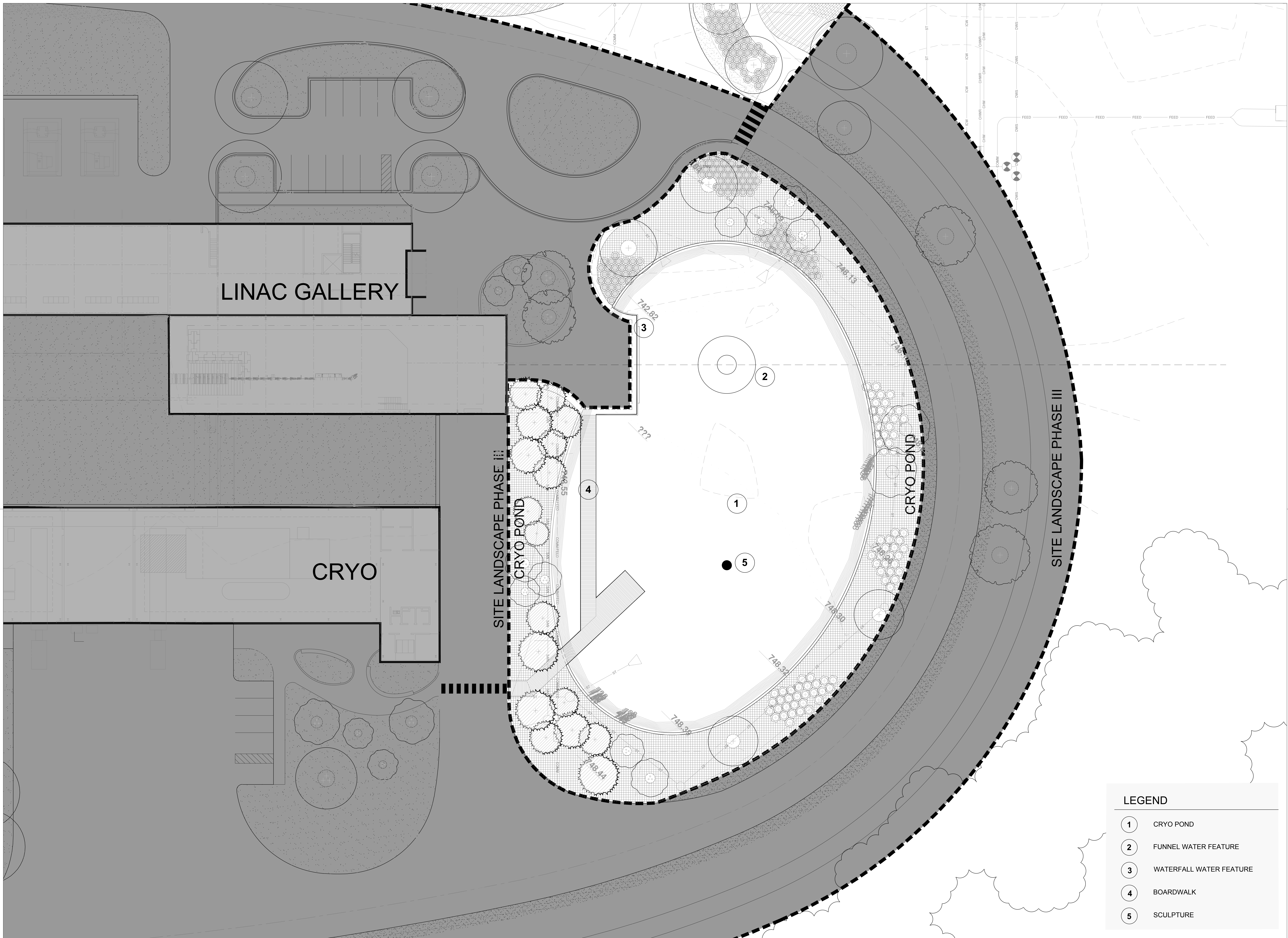
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 UNITED STATES DEPARTMENT OF ENERGY

PIP II : CRYO POND
GENERAL NOTES
 DRAWING NO. **4-3-2** **L-1** REV. 1
 17 AUG 2018



LINAC GALLERY

CRYO

SITE LANDSCAPE PHASE II

CRYO POND

CRYO POND

SITE LANDSCAPE PHASE III

LEGEND	
1	CRYO POND
2	FUNNEL WATER FEATURE
3	WATERFALL WATER FEATURE
4	BOARDWALK
5	SCULPTURE

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 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
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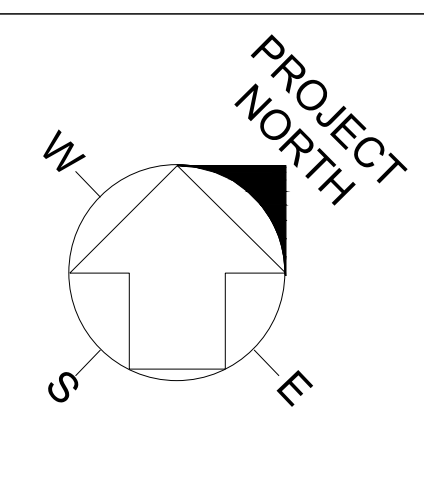
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 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
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IMEG
 MEP Engineers
 1100 Warronville Rd.
 Suite 400W
 Naperville, IL 60563
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 Chicago, IL 60607
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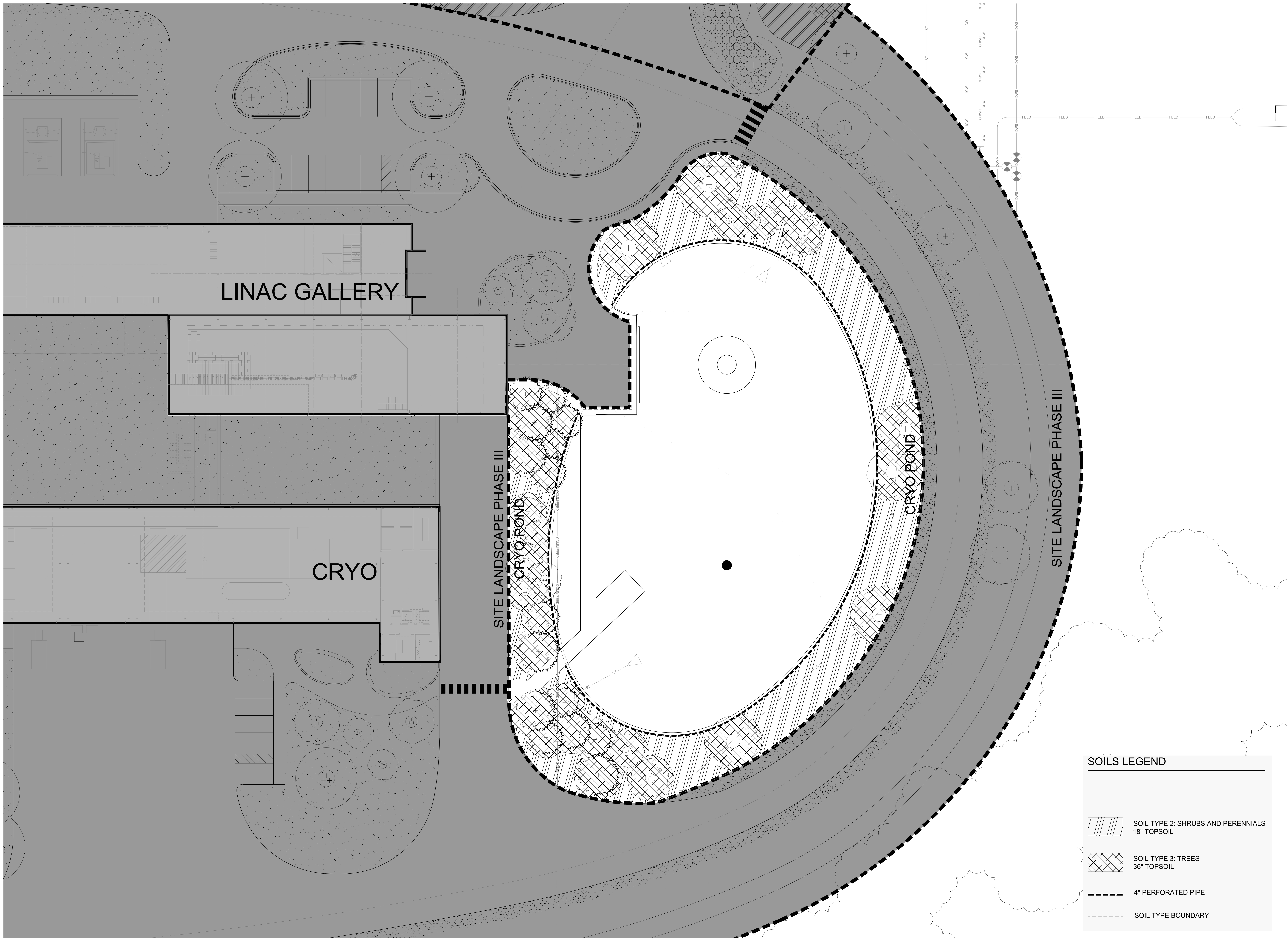
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CHECKED	SS	DATE	08/17/18
APPROVED	SS	DATE	08/17/18
SUBMITTED			



SCALE:
 OVERALL PLAN
 SCALE: 1/16" = 1'-0"
 0 4' 8' 16' 32'

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PIP II : CRYO POND
OVERALL LANDSCAPE PLAN
 DRAWING NO. 4-3-2 **L-2** REV. 1 **17 AUG 2018**



LINAC GALLERY

CRYO




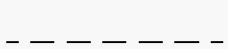
SITE LANDSCAPE PHASE III

CRYO POND

CRYO POND

SITE LANDSCAPE PHASE III

SOILS LEGEND

-  SOIL TYPE 2: SHRUBS AND PERENNIALS
18" TOPSOIL
-  SOIL TYPE 3: TREES
36" TOPSOIL
-  4" PERFORATED PIPE
-  SOIL TYPE BOUNDARY

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1	08/17/2018	60% DESIGN DOCUMENTS
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Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
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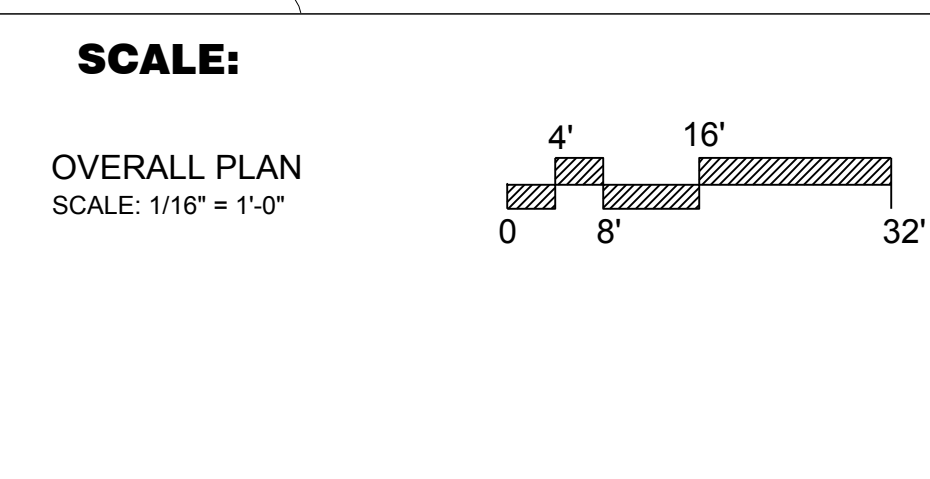
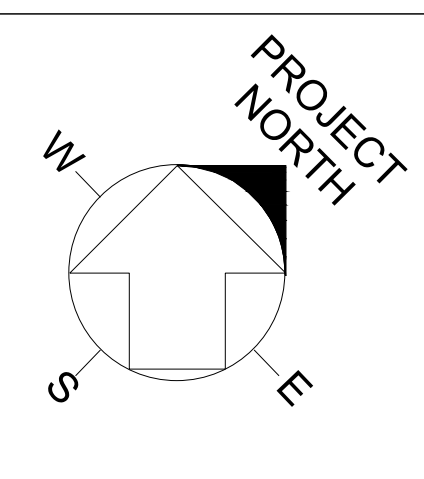
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Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
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Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
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HOERR SCHAUDT
Landscape Architects
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Chicago, IL 60607
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PIP II : CRYO POND
SOILS AND DRAINAGE PLAN

DRAWING NO. **4-3-2** **L-3** REV. 1 **17 AUG 2018**

HARDSCAPE SCHEDULE

PAVING

CODE	NAME	MATERIAL	USE / AREA	COLOR / SIZE	DETAIL	NOTES
P1	Unit Pavers	Precast Concrete Pavers	Linac Terrace	TBD	C L-8	Enduracolor Finish
P2	Board Walk	IPE Wood	See Plan	TBD	D L-11	

WALLS

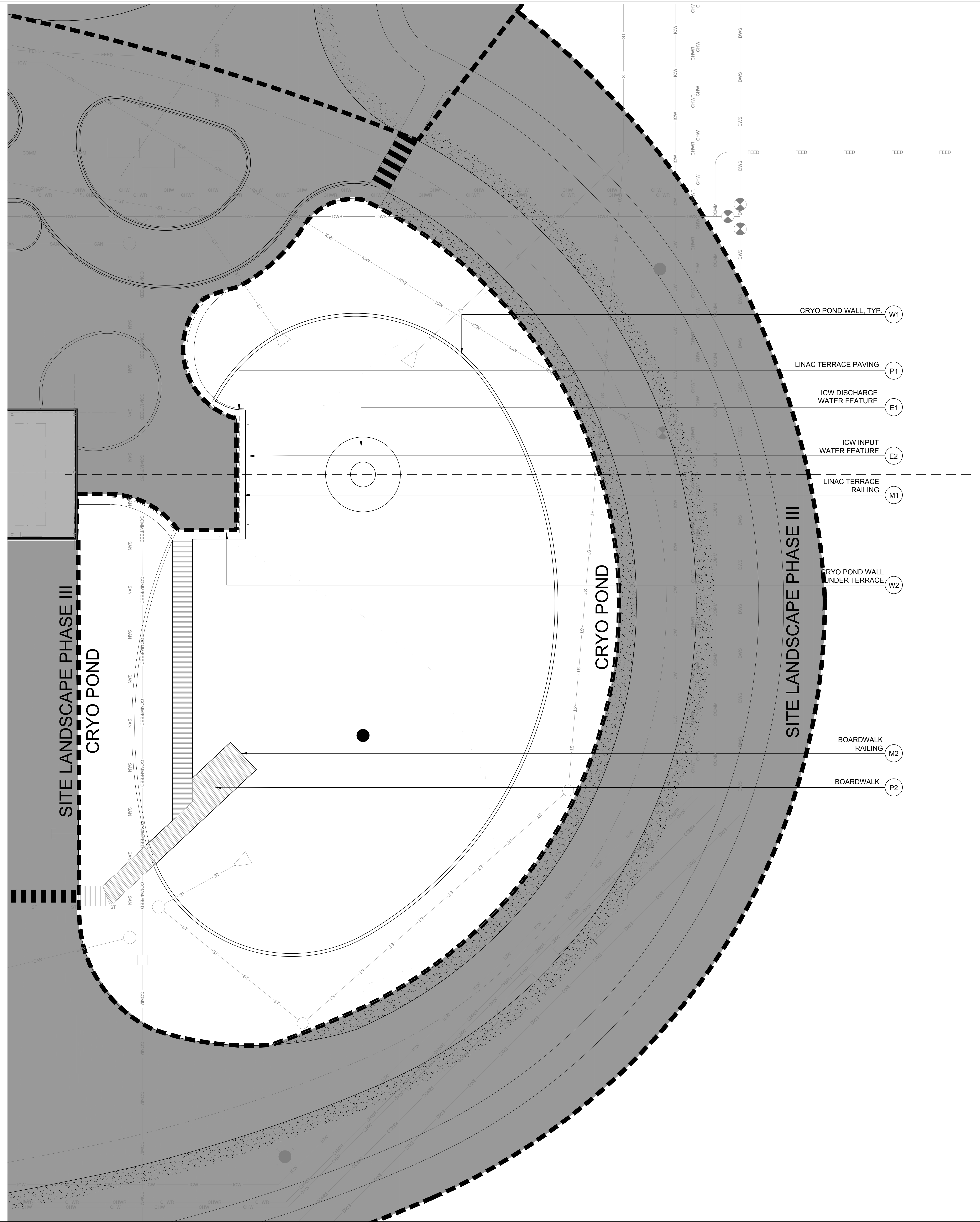
CODE	NAME	MATERIAL	USE / AREA	COLOR / SIZE	DETAIL	NOTES
W1	Cryo Pond Wall Typ.	CIP Concrete	Cryo Pond	Cast in Place With Custom Pattern Form Liner	C L-9	
W2	Cryo Pond Wall Under Terrace	CIP & Precast Concrete	Under Linac Terrace	Cast in Place With Custom Pattern Form Liner	D L-8 C L-8	

METALWORK

LEGEND	CODE	NAME	MATERIAL	USE / AREA	COLOR / SIZE	DETAIL	NOTES
	M1	Linac Terrace Railing	Metal, Cable	Linac Terrace			Match Linac Building Paint and Finish
	M2	Boardwalk Railing	Metal, Cable	Boardwalk			Match Linac Building Paint and Finish

WATER FEATURE

LEGEND	CODE	NAME	MATERIAL	USE / AREA	COLOR / SIZE	DETAIL	NOTES
	E1	ICW Discharge Water Feature	Precast Concrete	See Plan		A L-8	
	E2	ICW Input Water Feature	CIP Concrete Support Metal Water Spot	Terrace Edge		B L-8 C L-8	



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Fax: 312.456.0124

CMT

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Tel: 630.820.1022
Fax: 630.820.0350

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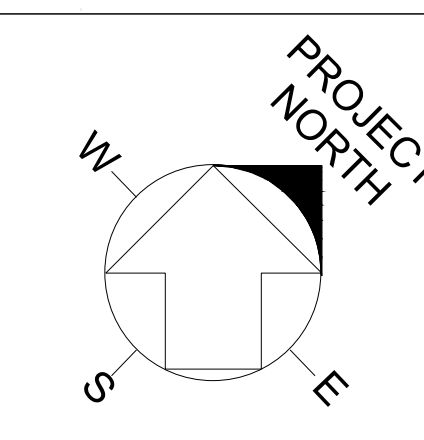
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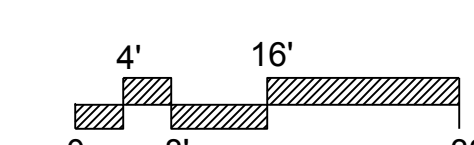
General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	SS/KG	08/17/18
DRAWN	KG/LK/ND	08/17/18
CHECKED	SS	08/17/18
APPROVED	SS	08/17/18
SUBMITTED		



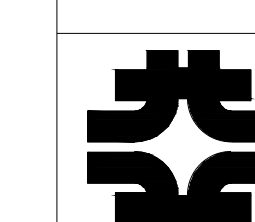
SCALE:

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



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UNITED STATES DEPARTMENT OF ENERGY



PIP II : CRYO POND
MATERIAL PLAN

DRAWING NO. 4-3-2

L-4 REV. 1

17 AUG 2018

PLANT ABOVE WATER ON FLAT BANK (158 sf)

(882 sf) PLANT ABOVE WATER ON FLAT BANK

PLANT SCHEDULE CRYO POND PLANT

DECIDUOUS TREES	SIZE	SPACING	QTY	REMARKS
ALNUS GLUTINOSA / EUROPEAN ALDER	14 T		1	
ALNUS GLUTINOSA / EUROPEAN ALDER	18 T		2	
ALNUS GLUTINOSA / EUROPEAN ALDER	18 T		2	
CELTIS OCCIDENTALIS / COMMON HACKBERRY	6" CAL		2	
QUERCUS ALBA / WHITE OAK	6" CAL		2	
QUERCUS ELLIPSOIDALIS / NORTHERN PINE OAK	8" CAL		2	

EVERGREEN TREES	SIZE	SPACING	QTY	REMARKS
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	14 T		1	
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	16 T		1	
PINUS STROBUS / WHITE PINE	16 T		3	
PINUS STROBUS / WHITE PINE	18 T		6	
PINUS STROBUS / WHITE PINE	20" T		3	
PINUS STROBUS / WHITE PINE	22" T		3	

FLOWERING TREES	SIZE	SPACING	QTY	REMARKS
AMELANCHIER LAEVIS / ALLEGHENY SERVICEBERRY	14 T		2	
AMELANCHIER LAEVIS / ALLEGHENY SERVICEBERRY	18 T		2	

DECIDUOUS SHRUBS	SIZE	SPACING	QTY	REMARKS
CEPHALANTHUS OCCIDENTALIS / BUTTONBUSH	30" 7 GAL	60" OC	24	
CORNUS STOLONIFERA / DOGWOOD	30" 7 GAL	48" OC	108	
RHUS GLABRA / SMOOTH SUMAC	36"	60" OC	26	
RHUS GLABRA / SMOOTH SUMAC	48"	60" OC	26	

CONCEPT PLANT SCHEDULE CRYO POND PLANT

CRYO POND	13,954 SF		
ASCLEPIAS SULLIVANTII / PRAIRIE MILKWEED	95	2% 1 gal 21" oc	
ASCLEPIAS VERTICILLATA / WHORLED MILKWEED	196	2% 1 gal 15" oc	
BOLTONIA ASTEROIDES / THOUSAND FLOWER ASTER	95	2% 1 gal 21" oc	
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA	1,290	20% 1 gal 18" oc	
ECHINACEA PALLIDA / PALE PURPLE CONEFLOWER	516	8% 1 gal 18" oc	
ECHINACEA PURPUREA / PURPLE CONEFLOWER	516	8% 1 gal 18" oc	
GEUM TRIFLORUM / PRAIRIE SMOKE	186	2% 1 gal 15" oc	
LIATRIS Pycnostachya / GAYFEATHER	129	2% 1 gal 18" oc	
MONARDA PUNCTATA / HORSEMINT	186	2% 1 gal 15" oc	
PANICUM VIRGATUM / SWITCH GRASS	1,290	20% 1 gal 18" oc	
PHYCANTHEMUM VIRGINIANUM / MOUNTAIN MINT	186	2% 1 gal 15" oc	
RUDBECKIA HIRTA / BLACK-EYED SUSAN	129	2% 1 gal 18" oc	
SCHIZACHYRIUM SCOPARUM / LITTLE BLUESTEM GRASS	1,290	2% 1 gal 18" oc	
SOLIDAGO SPECIOSA / SHOWY GOLDENROD	129	2% 1 gal 18" oc	
SYMPHYOTRICHUM OOLEPTANGIENSE / AZURE ASTER	129	2% 1 gal 18" oc	
TRADESCANTIA OHIENSIS / BLUE JACKET	129	2% 1 gal 18" oc	
ZIZIA AUREA / GOLDEN ALEXANDER	186	2% 1 gal 15" oc	

LINEAC GALLERY

CRYO

SITE LANDSCAPE PHASE III

CRYO POND

CRYO POND

SITE LANDSCAPE PHASE III

CORNUS STOLONIFERA (44)
30" 7 Gal
48" OC

QUERCUS ELLIPSOIDALIS (2)
8" Cal

CORNUS STOLONIFERA (29)
30" 7 Gal
48" OC

(2) AMELANCHIER LAEVIS
16 T

AMELANCHIER LAEVIS (2)
14 T

CORNUS STOLONIFERA (35)
30" 7 Gal
48" OC

(2) PINUS STROBUS
18 T

(1) PINUS STROBUS
16 T

(1) PINUS STROBUS
16 T

(2) PINUS STROBUS
20" T

(1) PINUS STROBUS
18 T

(1) JUNIPERUS VIRGINIANA
16 T

(1) JUNIPERUS VIRGINIANA
14 T

(1) ALNUS GLUTINOSA
18 T

(1) ALNUS GLUTINOSA
16 T

(1) ALNUS GLUTINOSA
14 T

(1) PINUS STROBUS
18 T

(2) PINUS STROBUS
22" T

(1) PINUS STROBUS
16 T

(1) ALNUS GLUTINOSA
16 T

(1) ALNUS GLUTINOSA
18 T

CEPHALANTHUS OCCIDENTALIS (24)
30" 7 Gal
60" OC

QUERCUS ALBA (2)
6" Cal

CRYO POND (12,359 sf)

RHUS GLABRA (11)
36"
60" OC

RHUS GLABRA (11)
48"
60" OC

CELTIS OCCIDENTALIS (1)
6" Cal

RHUS GLABRA (15)
48"
60" OC

RHUS GLABRA (15)
36"
60" OC

PINUS STROBUS (1)
18 T

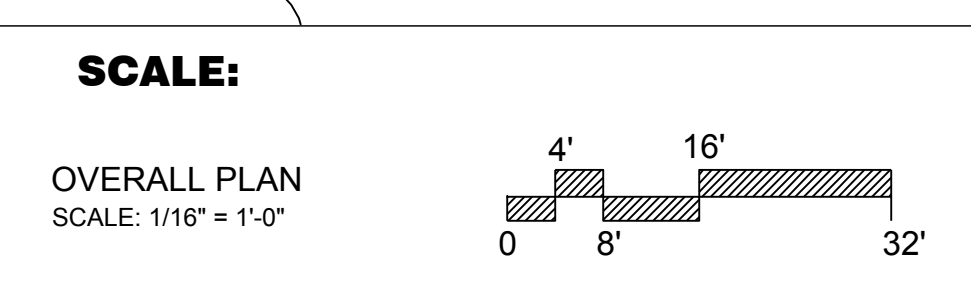
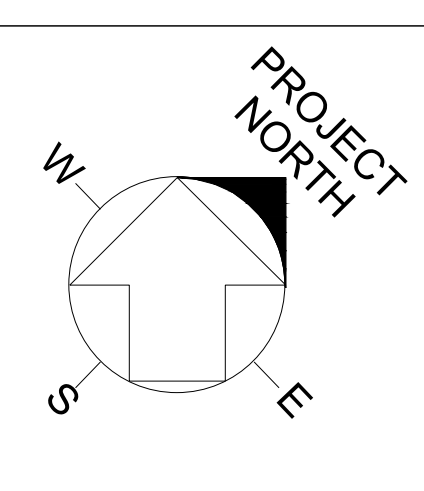
PINUS STROBUS (1)
20" T

PINUS STROBUS (1)
18 T

PINUS STROBUS (1)
22" T

CELTIS OCCIDENTALIS (1)
6" Cal

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CHECKED	SS	DATE	08/17/18
APPROVED	SS	DATE	08/17/18
SUBMITTED			



REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS
		REVISIONS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjck Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607

Tel: 312.482.6501
Fax: 312.482.7101

Turner

General Contractor
55 East marroe St.
Suite 1420
Chicago, IL 60603

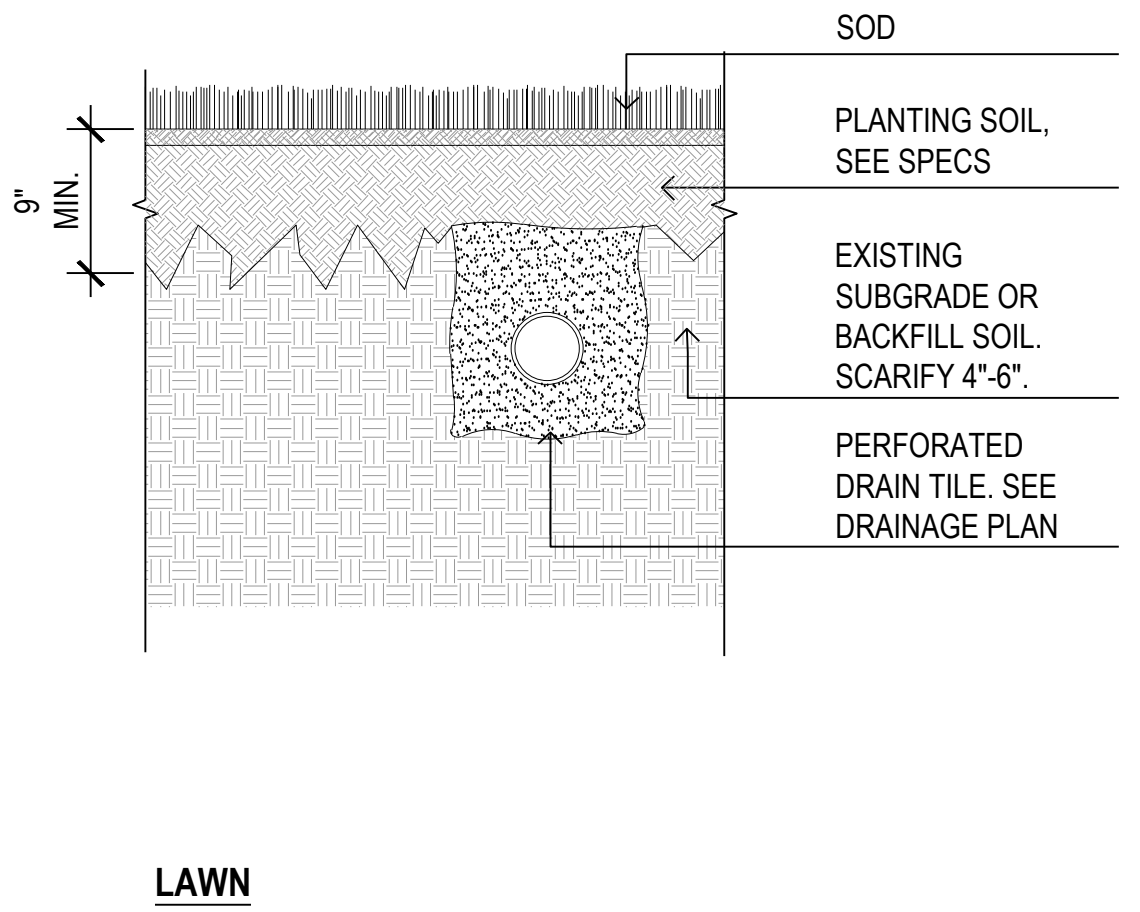
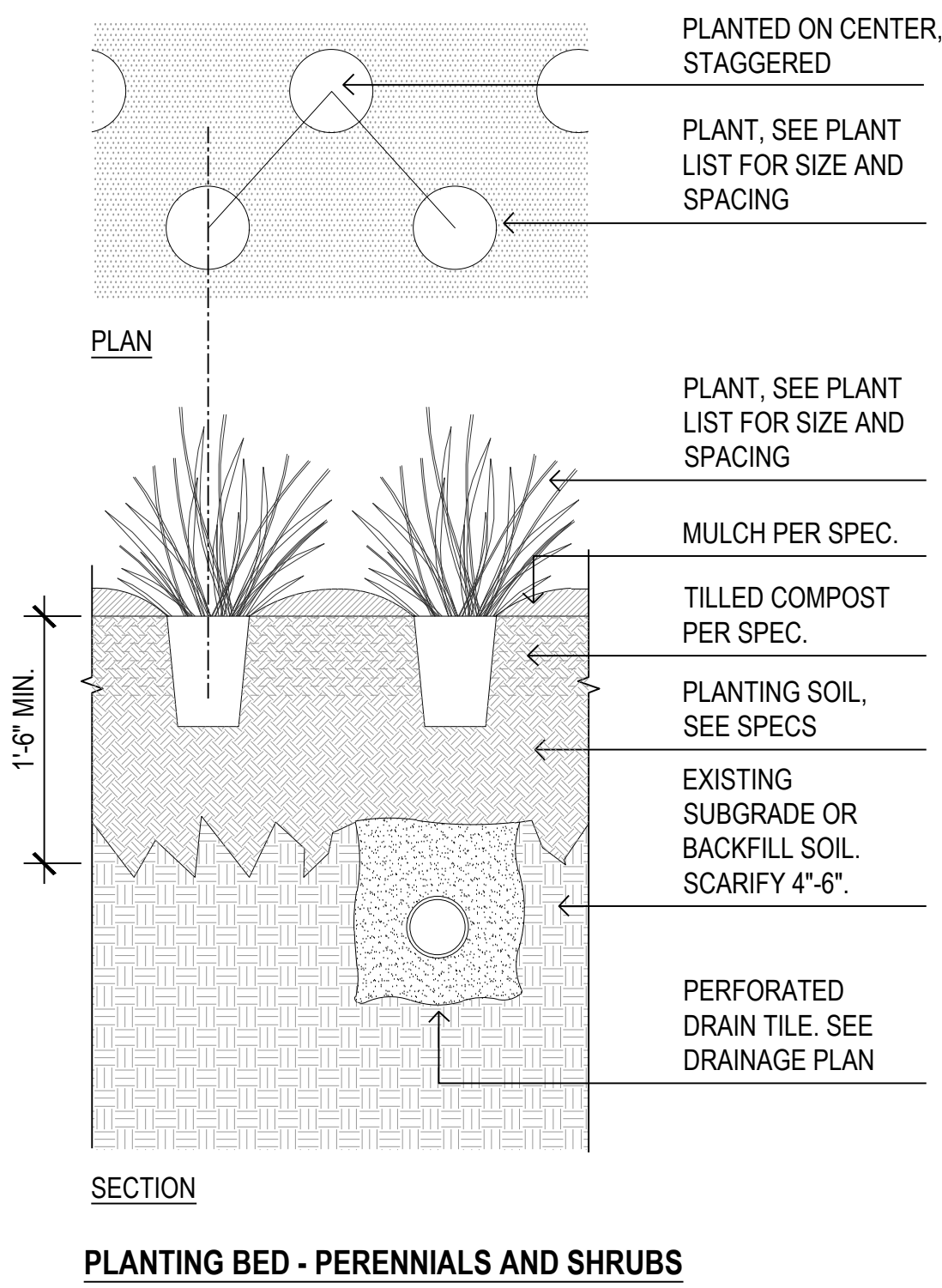
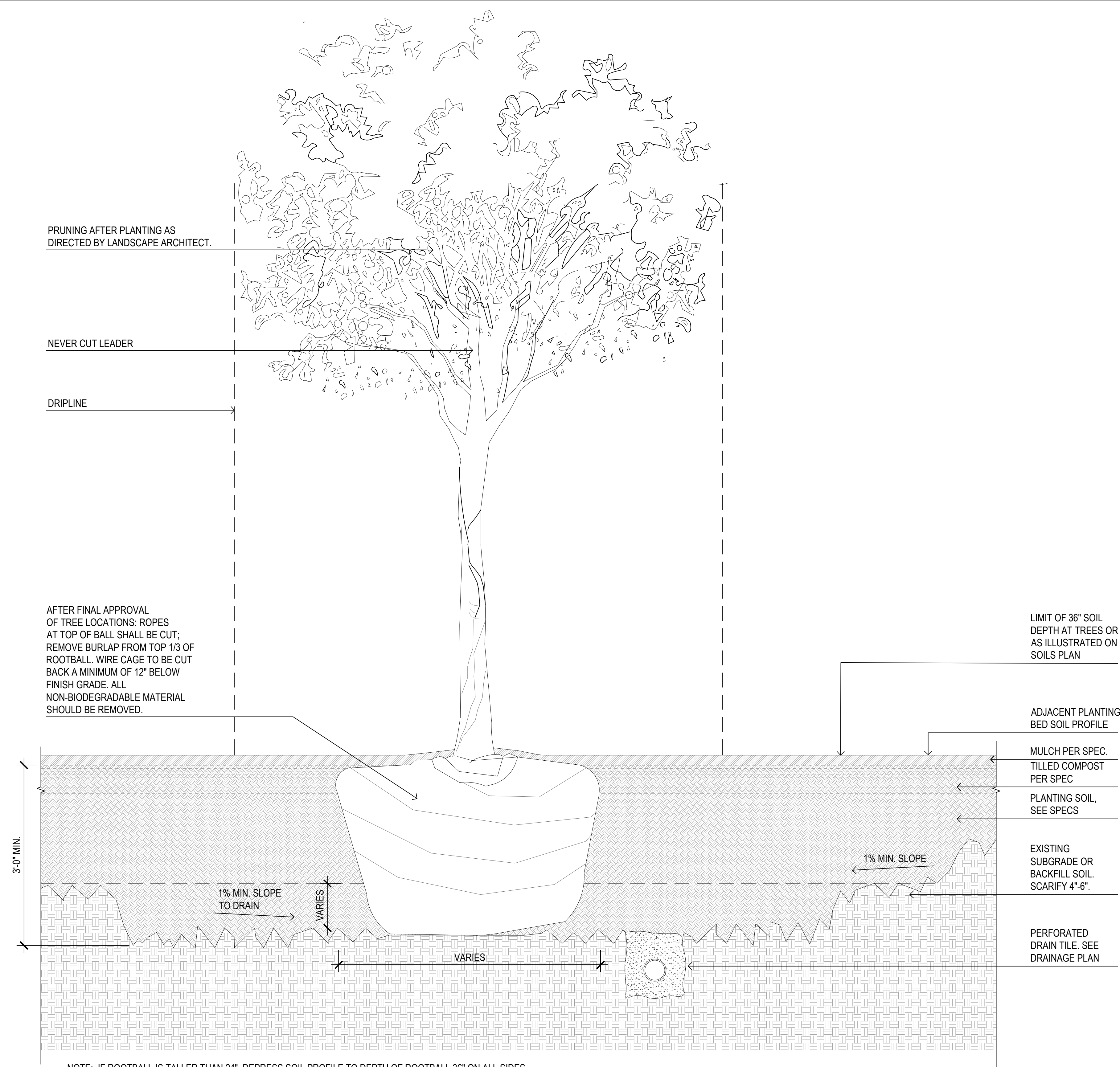
Tel: 312.327.2770
Fax: 312.492.7101

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UNITED STATES DEPARTMENT OF ENERGY

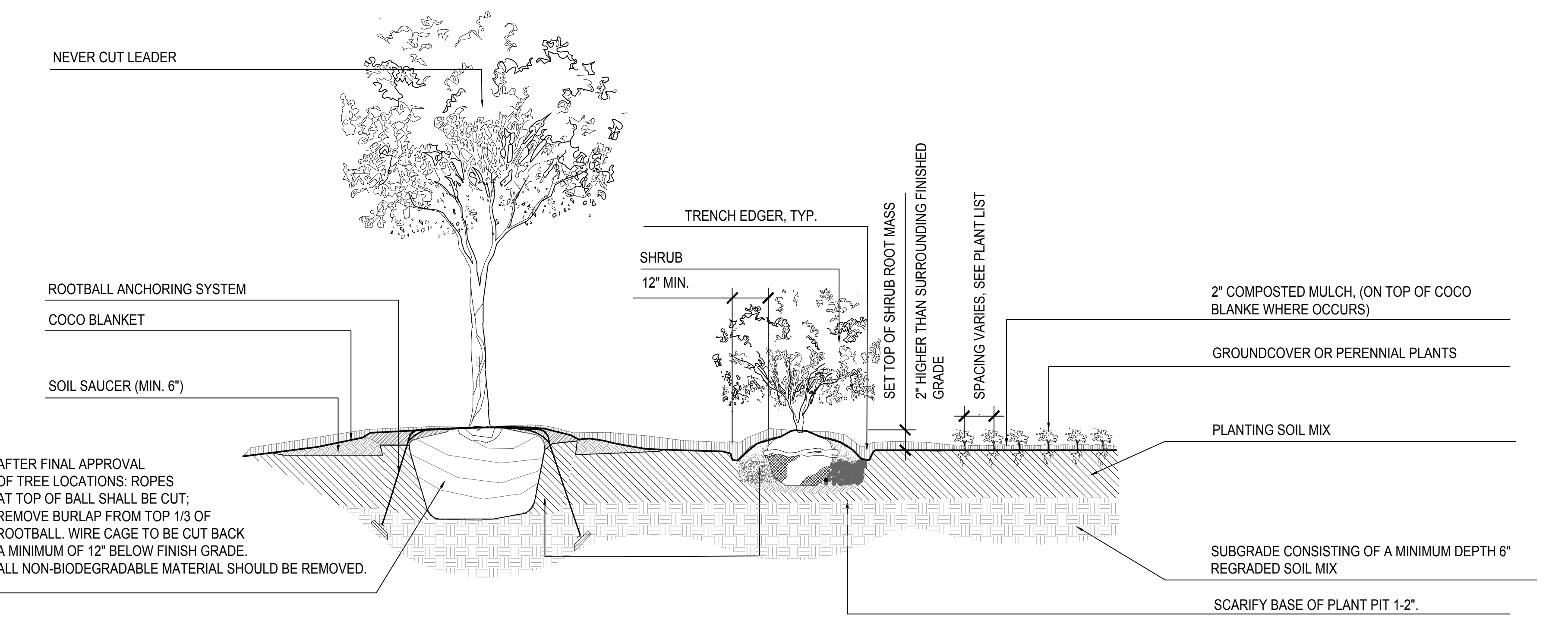
PIP II : CRYO POND
PLANTING PLAN

DRAWING NO. 4-3-2 **L-5** REV. 1

17 AUG 2018

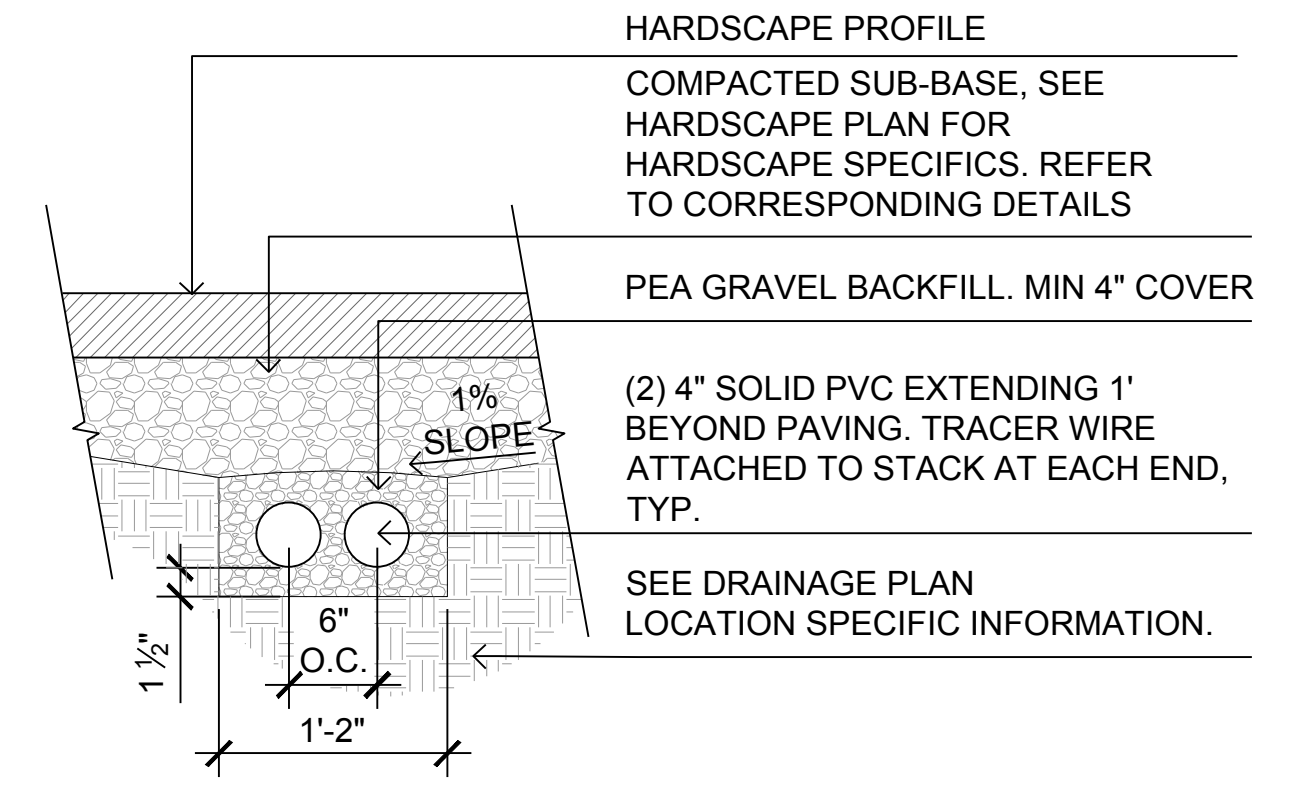


D TREE PIT
SOIL PROFILES
1" = 1'-0"

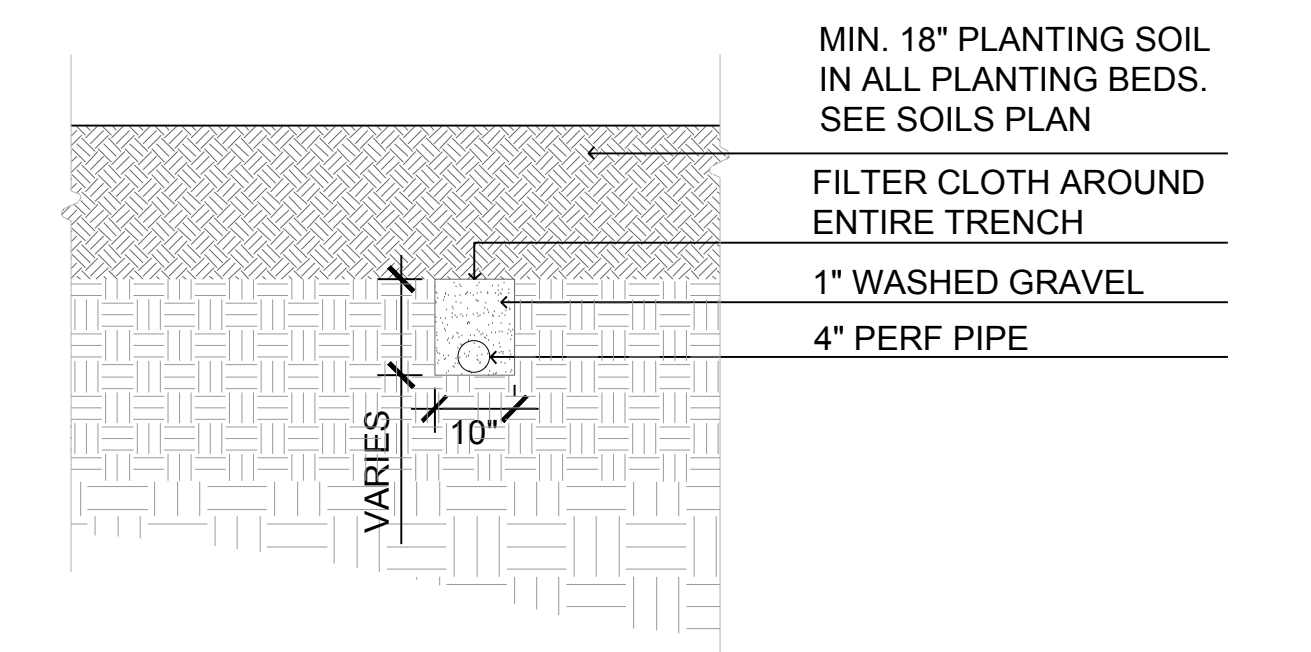


- EVERGREEN & DECIDUOUS TREES:**
1. TREES SHALL BEAR SAME RELATION TO FINISHED GRADE AS THEY DID TO PREVIOUSLY EXISTING GRADE ON SITE OR IN NURSERY.
 2. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHEN BACKFILLING.
 3. TREE STAKING/GUYS SHOULD BE REVIEWED WITH LANDSCAPE ARCHITECT WHEN CONTRACTOR DEEMS IT NECESSARY.
 4. IF B&B MATERIAL, REMOVE BURLAP & STRING FROM AROUND TOP 1/3 OF ROOTBALL. IF CONTAINERIZED, LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
 5. ROOT FLARE OF TREE TO BE SET NO MORE THAN 2" ABOVE FINISHED GRADE IN BORDERS & MASS PLANTINGS.
 6. TREES PLANTED WITHIN OR ADJACENT TO PAVING SHALL BE PLANTED WITH ROOT FLARE NO MORE THAN 1" ABOVE ADJACENT GRADE.
 7. EVERGREEN TREES WITH TIGHTLY SHEARED FORM WILL BE REJECTED.
 8. IF PITS ARE MACHINE EXCAVATED, & GLAZING IS PRONOUNCED, ALL SIDES OF PIT ARE TO BE SCARIFIED.
 9. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
- SHRUBS:**
1. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
 2. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
 3. DO NOT BREAK ROOTBALL.
 4. IF B&B MATERIAL, REMOVE BURLAP & STRING FROM AROUND TOP 1/3 OF ROOTBALL. IF CONTAINERIZED, LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
 4. PLANT APPROXIMATELY 1" ABOVE PLANTING MEDIA TO ALLOW FOR TYPICAL DRESSING OF MULCH.
 5. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
- PERENNIALS & GROUND COVER:**
1. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
 2. SOAK PLANTS IMMEDIATELY WITH WATER AFTER INSTALLATION.
 3. LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
 4. PLANT APPROXIMATELY 1" ABOVE PLANTING MEDIA TO ALLOW FOR TYPICAL DRESSING OF MULCH.
 5. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
- NOTE: ALL TREES ON GRADE SHALL HAVE ROOTBALL ANCHORING SYSTEM

C PLANTING DETAILS - STANDARD
1" = 1'-0"



B PVS SLEEVING
1" = 1'-0"



A PERFORATED DRAIN TILE
1/2" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 West Van Buren
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

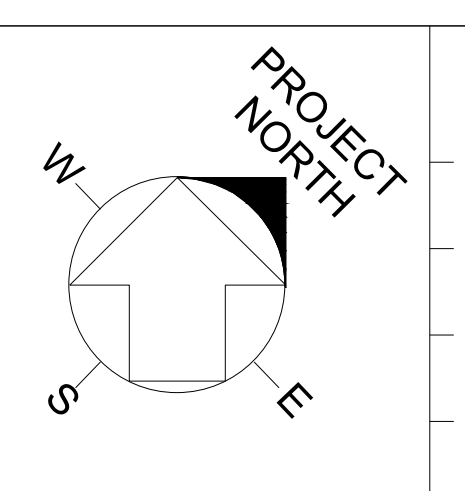
TGRWA
Tjk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Aurora, IL 60507
Tel: 312.341.0555
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

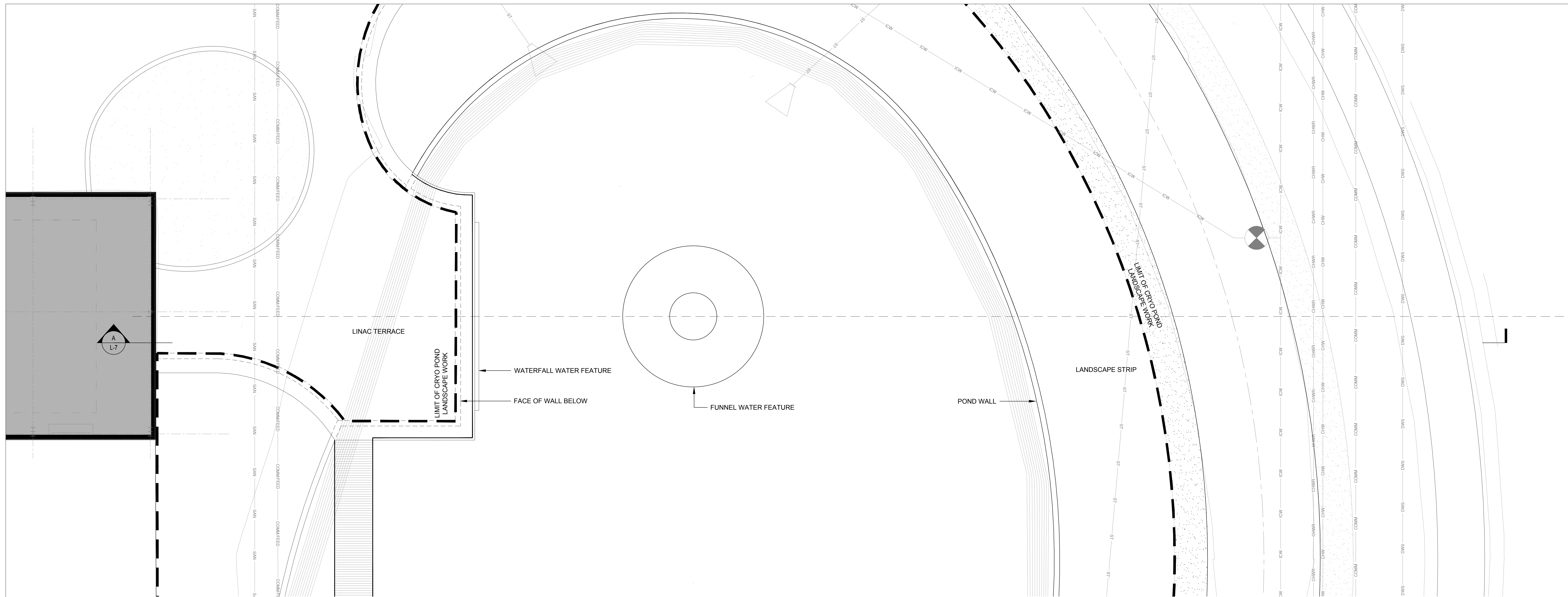
Turner
General Contractor
55 East marroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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SUBMITTED		

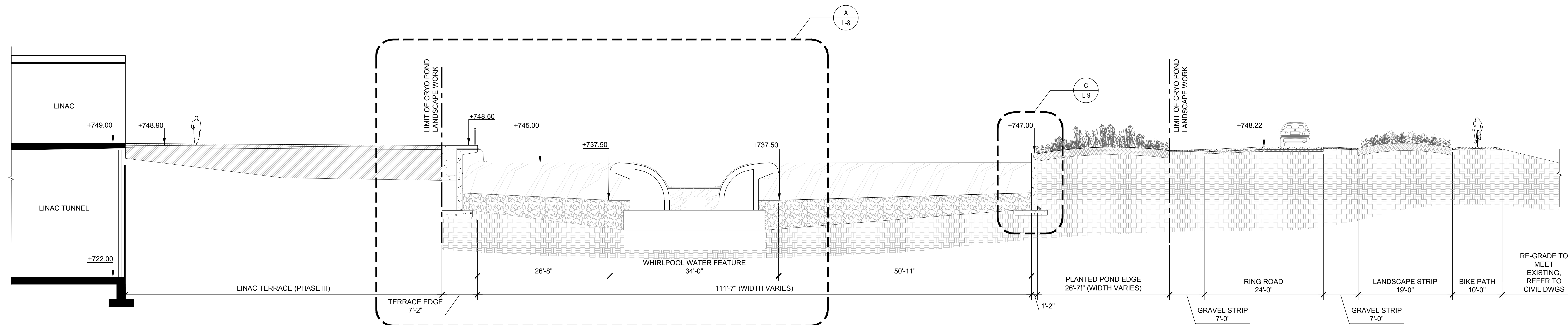


SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II : CRYO POND
SITE DETAILS - PLANTING
DRAWING NO. 4-3-2 L-6 REV. 1
17 AUG 2018



B ENLARGEMENT PLAN
1/8" = 1'-0"



A CRYO POND - SECTION 1
1/8" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS
		REVISIONS

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Architects
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Chicago IL 60602
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Suite 115
Aurora, IL 60504
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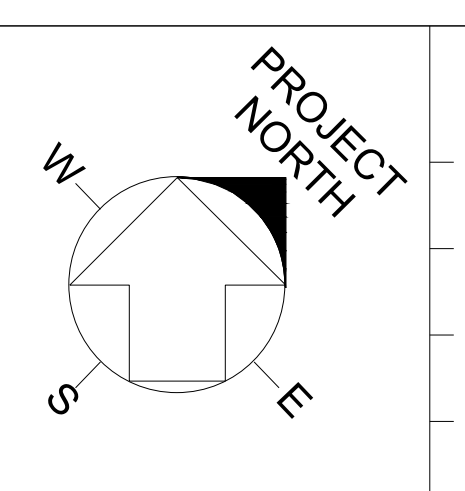
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

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Suite 900
Chicago, IL 60607
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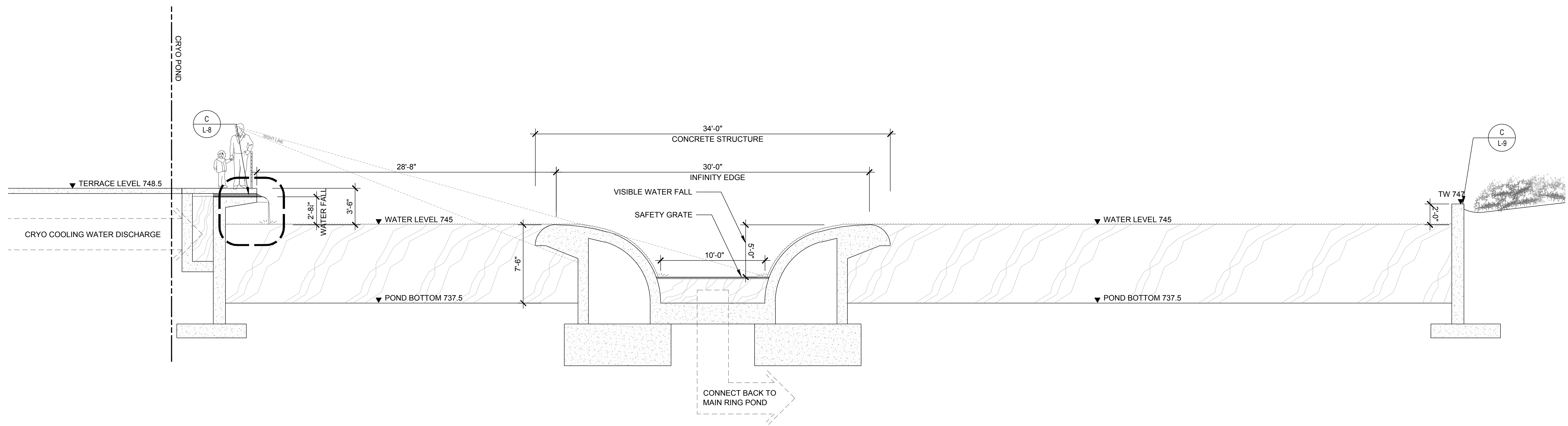
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55 East marroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
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SUBMITTED		

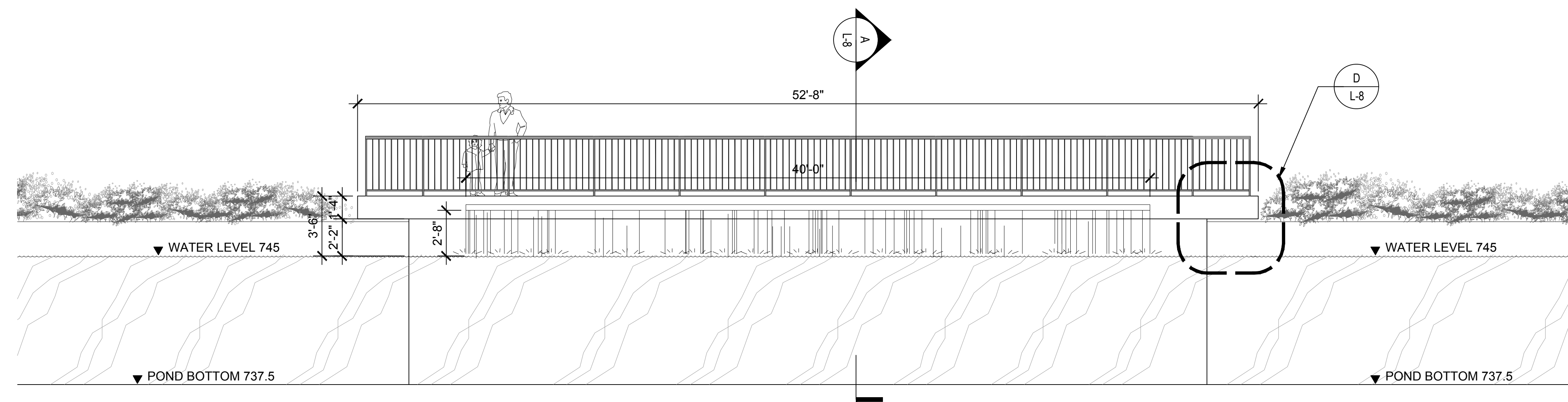


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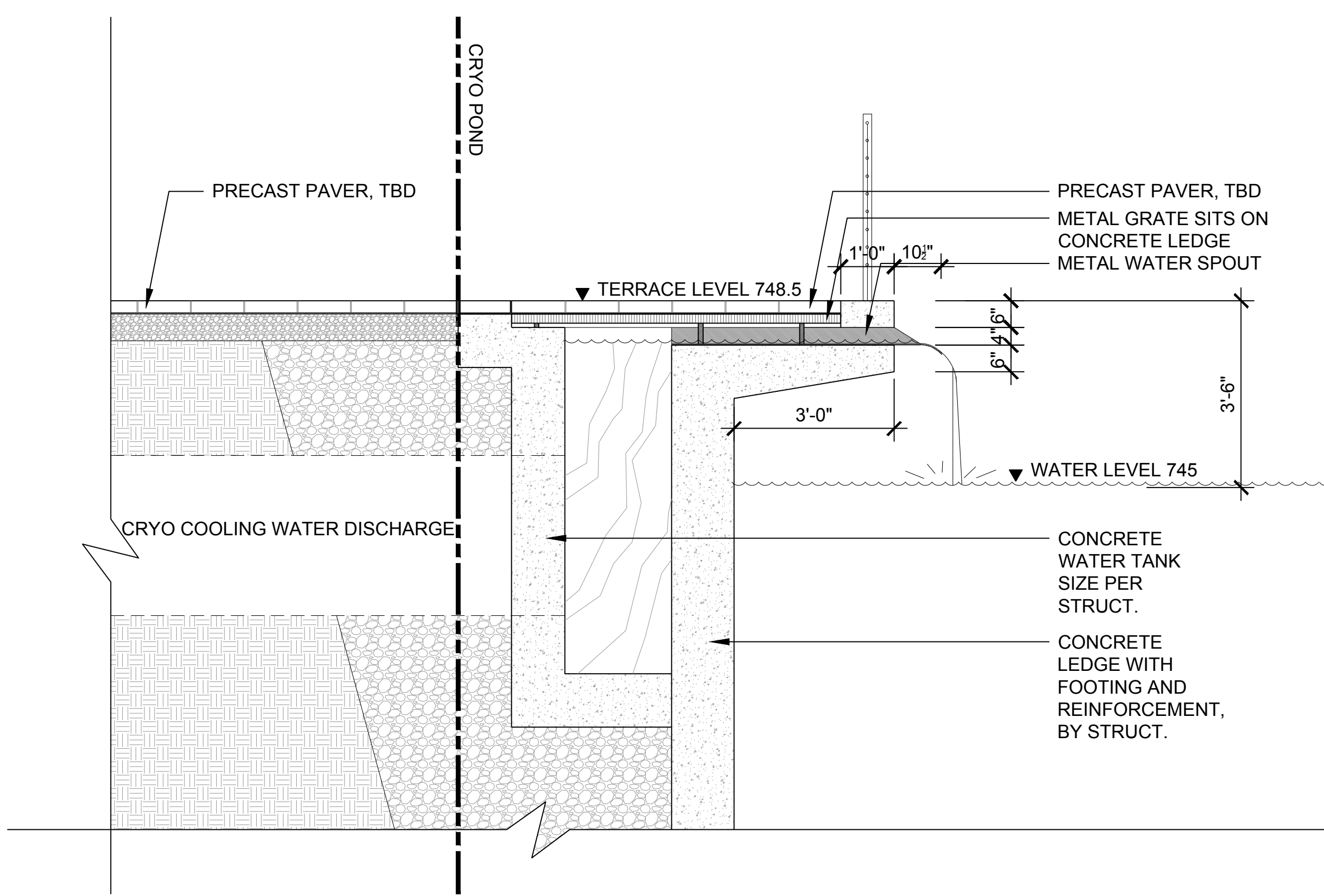
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UNITED STATES DEPARTMENT OF ENERGY
PIP II : CRYO POND
SITE SECTIONS
DRAWING NO. **4-3-2** **L-7** REV. 1
17 AUG 2018



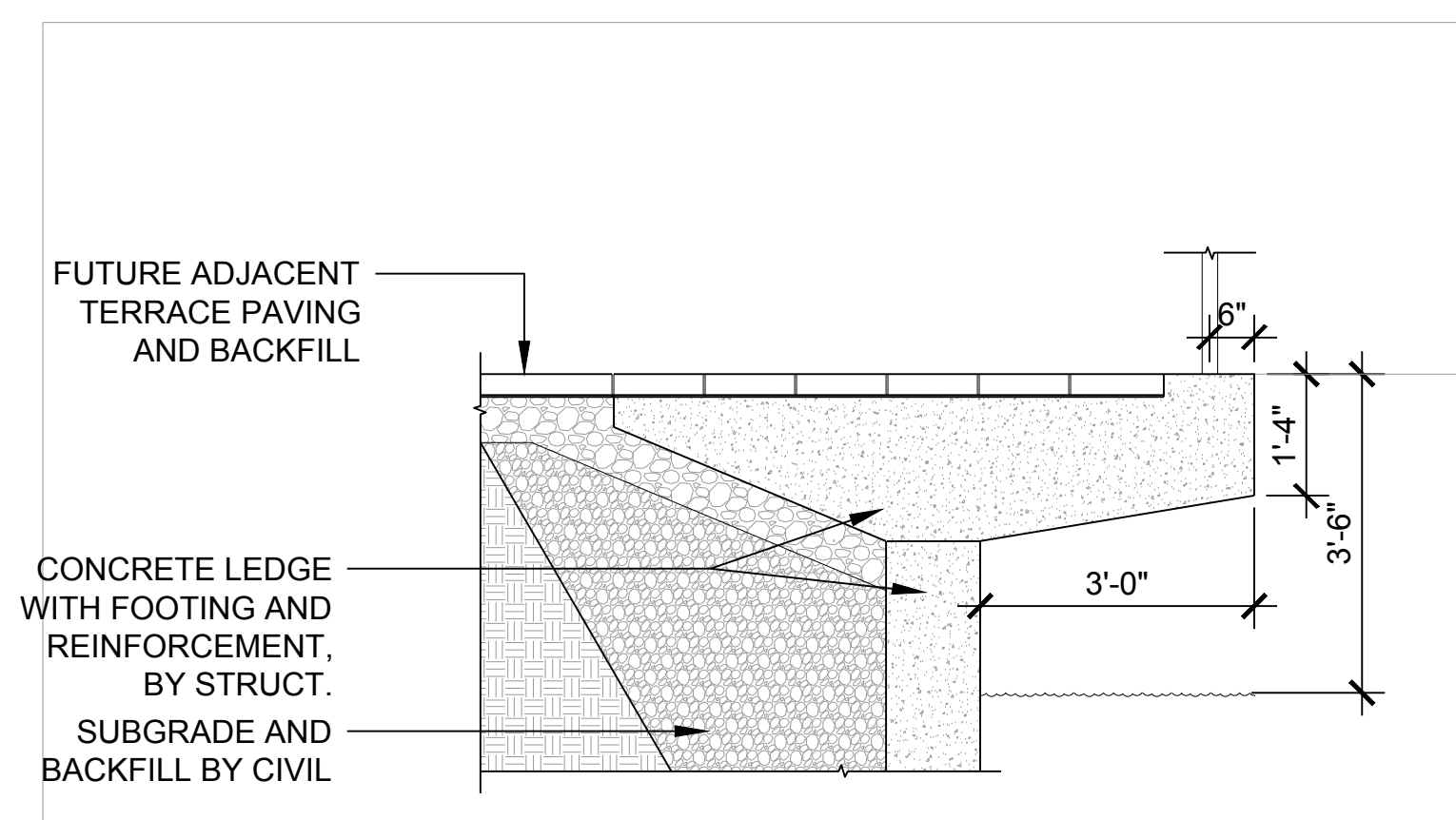
A CRYO POND WATER FEATURES
1"=50'-0"



B ICW INPUT WATER FEATURE ELEVATION
1"=50'-0"



C ICW INPUT WATER FEATURE EDGE DETAIL
1/2" = 1'-0"



D TERRACE EDGE TYP
1/2" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
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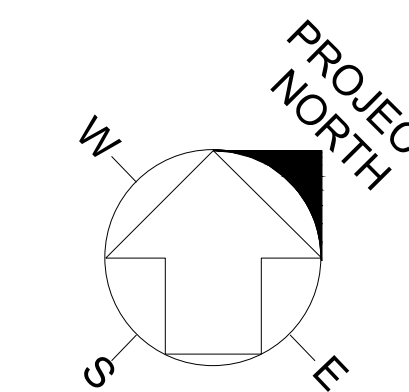
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
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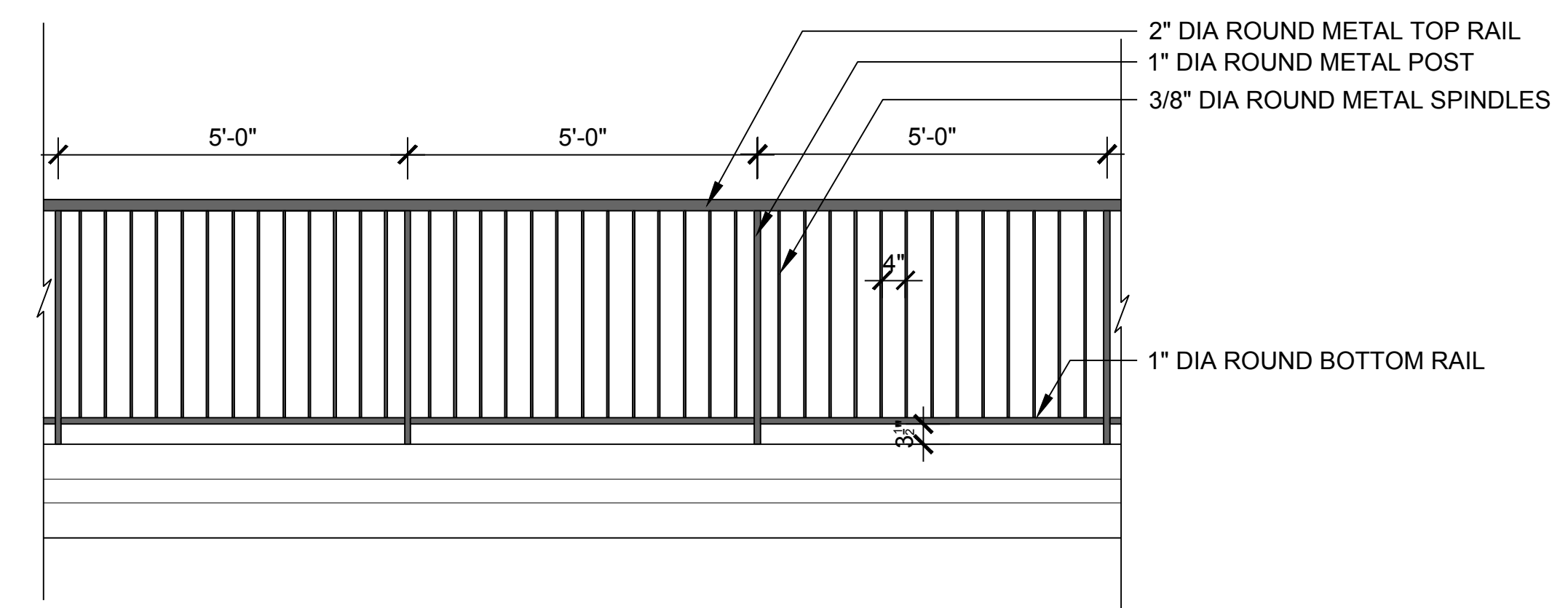


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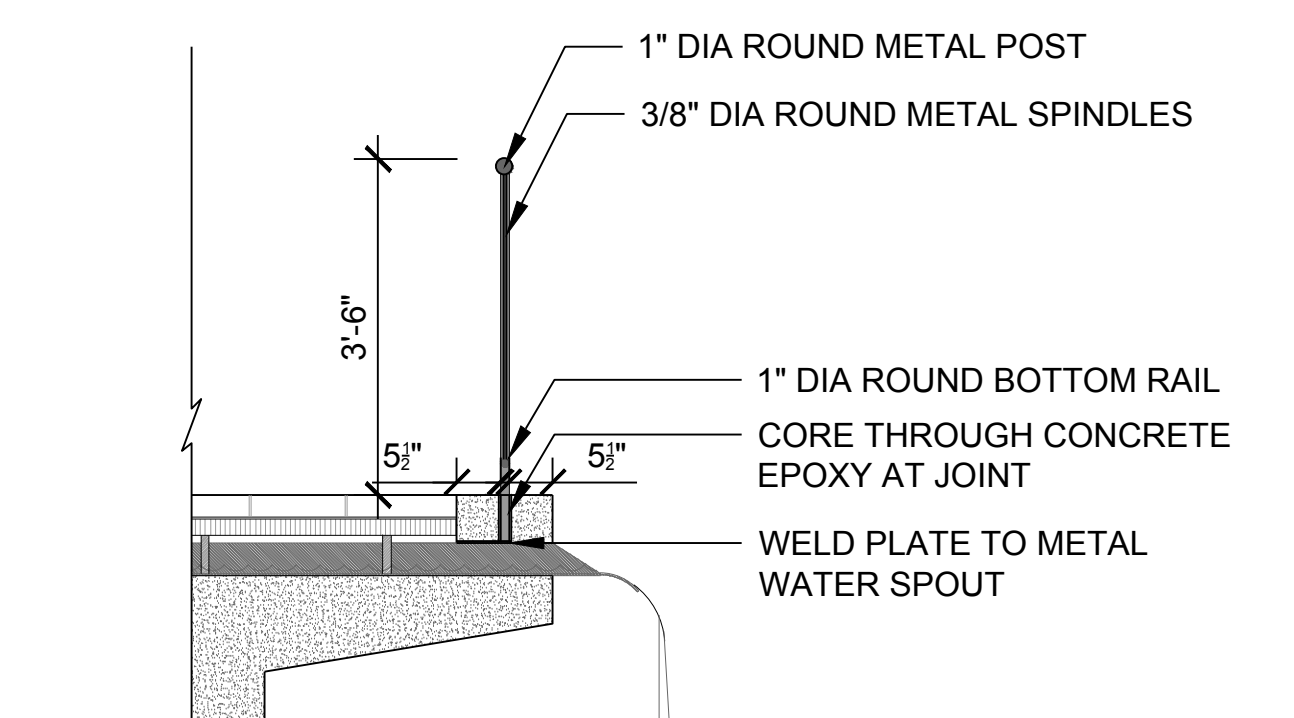
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UNITED STATES DEPARTMENT OF ENERGY

PIP II : CRYO POND
SITE DETAILS - CRYO POND WATER
FEATURE DETAILS

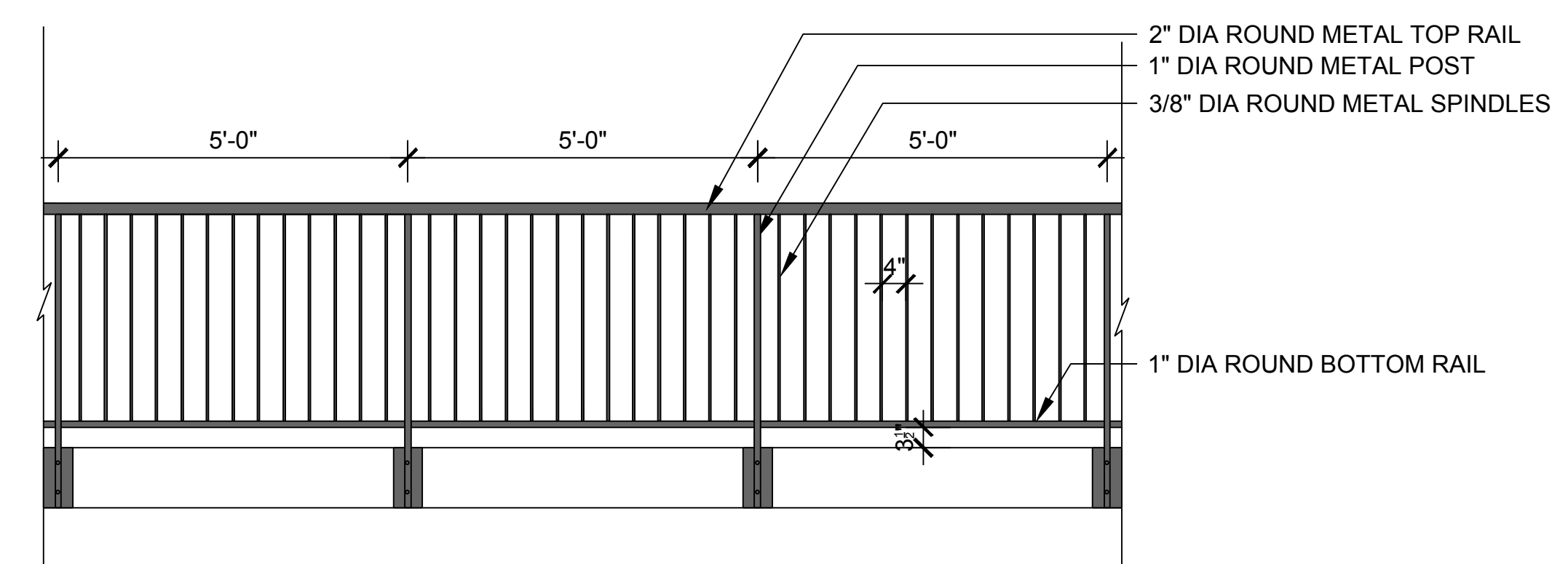
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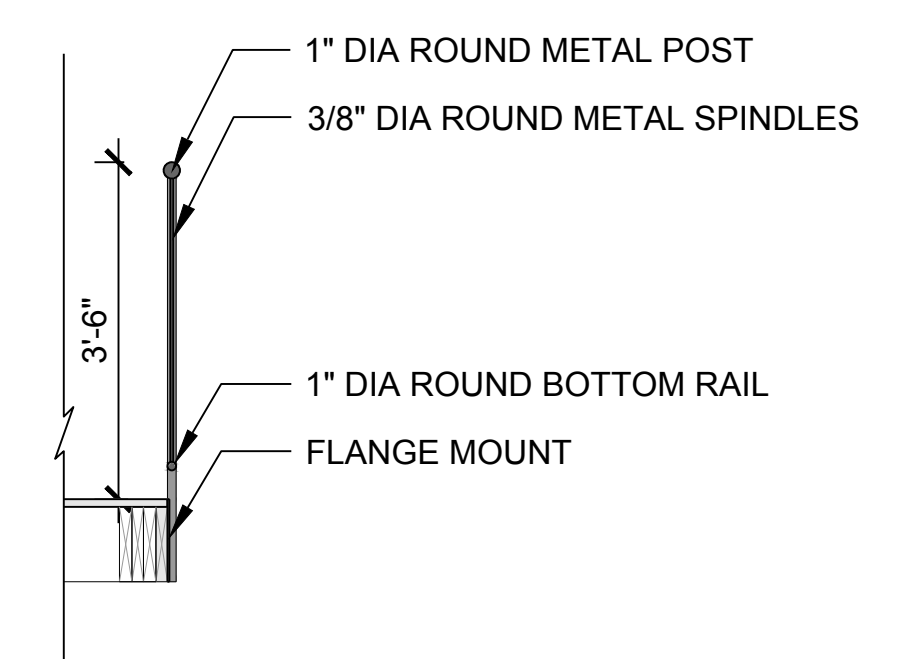
A LINAC TERRACE RAILING ELEVATION
1/2" = 1'-0"



B LINAC TERRACE RAILING CONNECTION DETAIL
1/2" = 1'-0"



C BOARDWALK RAILING ELEVATION
1/2" = 1'-0"



D BOARDWALK RAILING CONNECTION DETAIL
1/2" = 1'-0"

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Architects
11 East Madison Street
Suite 300
Chicago IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA

Tyik Gustafson Reckers Wilson Andrews, LLC

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600 West Van Buren
Suite 500
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563

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HOERR SCHAUDT

Landscape Architects
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Chicago, IL 60607

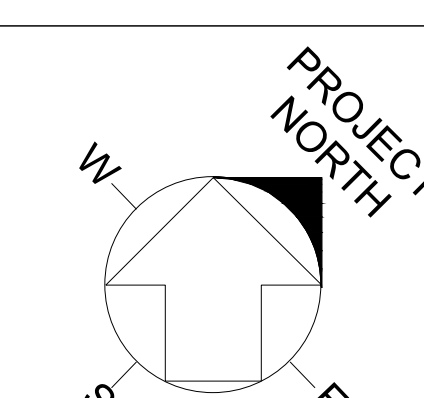
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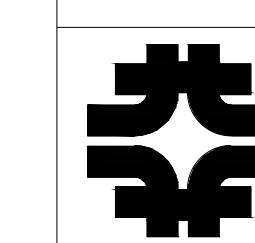
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APPROVED	SS	08/17/18
SUBMITTED		



SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY

UNITED STATES DEPARTMENT OF ENERGY

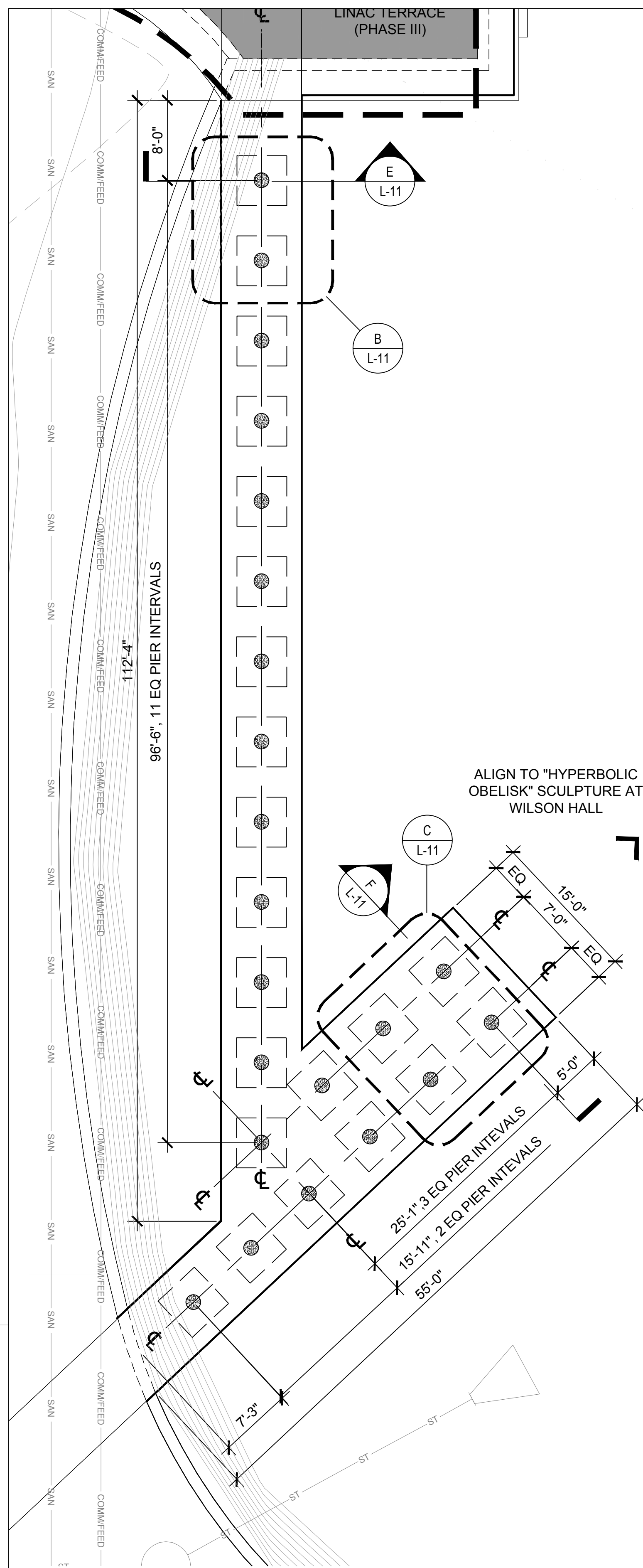


PIP II : CRYO POND
SITE DETAILS - RAILING

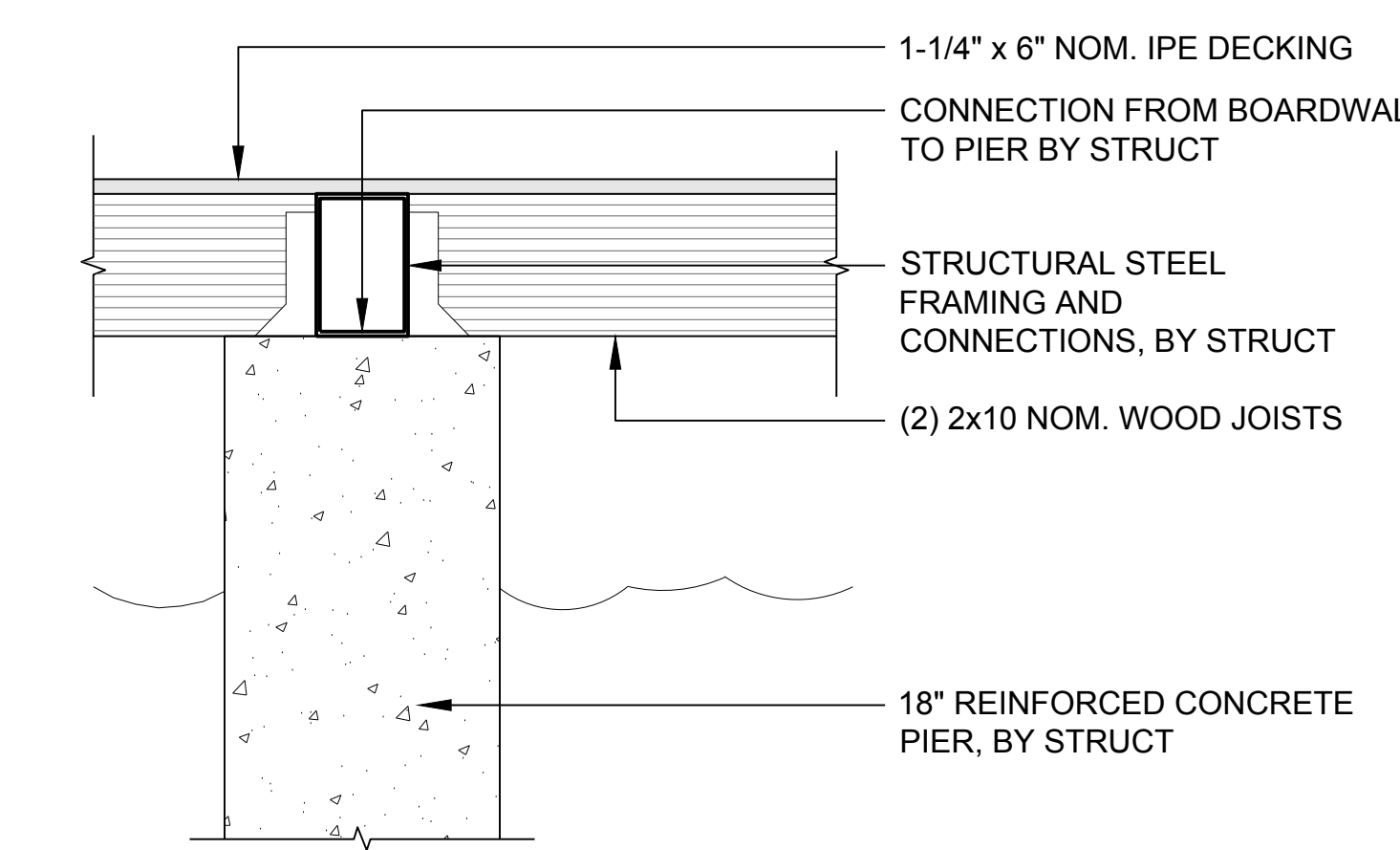
DRAWING NO. 4-3-2

L-10 REV. 1

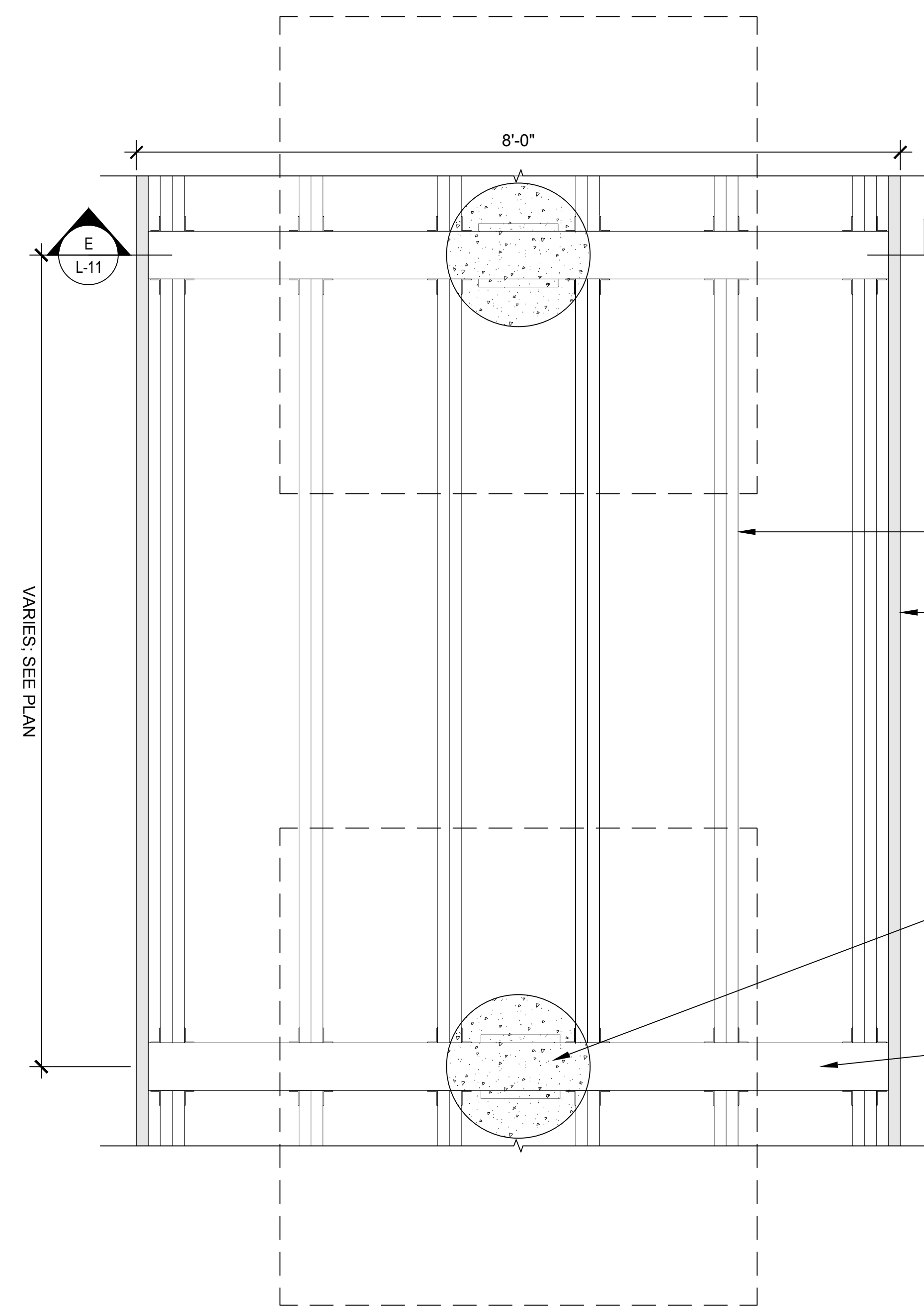
17 AUG 2018



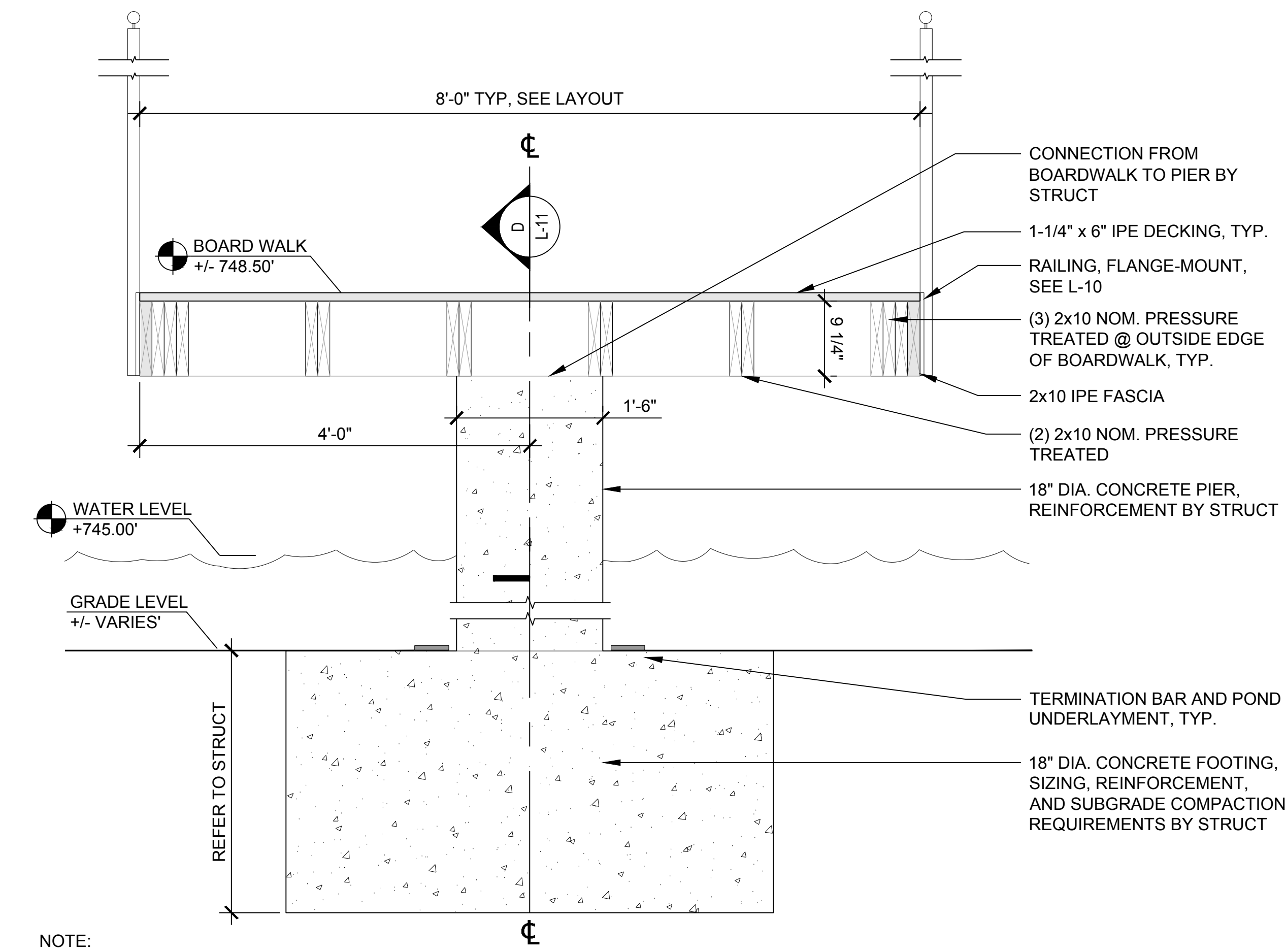
A BOARDWALK - PIER LAYOUT PLAN
1/8" = 1'-0"



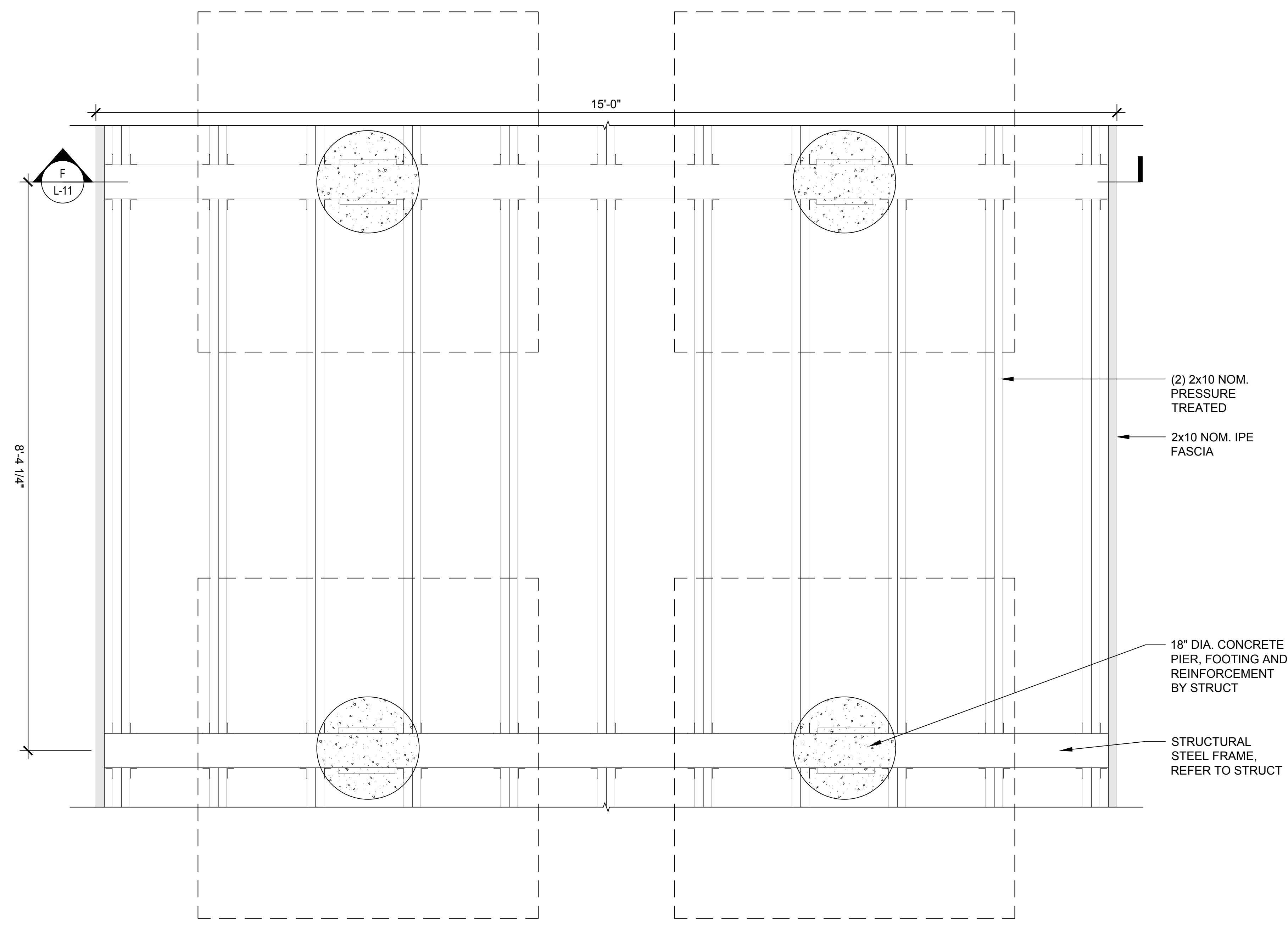
D BOARDWALK - PIER DETAIL SECTION
1" = 1'-0"



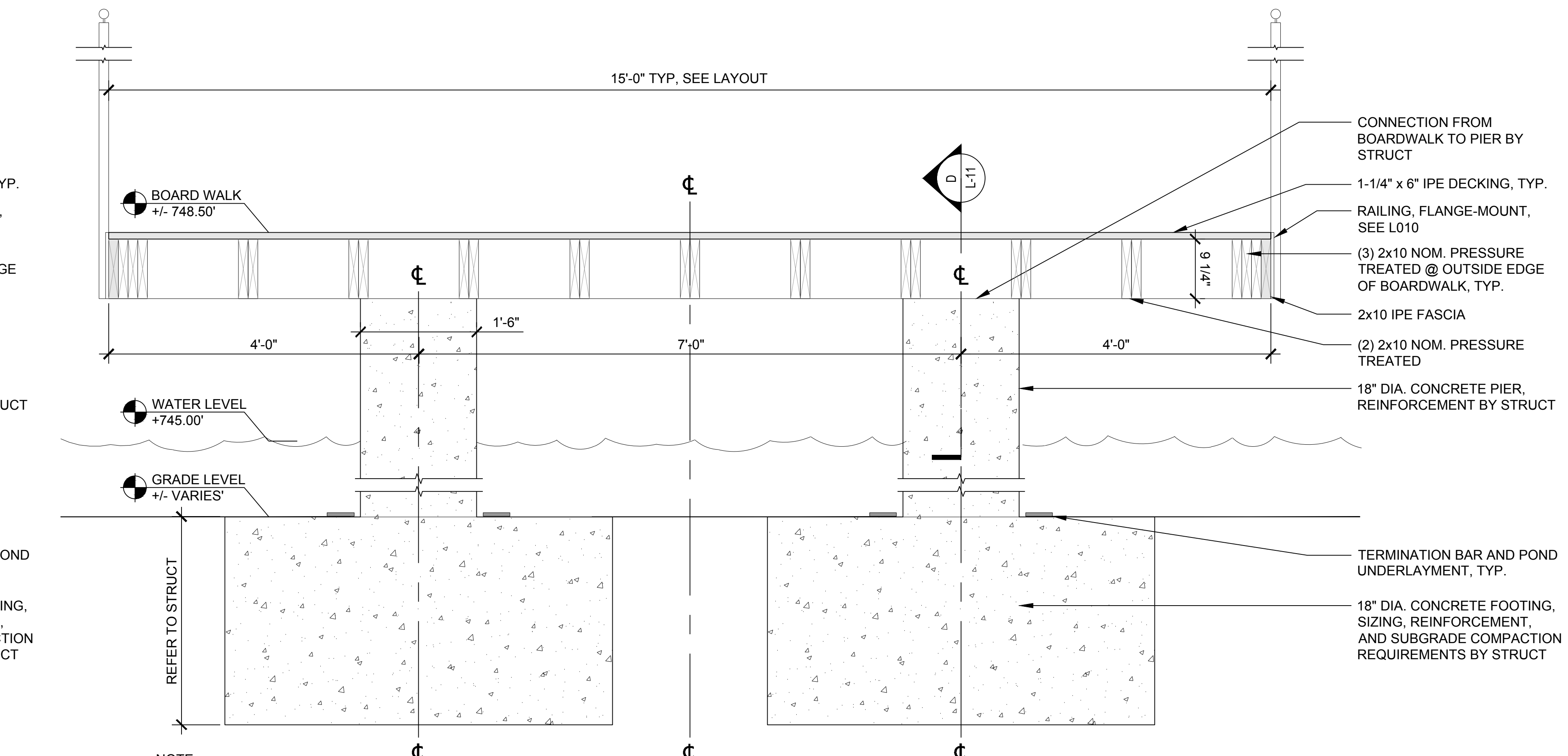
B BOARDWALK - ENLARGEMENT PLAN 1
1" = 1'-0"



E BOARDWALK - SECTION 1
1" = 1'-0"



C BOARDWALK - ENLARGEMENT PLAN 2
1" = 1'-0"



F BOARDWALK - SECTION 2
1" = 1'-0"

NOTE:
1. AVOID BEAM/PIER CONNECTION.
2. AT ALL FIELD WELDING LOCATIONS - TOUCH UP PAINTING WITH ZINC-RICH PAINT IS REQUIRED.
3. PROVIDE WATER STOP AT CONNECTION BETWEEN WALL AND FOOTING AND AT ALL WALL CONSTRUCTION JOINTS; NOT CONTROL JOINTS

NOTE:
1. AVOID BEAM/PIER CONNECTION.
2. AT ALL FIELD WELDING LOCATIONS - TOUCH UP PAINTING WITH ZINC-RICH PAINT IS REQUIRED.
3. PROVIDE WATER STOP AT CONNECTION BETWEEN WALL AND FOOTING AND AT ALL WALL CONSTRUCTION JOINTS; NOT CONTROL JOINTS

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

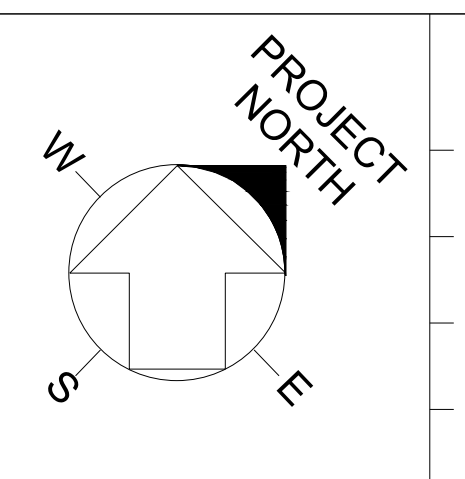
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warrville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

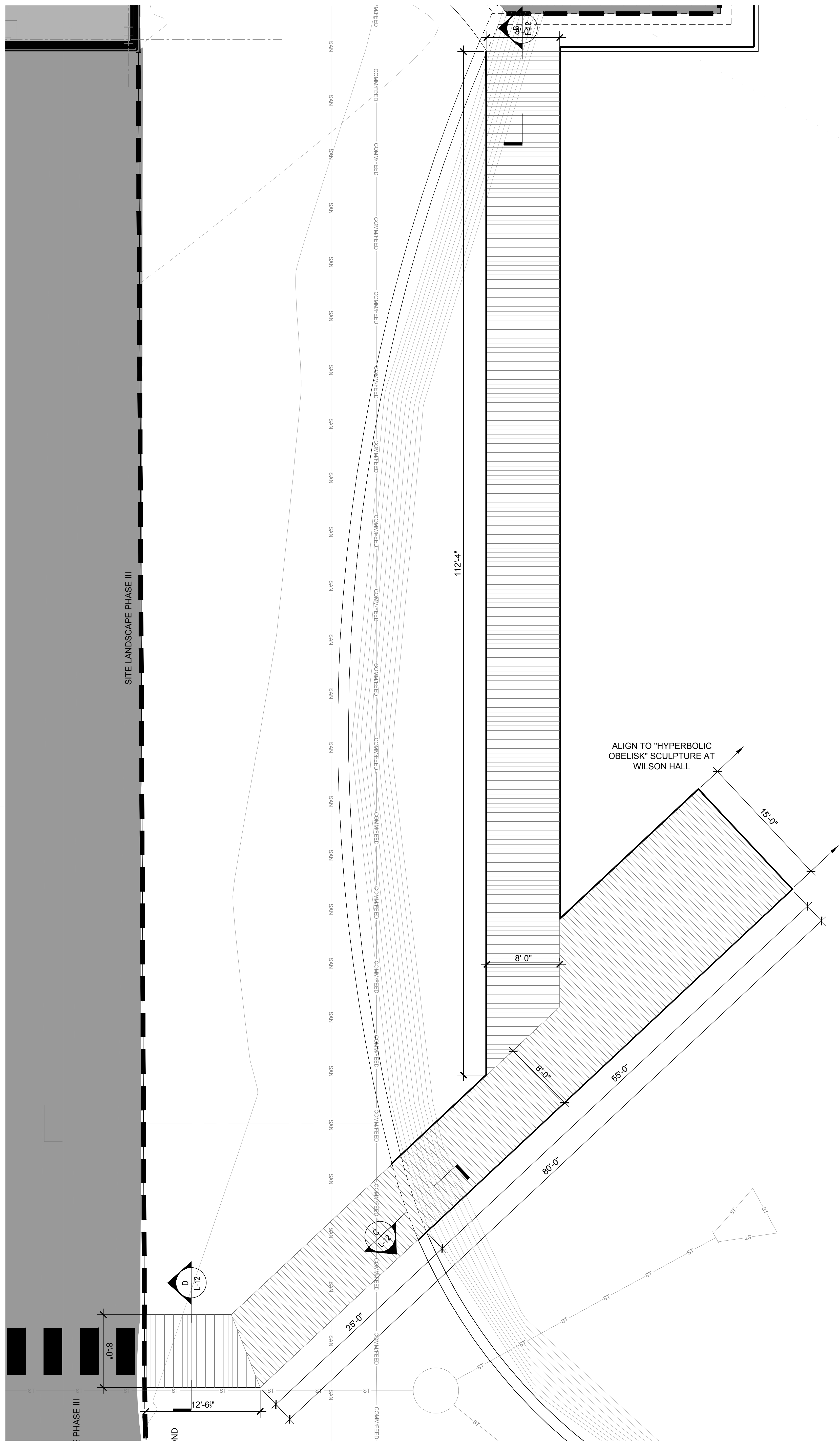
Turner
General Contractor
55 East marroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	SS/KG	08/17/18
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CHECKED	SS	08/17/18
APPROVED	SS	08/17/18
SUBMITTED		

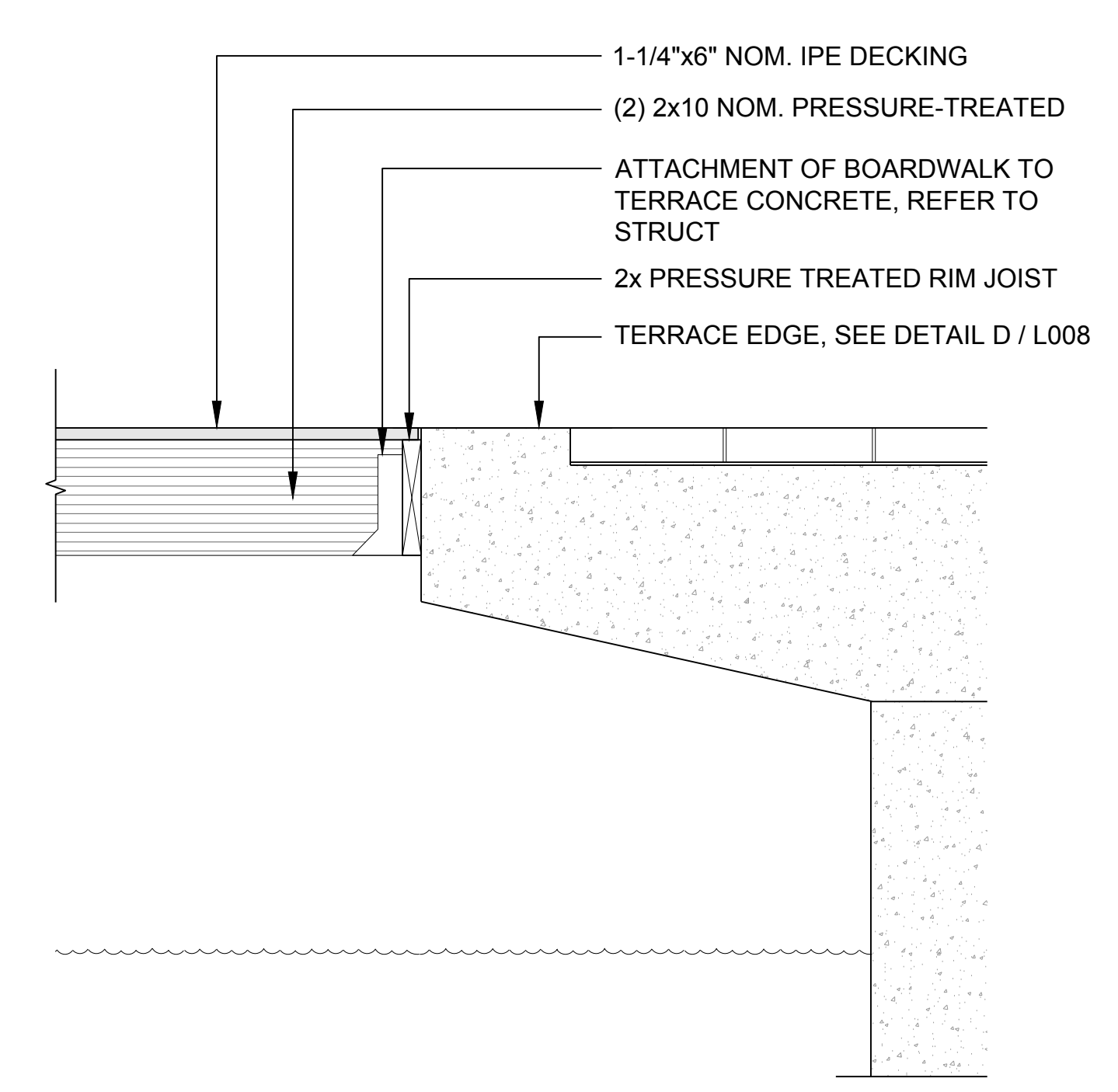


SCALE:
1" = 1'-0"

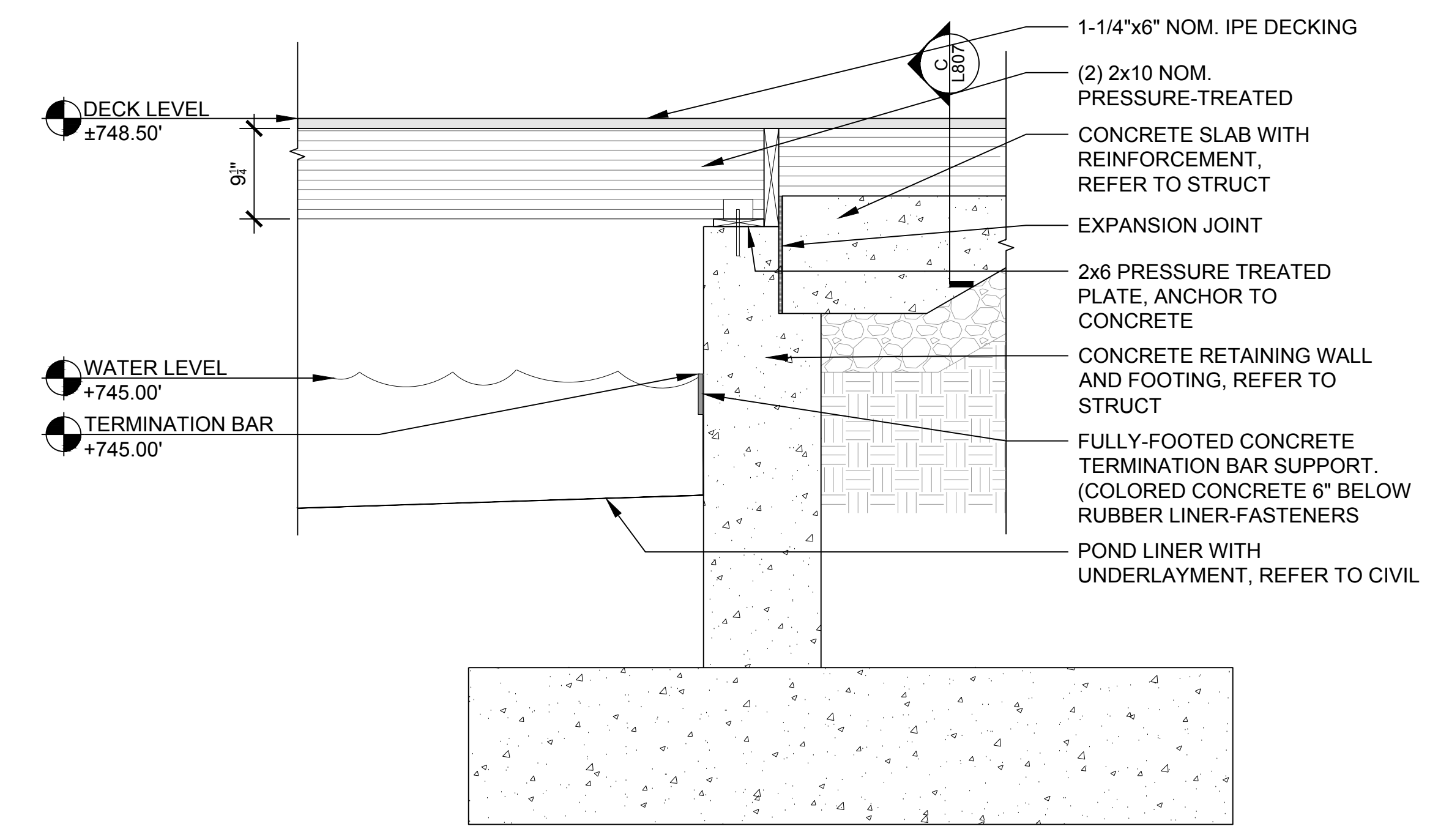
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UNITED STATES DEPARTMENT OF ENERGY
PIP II : CRYO POND
SITE DETAILS - BOARDWALK
DRAWING NO. 4-3-2
L-11 REV. 1
17 AUG 2018



A BOARDWALK - ENLARGED LAYOUT PLAN
3/16" = 1'-0"

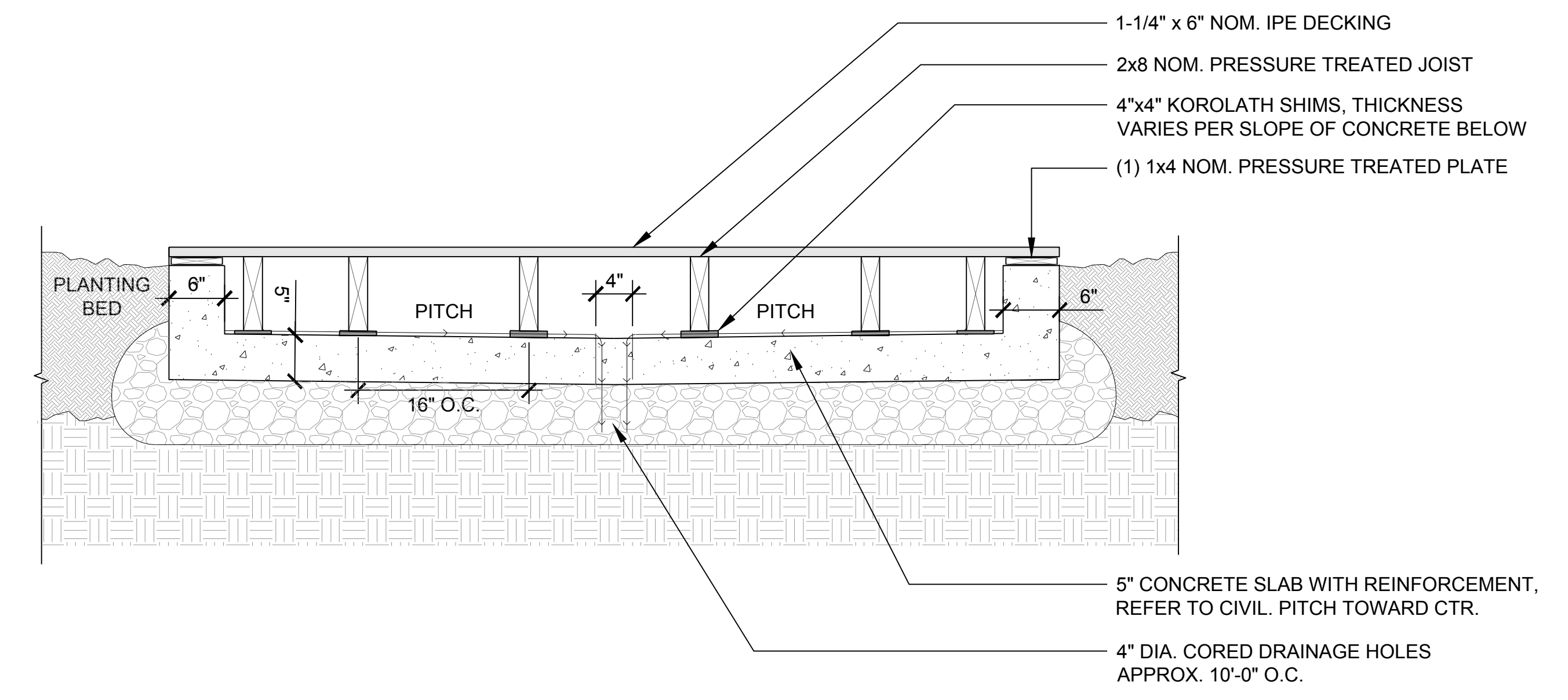


B BOARDWALK - SECTION AT TRANSITION TO CONCRETE
1" = 1'-0"



NOTES:
1. CONTROL JOINTS REQUIRED IN CONCRETE WALLS @ +/- 10'-0" O.C.
2. PROVIDE WATER STOP AT CONNECTION BETWEEN WALL AND FOOTING AND AT ALL WALL CONSTRUCTION JOINTS; NOT CONTROL JOINTS
3. HOLD CONTROL JOINTS ABOVE WATER LEVEL ELEVATION, TYP.

C BOARDWALK - SECTION AT TRANSITION TO GRADE
1" = 1'-0"



D BOARDWALK - ON GRADE
1" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

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Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 West Van Buren
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

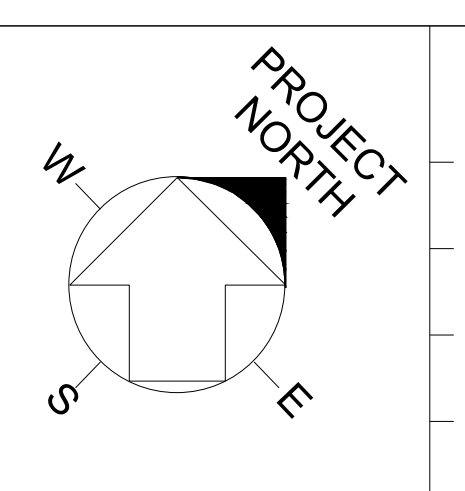
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

Turner
General Contractor
55 East Monroe St.
Suite 1430
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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SUBMITTED		



SCALE:
1" = 1'-0"

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UNITED STATES DEPARTMENT OF ENERGY
PIP II : CRYO POND
SITE DETAILS - BOARDWALK
DRAWING NO. 4-3-2 L-12 REV. 1
17 AUG 2018

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

LANDSCAPE - PHASE 1

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX

LANDSCAPE	PHASE 1
L-1	GENERAL NOTES
L-2	OVERALL LANDSCAPE PLAN - FOR REFERENCE ONLY
L-3	TREE PROTECTION & REMOVAL PLAN
L-4	PHASE 1 TEMPORARY LANDSCAPE PLAN



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Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjrn Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrenville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner

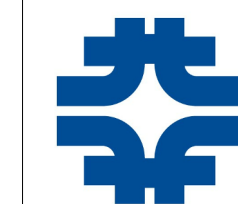
Contractor
55 East Manroe Street
Suite 1430
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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DESIGNED	RG	07/18/18
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APPROVED	BW	07/18/18
SUBMITTED		

SCALE: NOT TO SCALE

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UNITED STATES DEPARTMENT OF ENERGY



PIP-II: SITE PREPERATION

COVER

DRAWING NO. 4-3-2

L-0 REV. 1

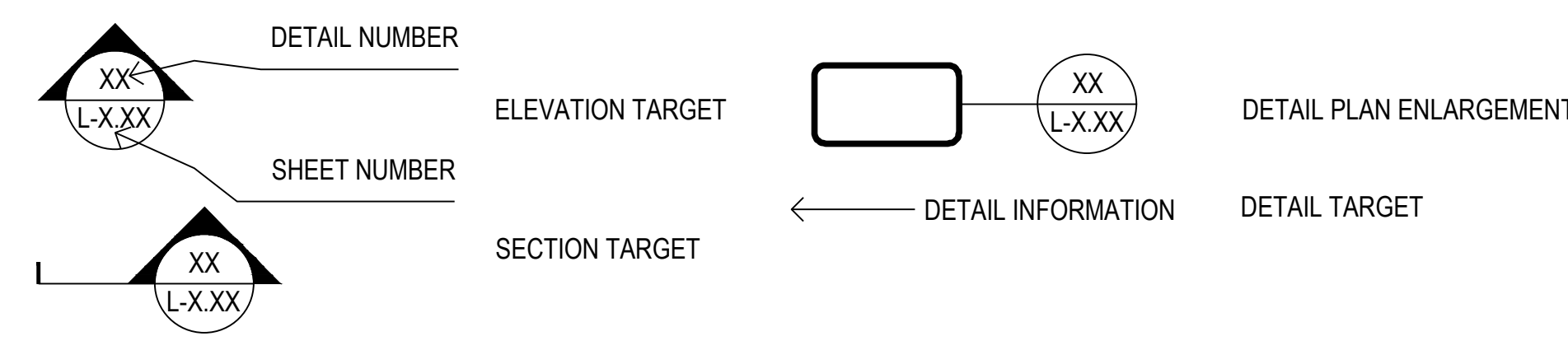
GENSLER NUMBER: 21.0137.004

17 AUG 2018

ABBREVIATIONS

&	AND	FG	FINISH GRADE	POB	POINT OF BEGINNING PAIR
@	AT			PR	PREFABRICATED
AD	AREA DRAIN	GA	GAUGE	PREFAB	PREFABRICATED
ADJ	ADJACENT FINISH	GALV	GALVANIZED	PSF	POUNDS PER SQUARE FOOT
AFF	ABOVE FINISHED FLOOR	GB	GLAZED BLOCK	PSI	POUNDS PER SQUARE INCH
ALS	ACRYLIC LATEX SEALANT	GC	GENERAL CONTRACTOR	2-PUMS	POLYURETHANE SEALANT (TWO PART)
ALUM	ALUMINUM	GL	GLASS		PAINTED FINISH
ANOD	ANODIZED	GRND	GROUND	PTD	PAINTED FINISH
AP	ACCESS PANEL	G	GUTTER		
APPROX	APPROXIMATELY			QTY	QUANTITY
ARCH	ARCHITECTURAL	HDW	HARDWARE	R	RADIUS
		HNCG	HOLLOW NEOPRENE COMPRESSION GASKET	RD	ROOF DRAIN
B-B	BACK TO BACK			REF	REFERENCE
BC	BOTTOM OF CURB	HORIZ	HORIZONTAL	REINF	REINFORCED
BJF	BITUMINOUS JOINT FILLER	HM	HOLLOW METAL	REQ'D	REQUIRED
BLK	BLOCK (WOOD BLOCKING)	HP	HIGH POINT	REV	REVISION
BMT	BUTYLMASTIC TAPE SEALANT	HR	HOURS	RM	ROOM
BRK	BRICK	HT	HEIGHT	RO	ROUGH OPENING
BRS	BUTYL RUBBER SEALANT				
BS	BOTTOM OF SLAB	INV	INVERT		
BT	BOTTOM OF TRENCH	ID	INSIDE DIAMETER	SECT	SECTION
BW	BOTTOM OF WALL	IN	INCH	SG	SOIL GRADE
		INLET	DRAIN INLET	SHT	SHEET
C/C	CENTER TO CENTER	INFO	INFORMATION	SIM	SIMILAR
CB	CATCH BASIN	INSUL	INSULATION	SPEC	SPECIFICATION
CJ	CONTROL JOINT	INT	INTERIOR	SQ	SQUARE
CJF	CORK JOINT FILLER			SS	STAINLESS STEEL
CL	CENTER LINE	LAM	LAMINATED	SRS	SILICONE RUBBER SEALANT
CLR	CLEAR OPENING	LBS.#	POUNDS	ST	SEALANT TAPE
COL	COLUMN	LP	LOW POINT	STD	STANDARD
CONC	CONCRETE			STL	STEEL
CONCP	CONCRETE PAINTED	MACH	MACHINE	STOR	STORAGE
CONST	CONSTRUCTION	MATL	MATERIAL	STRUCT	STRUCTURAL
CONTR	CONTRACTOR	MAX	MAXIMUM	SUSP	SUSPENDED
CONT	CONTINUOUS	MECH	MECHANICAL		
CMU	CONCRETE MASONRY UNIT	MED	MEDIUM	T	TREAD
		MFR	MANUFACTURER	T/	TOP OF
CMUP	CONCRETE MASONRY UNIT PAINTED	MH	MANHOLE	TC	TOP OF CURB
		MIN	MINIMUM	TEL	TELEPHONE
CO	CLEAN OUT	MISC	MISCELLANEOUS	THK	THICK
		MO	MASONRY OPENING	TS	TOP OF SLAB
DF	DRINKING FOUNTAIN	MTL	METAL	TT	TRAFFIC TOPPING
DI	DUCTILE IRON			TW	TOP OF WALL
DIA	DIAMETER	NIC	NOT IN CONTRACT	TYP	TYPICAL
DIM	DIMENSION	NO	NUMBER		
DN	DOWN	NOM	NOMINAL		
DTL	DETAIL	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING				
		OA	OVERALL	VERT	VERTICAL
EA	EACH	OC	ON CENTER	VIF	VERIFY IN FIELD
EC	EXPOSED CONSTRUCTION	OD	OUTSIDE DIAMETER		
ECP	EXPOSED CONSTRUCTION PAINTED	OPNG	OPENING		
		OPP	OPPOSITE	W/	WITH
EFTS	EXPANDING FOAM TAPE SEALANT	P.C.C.	PORTLAND CEMENT CONCRETE	W/O	WITHOUT
				WC	WATER CLOSET
EL	ELEVATION			WD	WOOD
EJ	EXPANSION JOINT	PERP	PERPENDICULAR	WP	WORK POINT
EQ	EQUAL	PLBG	PLUMBING	WPR	WATERPROOFING
EX	EXISTING	PLWD	PLYWOOD	WT	WEIGHT

ANNOTATIONS



DRAWING INDEX

Sheet Number	Sheet Title	ISSUE FOR 60% 08-17-18
L-1	GENERAL NOTES	●
L-2	OVERALL SITE PLAN (FOR REFERENCE)	●
L-3	TREE PROTECTION & REMOVALS PLAN	●
L-4	TEMPORARY LANDSCAPE PLAN	●

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS
		REVISIONS



Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124



Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350



Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966



MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

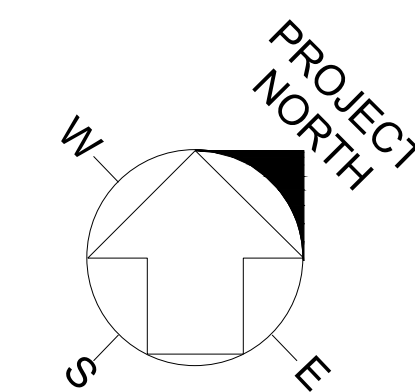


Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101



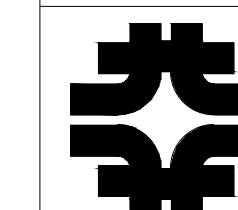
General Contractor
55 East mahroe St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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SCALE:

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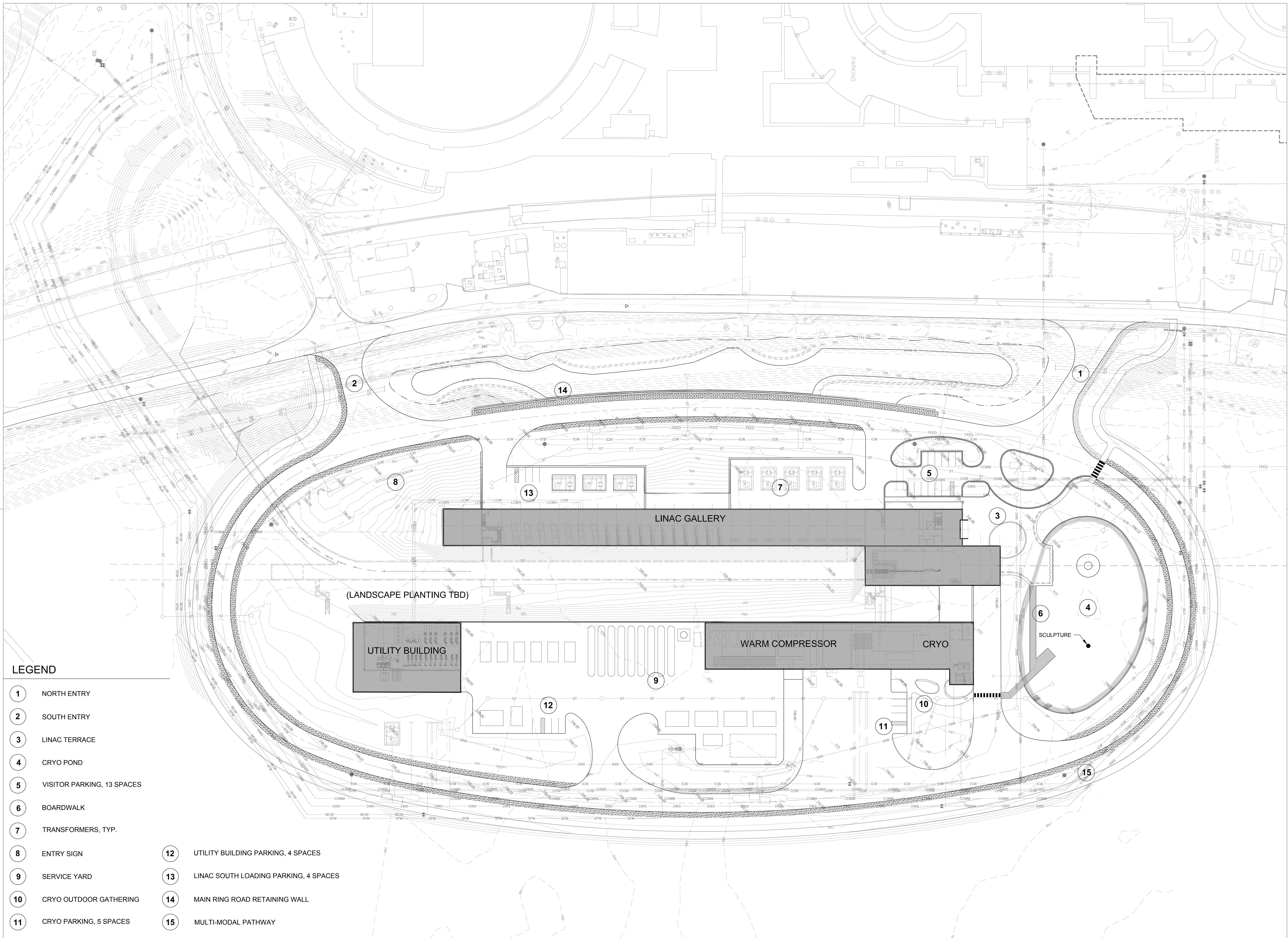


PIP II : SITE PREPARATION
PHASE I
GENERAL NOTES

DRAWING NO. **4-3-2**

L-1 REV. 1

17 AUG 2018



LEGEND

- 1 NORTH ENTRY
- 2 SOUTH ENTRY
- 3 LINAC TERRACE
- 4 CRYO POND
- 5 VISITOR PARKING, 13 SPACES
- 6 BOARDWALK
- 7 TRANSFORMERS, TYP.
- 8 ENTRY SIGN
- 9 SERVICE YARD
- 10 CRYO OUTDOOR GATHERING
- 11 CRYO PARKING, 5 SPACES
- 12 UTILITY BUILDING PARKING, 4 SPACES
- 13 LINAC SOUTH LOADING PARKING, 4 SPACES
- 14 MAIN RING ROAD RETAINING WALL
- 15 MULTI-MODAL PATHWAY

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS
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Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 West Van Buren
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
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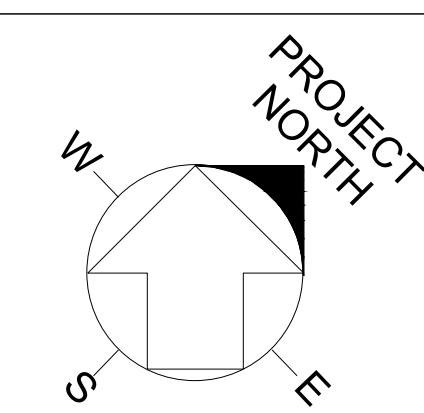
HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 1420
Chicago, IL 60603
Tel: 312.492.6501
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Turner

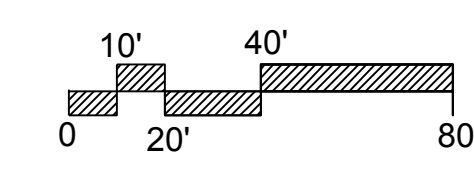
General Contractor
55 East Maroon St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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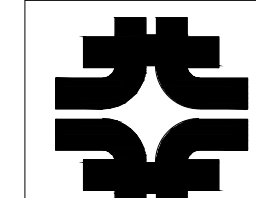


SCALE:

OVERALL PLAN
SCALE: 1" = 40'



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PIP II : SITE PREPARATION
PHASE I **OVERALL SITE PLAN (FOR REFERENCE)**

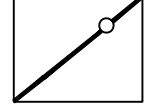
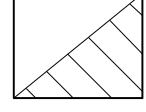
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L-2 REV. 1

17 AUG 2018

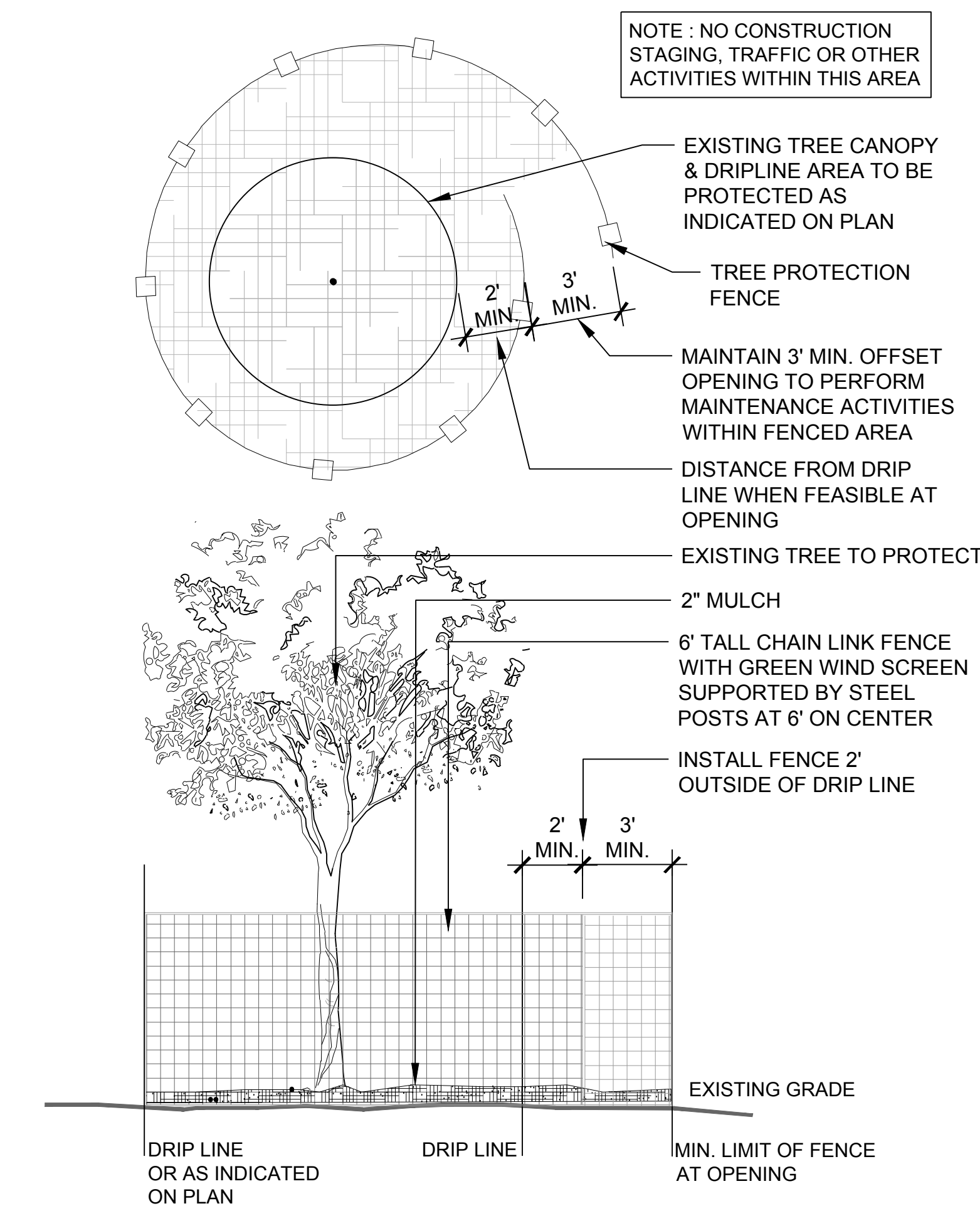


LEGEND

-  TREE PROTECTION FENCE
SEE DETAIL A, THIS SHEET
-  TREE REMOVAL REGION

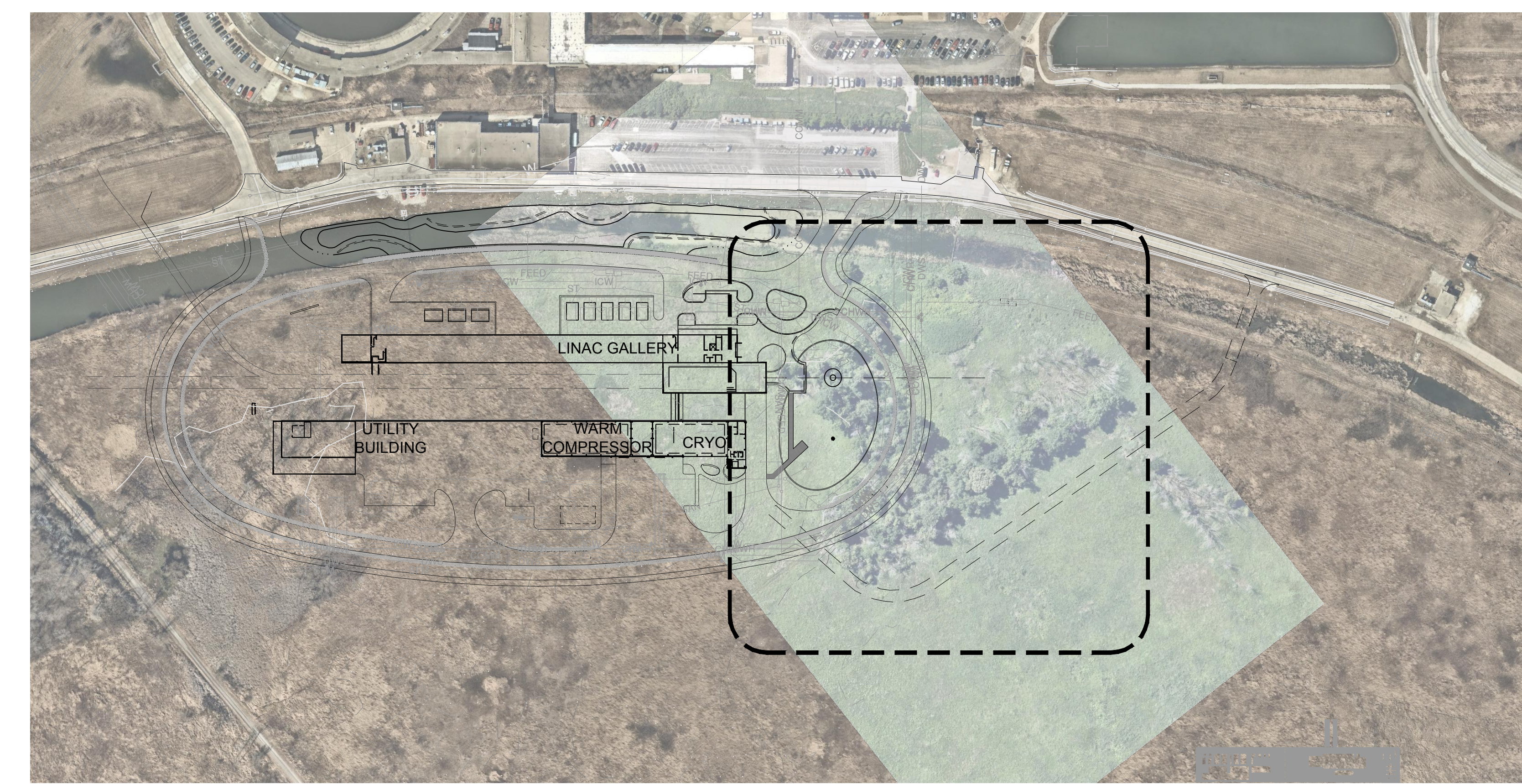
GENERAL DEMOLITION NOTES:

1. REFER TO CURRENT SURVEY BY CMT CIVIL ENGINEERS.
2. THE SUBCONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE SUBCONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ALL UTILITY LOCATIONS THROUGHOUT THE DURATION OF CONSTRUCTION. HAND DIG ALL AREAS WITH EXCESSIVE UTILITIES WITHIN THE AREAS OF EXCAVATION.
3. LIMITS OF DEMOLITION SHOULD BE VERIFIED IN FIELD. THE SUBCONTRACTOR SHALL REMOVE AND REPLACE ITEMS AS INDICATED AND AS NEEDED. SUBCONTRACTOR TO ACCEPT EXISTING CONDITIONS.
4. ALL EXISTING SIGNAGE SHALL REMAIN AND BE MAINTAINED DURING CONSTRUCTION. CONTRACTOR IS TO COMPLY WITH ALL LOCAL CODES AND STANDARDS AND REQUIREMENTS REGARDING REMOVAL AND RELOCATION.
5. THE SUBCONTRACTOR SHALL REMOVE ALL RUBBLE, TRASH, DEBRIS, AND ANY OTHER MISCELLANEOUS ITEMS FROM THE SITE IN COMPLIANCE WITH ALL STATE AND LOCAL EPA ORDINANCES.
6. SUBCONTRACTOR IS TO CONFIRM EXTENTS OF TREES TO BE PROTECTED AND REMAIN WITH FERMLAB ON SITE PRIOR TO REMOVAL.
7. SUBCONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND TREES AND AS DIRECTED BY CIVIL ENGINEER. SUBCONTRACTOR SHALL PROTECT ALL EXISTING TREES TO REMAIN AND WILL REPLACE PER CALIPER INCH ANY TREES DAMAGED BY CONSTRUCTION OPERATION AT NO ADDITIONAL COST TO FERMLAB.
8. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY AREAS AND FEATURES DAMAGED DURING THE COURSE OF CONSTRUCTION, WHETHER WITHIN OR OUTSIDE OF THE PROJECT AREA, AT NO ADDITIONAL COST TO FERMLAB.
9. COORDINATE WITH IN-PROGRESS ADJACENT WORK BY OTHERS. REMOVE ALL SOD & VEGETATION WITHIN LIMIT OF WORK UNLESS OTHERWISE NOTED. REFER TO CIVIL ENGINEERS FOR ADDITIONAL REMOVAL NOTES.
10. SUBCONTRACTOR TO VERIFY SITE CONDITIONS PRIOR TO START OF WORK.
11. SUBCONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES AT A MINIMUM OF 48 HOURS PRIOR TO THE START OF ALL CONSTRUCTION. FOR UTILITY LOCATIONS, CALL J.U.L.I.E. AT 800-892-0123. THE SUBCONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING ALL UTILITY LOCATIONS, AS MARKED BY THE UTILITY COMPANIES, THROUGHOUT THE DURATION OF CONSTRUCTION. SUBCONTRACTOR MUST BRING UTILITY CONFLICTS TO ATTENTION OF FERMLAB FOR RESOLUTION PRIOR TO PROCEEDING.
12. SUBCONTRACTOR SHALL REVIEW PROPOSED LANDSCAPE AND EXACT LOCATION OF EXISTING AND PROPOSED UTILITIES PRIOR TO PURCHASING ALL LANDSCAPE MATERIALS. ANY CONFLICTS WILL BE BROUGHT TO THE ATTENTION OF FERMLAB PRIOR TO PROCEEDING.



A TREE PROTECTION FENCE
1/4" = 1'-0"

NOTE: UTILITY CORRIDOR LAYOUT, SEE CIVIL

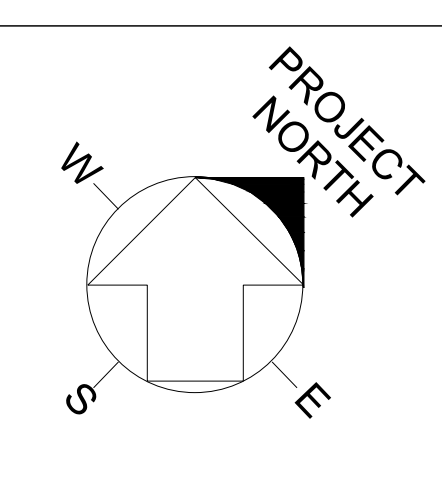


OVERALL SITE KEY PLAN
1" = 150'

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<p>Gensler</p> <p>Architects 11 East Madison Street Suite 300 Chicago, IL 60602</p> <p>Tel: 312.456.0123 Fax: 312.456.0124</p>	<p>CMT</p> <p>Consulting Engineers 500 North Commons Drive Suite 115 Aurora, IL 60504</p> <p>Tel: 630.820.1022 Fax: 630.820.0350</p>	<p>TGRWA</p> <p>Tyik Gustafson Reckers Wilson Andrews, LLC</p> <p>Structural Engineers 600 West Van Buren Suite 900 Naperville, IL 60563</p> <p>Tel: 312.341.0055 Fax: 312.341.9966</p>	<p>IMEG</p> <p>MEP Engineers 1100 Warronville Rd. Suite 400W Naperville, IL 60563</p> <p>Tel: 630.527.2320 Fax: 630.527.2321</p>	<p>HOERR SCHAUDT</p> <p>Landscape Architects 850 West Jackson Blvd. Suite 1420 Chicago, IL 60603</p> <p>Tel: 312.492.6501 Fax: 312.492.7101</p>	<p>Turner</p> <p>General Contractor 55 East Monroe St. Suite 1420 Chicago, IL 60603</p> <p>Tel: 312.327.2770 Fax: 312.492.7101</p>
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SUBMITTED		



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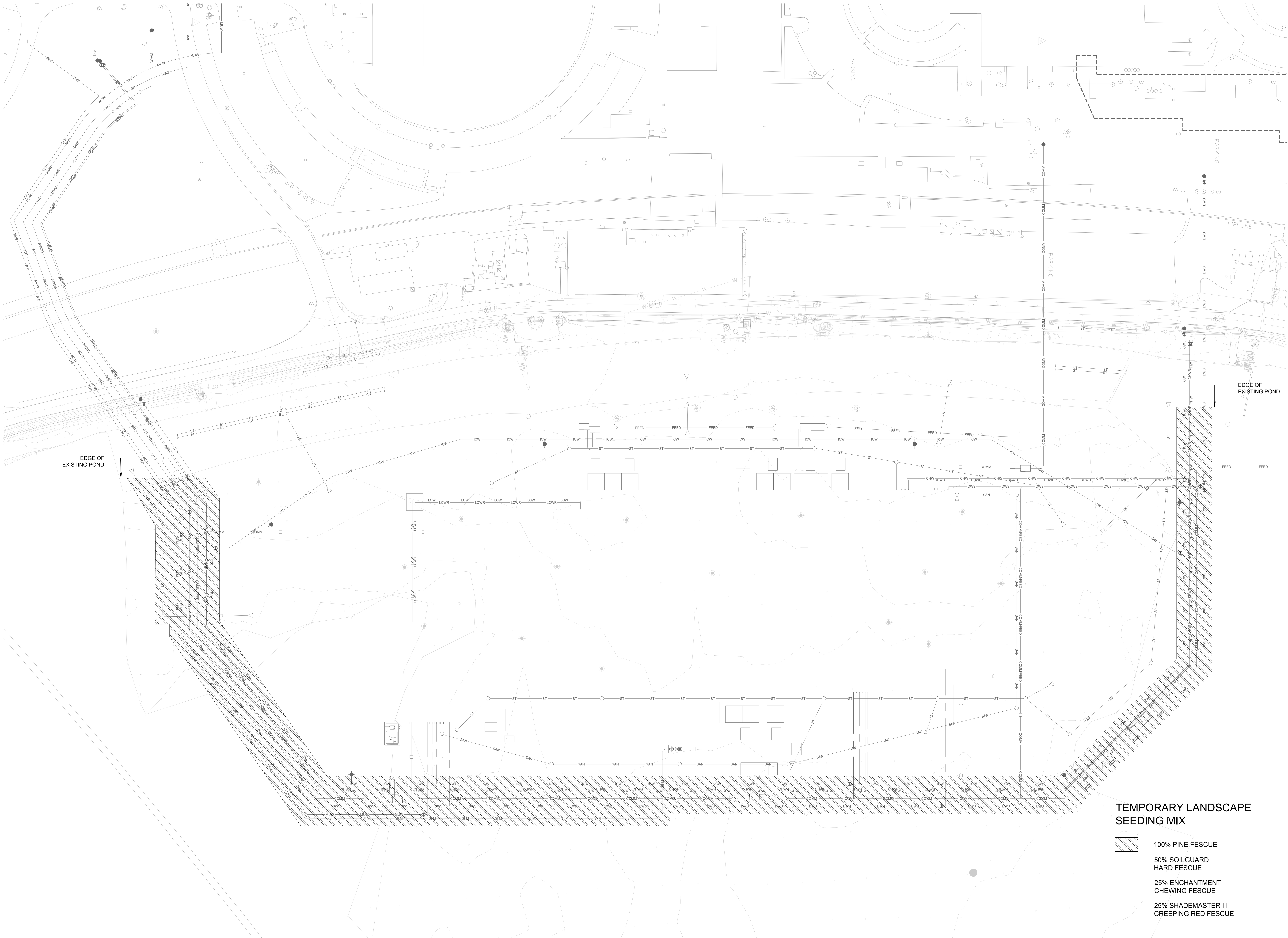
ENLARGEMENT PLAN
SCALE: 1" = 30'

KEY PLAN
SCALE: 1" = 150'

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PII II : SITE PREPARATION
PHASE I
TREE PROTECTION & REMOVALS PLAN

DRAWING NO. **4-3-2** **L-3** REV. 1



TEMPORARY LANDSCAPE SEEDING MIX

- 100% PINE FESCUE
- 50% SOILGUARD
HARD FESCUE
- 25% ENCHANTMENT
CHEWING FESCUE
- 25% SHADEMASTER III
CREEPING RED FESCUE

REV.	DATE	DESCRIPTIONS REVISIONS
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Architects
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Chicago, IL 60602
Tel: 312.456.0123
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CMT
Consulting Engineers
500 West Van Buren
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

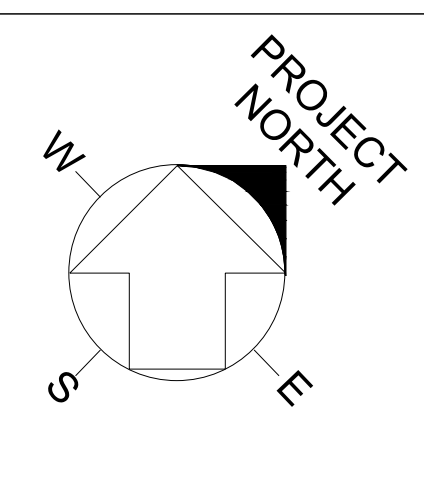
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warrville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

Turner
General Contractor
55 East marion St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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APPROVED	SS	08/17/18
SUBMITTED		



SCALE:
OVERALL PLAN
SCALE: 1" = 40'

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UNITED STATES DEPARTMENT OF ENERGY
PIP II : SITE PREPARATION
PHASE I
TEMPORARY LANDSCAPE PLAN
DRAWING NO. **4-3-2** **L-4** REV. 1 **17 AUG 2018**

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

LANDSCAPE - PHASE 2

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX

LANDSCAPE	PHASE 2
L-1	GENERAL NOTES
L-2	OVERALL LANDSCAPE PLAN - FOR REFERENCE ONLY
L-3	PHASE 2 TEMPORARY LANDSCAPE PLAN
L-4	SOILS AND DRAINAGE PLAN
L-5	PLANTING PLAN
L-6	SITE DETAILS - PLANTING
L-7	SITE SECTIONS
L-8	SITE DETAILS - POND DETAILS



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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

TGRWA
 Tyra Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 HOERR SCHAUDT
 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

Turner
 Contractor
 55 East Manroe Street
 Suite 1430
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

Turner
 Landscape Architects
 850 West Jackson Blvd.
 Suite 800
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

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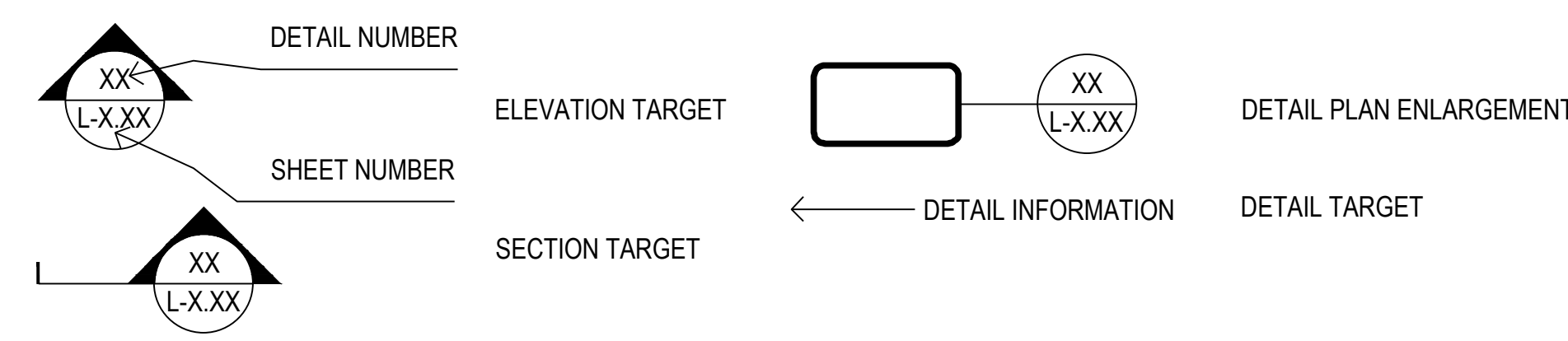
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PIP-II: SITE PREPERATION
COVER

DRAWING NO. **4-3-2** L-0 REV. 1
 GENSLER NUMBER: 21.0137.004
 17 AUG 2018

ABBREVIATIONS

&	AND	FG	FINISH GRADE	POB	POINT OF BEGINNING PAIR
@	AT	GA	GAUGE	PR	PREFABRICATED
AD	AREA DRAIN	GALV	GALVANIZED	PREFAB	PREFABRICATED
ADJ	ADJACENT FINISH	GB	GLAZED BLOCK	PSF	POUNDS PER SQUARE FOOT
AFF	ABOVE FINISHED FLOOR	GC	GENERAL CONTRACTOR	PSI	POUNDS PER SQUARE INCH
ALS	ACRYLIC LATEX SEALANT	GL	GLASS	2-PUMS	POLYURETHANE SEALANT (TWO PART)
ALUM	ALUMINIUM	GRND	GROUND	PTD	PAINTED FINISH
ANOD	ANONIZED	G	GUTTER	QTY	QUANTITY
AP	ACCESS PANEL	HDW	HARDWARE	R	RADIUS
APPROX	APPROXIMATELY	HNCG	HOLLOW NEOPRENE COMPRESSION GASKET	RD	ROOF DRAIN
ARCH	ARCHITECTURAL	HORIZ	HORIZONTAL	REF	REFERENCE
B-B	BACK TO BACK	HM	HOLLOW METAL	REINF	REINFORCED
BC	BOTTOM OF CURB	HP	HIGH POINT	REQ'D	REQUIRED
BJF	BITUMINOUS JOINT FILLER	HR	HOURS	REV	REVISION
BLK	BLOCK (WOOD BLOCKING)	HT	HEIGHT	RM	ROOM
BMT	BUTYLMASTIC TAPE SEALANT	INV	INVERT	RO	ROUGH OPENING
BRK	BRICK	ID	INSIDE DIAMETER	SECT	SECTION
BRS	BUTYL RUBBER SEALANT	IN	INCH	SG	SOIL GRADE
BS	BOTTOM OF SLAB	INLET	DRAIN INLET	SHT	SHEET
BT	BOTTOM OF TRENCH	INFO	INFORMATION	SIM	SIMILAR
BW	BOTTOM OF WALL	INSUL	INSULATION	SPEC	SPECIFICATION
C/C	CENTER TO CENTER	INT	INTERIOR	SQ	SQUARE
CB	CATCH BASIN	LAM	LAMINATED	SS	STAINLESS STEEL
CJ	CONTROL JOINT	LBS.#	POUNDS	SRS	SILICONE RUBBER SEALANT
CJF	CORK JOINT FILLER	LP	LOW POINT	ST	SEALANT TAPE
CL	CENTER LINE	MACH	MACHINE	STD	STANDARD
CLR	CLEAR OPENING	MATL	MATERIAL	STL	STEEL
COL	COLUMN	MAX	MAXIMUM	STOR	STORAGE
CONC	CONCRETE	MECH	MECHANICAL	STRUCT	STRUCTURAL
CONCP	CONCRETE PAINTED	MED	MEDIUM	SUSP	SUSPENDED
CONST	CONSTRUCTION	MFR	MANUFACTURER	T	TREAD
CONTR	CONTRACTOR	MH	MANHOLE	T/	TOP OF
CONT	CONTINUOUS	MIN	MINIMUM	TC	TOP OF CURB
CMU	CONCRETE MASONRY UNIT	MISC	MISCELLANEOUS	TEL	TELEPHONE
CMUP	CONCRETE MASONRY UNIT PAINTED	MO	MASONRY OPENING	THK	THICK
CO	CLEAN OUT	MTL	METAL	TS	TOP OF SLAB
DF	DRINKING FOUNTAIN	NIC	NOT IN CONTRACT	TT	TRAFFIC TOPPING
DI	DUCTILE IRON	NO	NUMBER	TW	TOP OF WALL
DIA	DIAMETER	NOM	NOMINAL	TYP	TYPICAL
DIM	DIMENSION	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
DN	DOWN	OA	OVERALL	VERT	VERTICAL
DTL	DETAIL	OC	ON CENTER	VIF	VERIFY IN FIELD
DWG	DRAWING	OD	OUTSIDE DIAMETER	W/	WITH
EA	EACH	OPNG	OPENING	W/O	WITHOUT
EC	EXPOSED CONSTRUCTION	OPP	OPPOSITE	WC	WATER CLOSET
ECP	EXPOSED CONSTRUCTION PAINTED	P.C.C.	PORTLAND CEMENT CONCRETE	WD	WOOD
EFTS	EXPANDING FOAM TAPE SEALANT	PERP	PERPENDICULAR	WP	WORK POINT
EL	ELEVATION	PLBG	PLUMBING	WPR	WATERPROOFING
EJ	EXPANSION JOINT	PLWD	PLYWOOD	WT	WEIGHT
EQ	EQUAL				
EX	EXISTING				

ANNOTATIONS



DRAWING INDEX

Sheet Number	Sheet Title	ISSUE FOR 60% 08-17-18
L-1	GENERAL NOTES	●
L-2	OVERALL LANDSCAPE PLAN (FOR REFERENCE ONLY)	●
L-3	TEMPORARY LANDSCAPE PLAN	●
L-4	SOIL AND DRAINAGE PLAN	●
L-5	PLANTING PLAN	●
L-6	SITE DETAILS - PLANTING	●
L-7	SITE SECTIONS	●
L-8	SITE DETAILS - POND DETAILS	●

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 500 North Commons Drive
 Suite 115
 Aurora, IL 60504
 Tel: 630.820.1022
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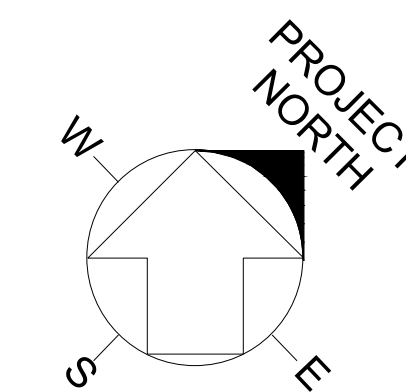
TGRWA
 Tjrk Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Naperville, IL 60563
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warronville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.482.6501
 Fax: 312.482.7101

Turner
 General Contractor
 55 East mahroe St.
 Suite 1420
 Chicago, IL 60603
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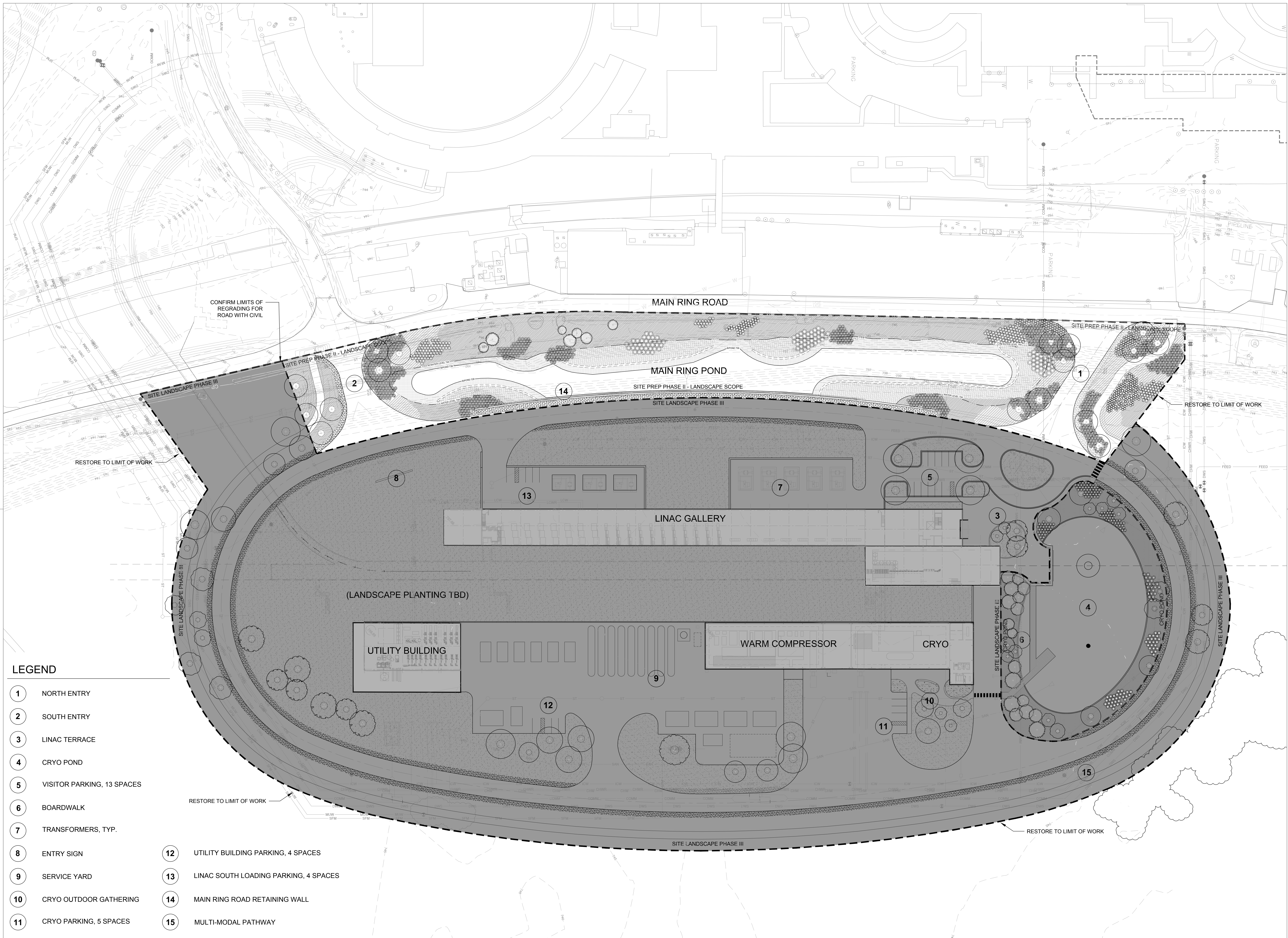
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PIP II : SITE PREPARATION
 PHASE II
GENERAL NOTES
 DRAWING NO. 4-3-2 L-1 REV. 1



LEGEND

- 1 NORTH ENTRY
- 2 SOUTH ENTRY
- 3 LINAC TERRACE
- 4 CRYO POND
- 5 VISITOR PARKING, 13 SPACES
- 6 BOARDWALK
- 7 TRANSFORMERS, TYP.
- 8 ENTRY SIGN
- 9 SERVICE YARD
- 10 CRYO OUTDOOR GATHERING
- 11 CRYO PARKING, 5 SPACES
- 12 UTILITY BUILDING PARKING, 4 SPACES
- 13 LINAC SOUTH LOADING PARKING, 4 SPACES
- 14 MAIN RING ROAD RETAINING WALL
- 15 MULTI-MODAL PATHWAY

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 Chicago IL 60602
 Tel: 312.456.0123
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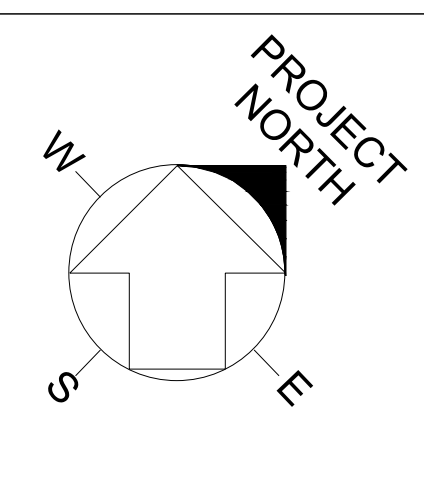
TGRWA
 Tjyk Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Aurora, IL 60507
 Tel: 312.341.0055
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IMEG
 MEP Engineers
 1100 Warronville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

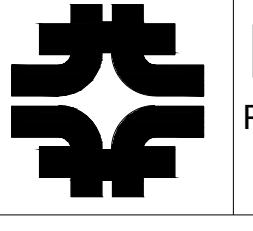
HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.492.6501
 Fax: 312.492.7101

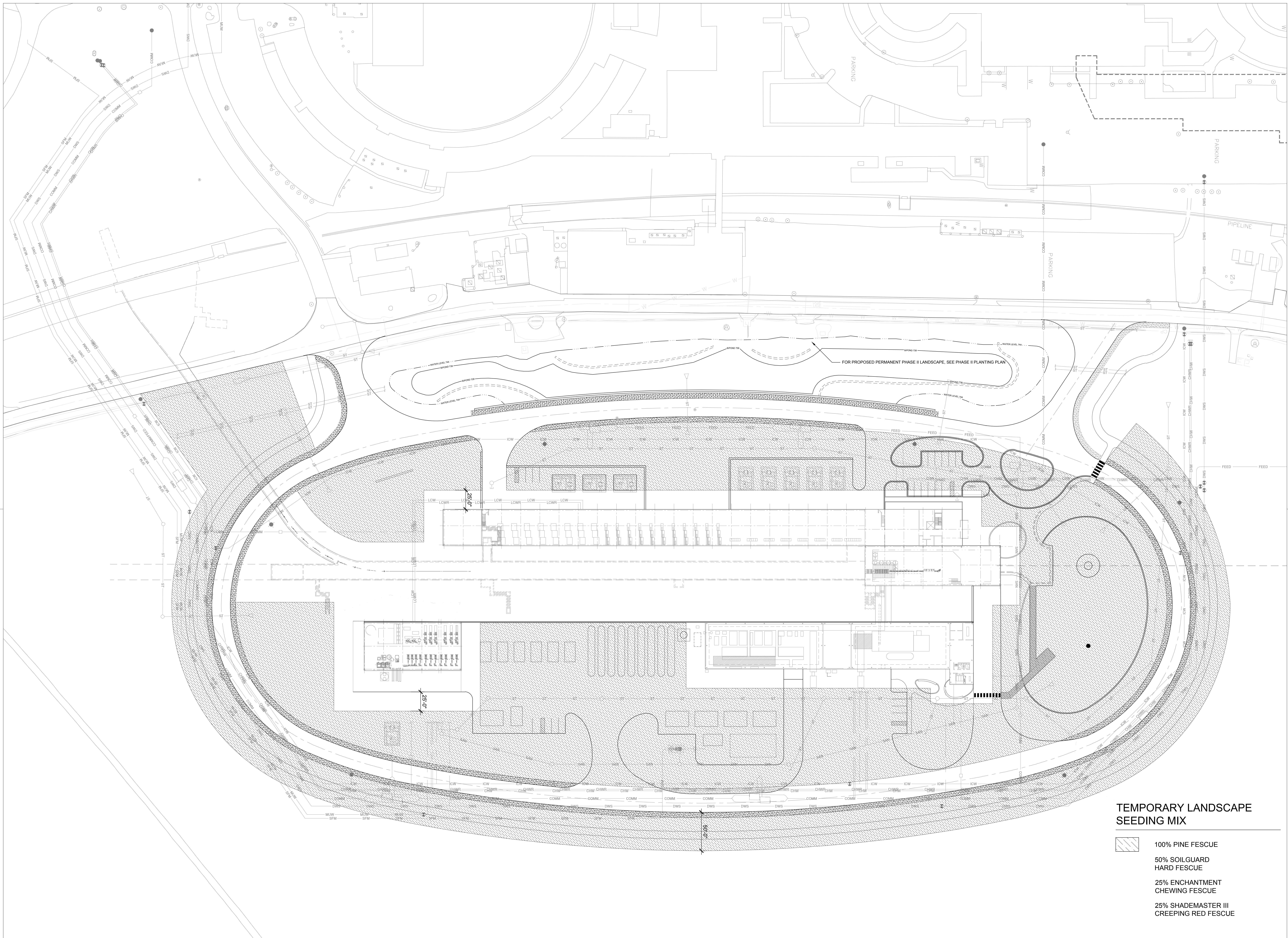
Turner
 General Contractor
 55 East marion St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

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SCALE:
 OVERALL PLAN
 SCALE: 1" = 40'
 0 20' 40' 80'

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PIP II : SITE PREPARATION
 PHASE II
OVERALL LANDSCAPE PLAN
 (FOR REFERENCE ONLY)
 DRAWING NO. 4-3-2 **L-2** REV. 1 17 AUG 2018



TEMPORARY LANDSCAPE SEEDING MIX

- 100% PINE FESCUE
- 50% SOILGUARD HARD FESCUE
- 25% ENCHANTMENT CHEWING FESCUE
- 25% SHADEMASTER III CREEPING RED FESCUE

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 Tel: 312.456.0123
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 Consulting Engineers
 500 West Van Buren
 Suite 115
 Aurora, IL 60504
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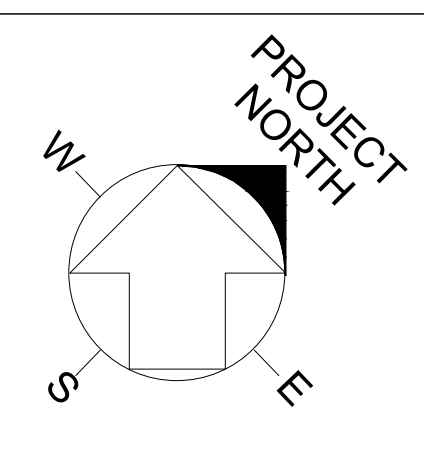
TGRWA
 Tjrk Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 900
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Warrville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.482.6501
 Fax: 312.482.7101

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 55 East marroe St.
 Suite 1420
 Chicago, IL 60603
 Tel: 312.327.2770
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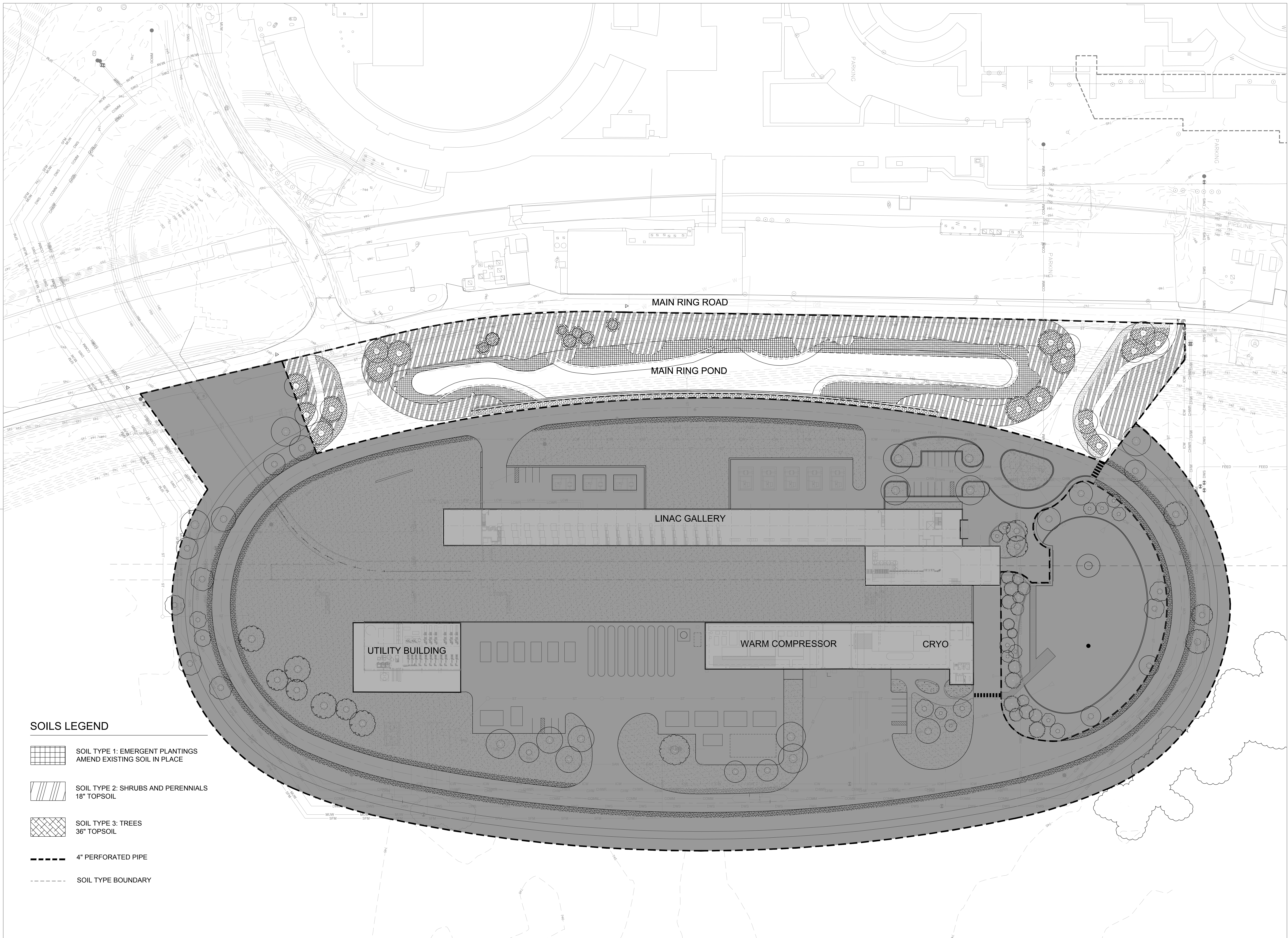
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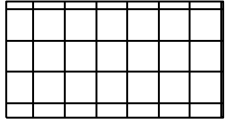
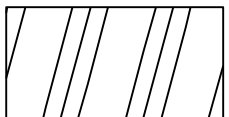



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 OVERALL PLAN
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PIP II : SITE PREPARATION
 PHASE II
TEMPORARY LANDSCAPE PLAN
 DRAWING NO. **4-3-2** **L-3** REV. 1 **17 AUG 2018**



SOILS LEGEND

- 
SOIL TYPE 1: EMERGENT PLANTINGS
AMEND EXISTING SOIL IN PLACE
- 
SOIL TYPE 2: SHRUBS AND PERENNIALS
18" TOPSOIL
- 
SOIL TYPE 3: TREES
36" TOPSOIL
- 
4" PERFORATED PIPE
- 
SOIL TYPE BOUNDARY

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Gensler

Architects
11 East Madison Street
Suite 300
Chicago, IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjrk Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563

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Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
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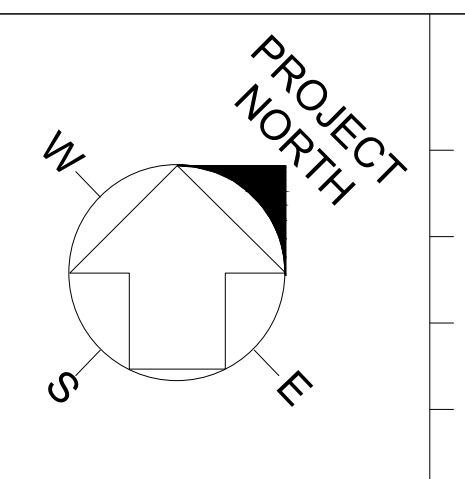
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Turner

General Contractor
55 East marroe St.
Suite 1420
Chicago, IL 60603

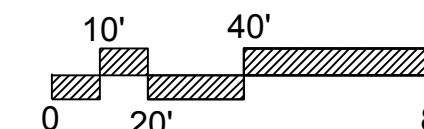
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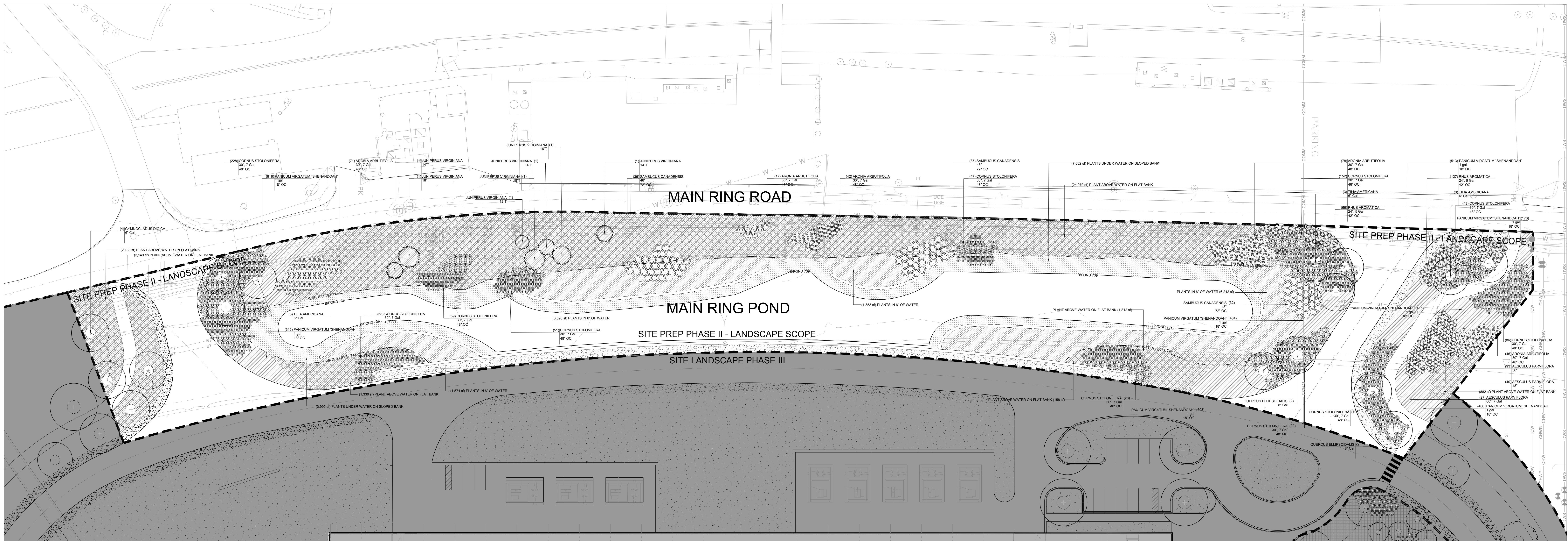
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PIP II : SITE PREPARATION
PHASE II
SOIL AND DRAINAGE PLAN

DRAWING NO. **4-3-2** **L-4** REV. 1

17 AUG 2018



PLANT SCHEDULE PHASE II PLANT

DECIDUOUS TREES	SIZE	SPACING	QTY	REMARKS
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE	6" CAL		4	
QUERCUS ELLIPSOIDALIS / NORTHERN PINE OAK	8" CAL		4	
TILIA AMERICANA / AMERICAN LINDEN	6" CAL		9	

EVERGREEN TREES	SIZE	SPACING	QTY	REMARKS
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	12 T		1	
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	14 T		3	
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	16 T		1	
JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	18 T		2	

DECIDUOUS SHRUBS	SIZE	SPACING	QTY	REMARKS
AESCULLUS PARVIFLORA / BOTTLEBRUSH BUCKEYE	36"		93	
AESCULLUS PARVIFLORA / BOTTLEBRUSH BUCKEYE	48"		40	
AESCULLUS PARVIFLORA / BOTTLEBRUSH BUCKEYE	60", 7 GAL		27	
ARONIA ARBUTIFOLIA / RED CHOKEBERRY	30", 7 GAL	48" OC	243	
CORNUS STOLONIFERA / DOGWOOD	30", 7 GAL	48" OC	998	
RHUS AROMATICA / FRAGRANT SUMAC	24", 5 GAL	42" OC	193	
SAMBUCUS CANADENSIS / ELDERBERRY	48"	72" OC	105	

PERENIALS	BOTANICAL NAME / COMMON NAME	SIZE	SPACING	SPACING	QTY
	PANICUM VIRGATUM / SHENANDOAH / SWITCH GRASS	1 GAL	18" OC	18" o.c.	3,832

CONCEPT PLANT SCHEDULE PHASE II PLANT

	PLANTS IN 6" OF WATER	12,764 SF
	ACORUS AMERICANUS / SWEET FLAG	1,327
	ASCLEPIAS INCARNATA / SWAMP MILKWEED	87
	CALAMAGROSTIS CANADENSIS / BLUE JOINT REED GRASS	174
	CAREX MUSKINGUMENSIS / PALM SEDGE	177
	CAREX VULPINOIDEA / BROWN FOX SEDGE	177
	EUPATORIUM MACULATUM / JOE PYE WEED	130
	EUPATORIUM PERFOLIATUM / COMMON BONESET	177
	IRIS FULVA / IRIS	1,327
	IRIS VIRGINICA SHREVEI / SHREVE'S IRIS	1,327
	LOBELIA CARDINALIS / CARDINAL FLOWER	59
	LOBELIA SIPHILITICA / GREAT LOBELIA	59
	PONTEDERIA CORDATA / PICKEREL WEED	590
	SAGITTARIA LATIFOLIA / LANCE-LEAFED ARROWHEAD	590
	SAURURUS CERNUJUS / LIZARD'S TAIL	590
	SILUM SUAVE / HELMLOCK WATER PARSNIP	590
	TYPHA LATIFOLIA / BROAD LEAVED CATTAIL	590
	PLANTS UNDER WATER ON SLOPED BANK	11,677 SF
	AGASTACHE FOENICULUM / BLUE GIANT HYSSOP	216
	ASCLEPIAS INCARNATA / SWAMP MILKWEED	40
	BAPTISIA AUSTRALIS / BLUE WILD INDIGO	40
	BAPTISIA SPHAEROCARPA / WILD INDIGO	40
	BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA	1,079
	CALAMAGROSTIS CANADENSIS / BLUE JOINT REED GRASS	397
	CAREX VULPINOIDEA / BROWN FOX SEDGE	270
	ECHINACEA PALLIDA / PALE PURPLE CONEFLOWER	54
	EUPATORIUM PERFOLIATUM / COMMON BONESET	216
	EUTROCHUM MACULATUM / SPOTTED JOE PYE WEED	159
	LOBELIA CARDINALIS / CARDINAL FLOWER	54
	MONARDA FISTULOSA / BERGAMOT	54
	PANICUM VIRGATUM / SWITCH GRASS	1,079
	RUDEBECKIA HIRTA / BLACK-EYED SUSAN	54
	SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS	1,079
	SOLIDAGO SPECIOSA / SHOWY GOLDENROD	108
	SYMPHYOTRICHUM NOVAE-ANGLIAE / NEW ENGLAND ASTER	159
	PLANT ABOVE WATER ON FLAT BANK	33,448 SF
	AGASTACHE FOENICULUM / BLUE GIANT HYSSOP	618
	BAPTISIA AUSTRALIS / BLUE WILD INDIGO	114
	BAPTISIA SPHAEROCARPA / WILD INDIGO	114
	BOLTONIA ASTEROIDES / THOUSAND FLOWER ASTER	341
	BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA	2,936
	CALAMAGROSTIS CANADENSIS / BLUE JOINT REED GRASS	1,136
	ECHINACEA PALLIDA / PALE PURPLE CONEFLOWER	155
	ECHINACEA PURPUREA / PURPLE CONEFLOWER	155
	EUTROCHUM PURPUREUM / SWEET JOE PYE WEED	341
	GLIUM TRIFLORUM / FRAGRANT SMOKE	223
	LIATRIS PYCNOSTACHYA / GAYFEATHER	155
	MONARDA PUNCTATA / HORSEMINT	223
	PANICUM VIRGATUM / SWITCH GRASS	2,936
	RYCANTHEMUM MUTICUM / CLUSTERED MOUNTAINMINT	618
	RUDEBECKIA HIRTA / BLACK-EYED SUSAN	155
	SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS	2,936
	SOLIDAGO SPECIOSA / SHOWY GOLDENROD	773
	SYMPHYOTRICHUM NOVAE-ANGLIAE / NEW ENGLAND ASTER	455
	TRADESCANTIA OHIENSIS / BLUE JACKET	155
	ZIZIA AUREA / GOLDEN ALEXANDER	223

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Gensler

Architects
11 East Madison Street
Suite 300
Chicago IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjck Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Naperville, IL 60563

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60607

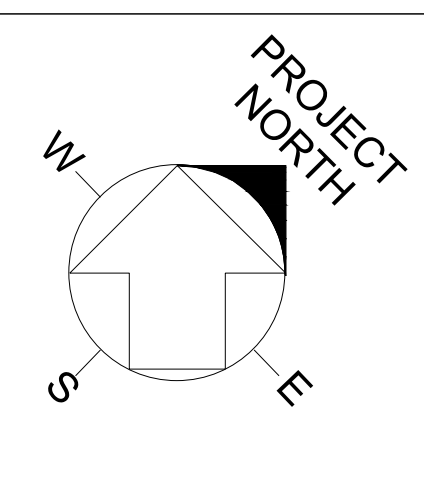
Tel: 312.492.6501
Fax: 312.492.7101

Turner

General Contractor
55 East Monroe St.
Suite 1420
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	SS/KG	08/17/18
DRAWN	KG/LK/ND	08/17/18
CHECKED	SS	08/17/18
APPROVED	SS	08/17/18
SUBMITTED		



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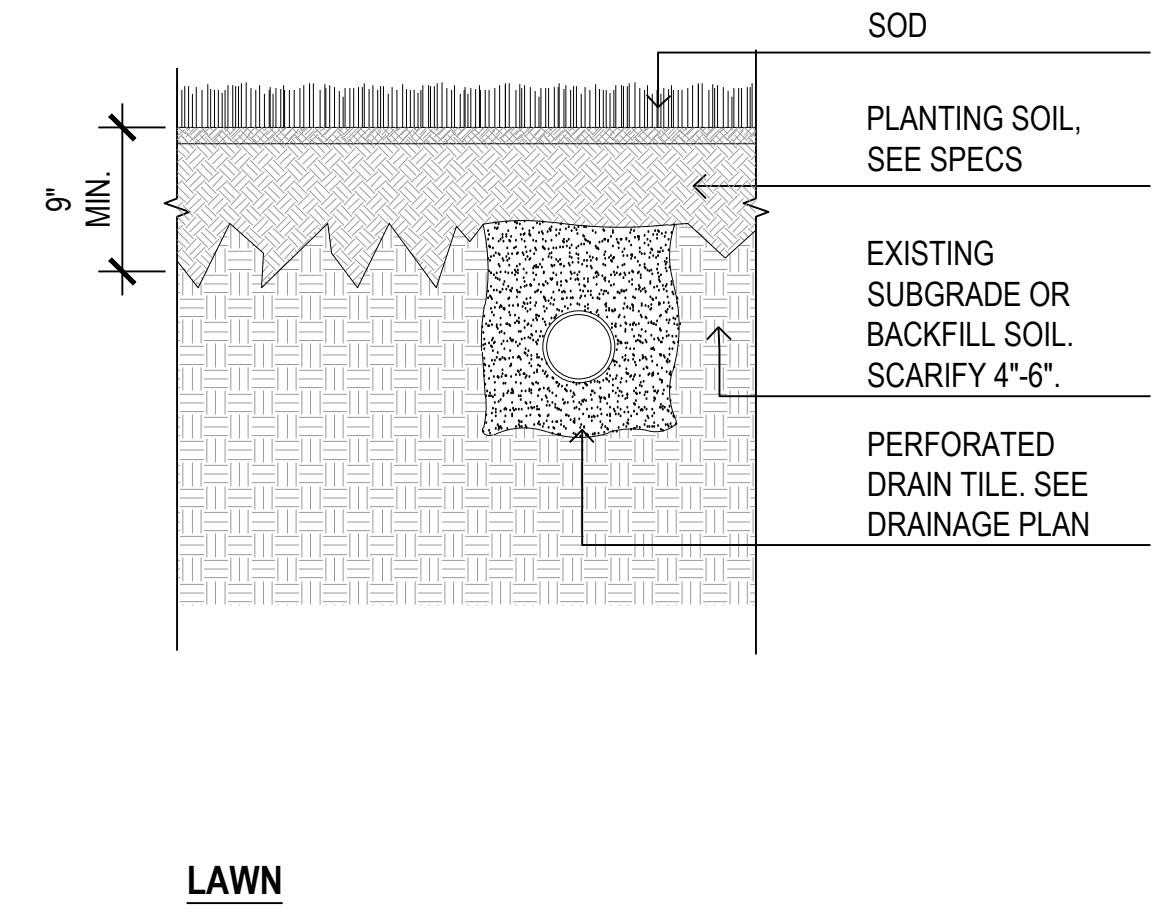
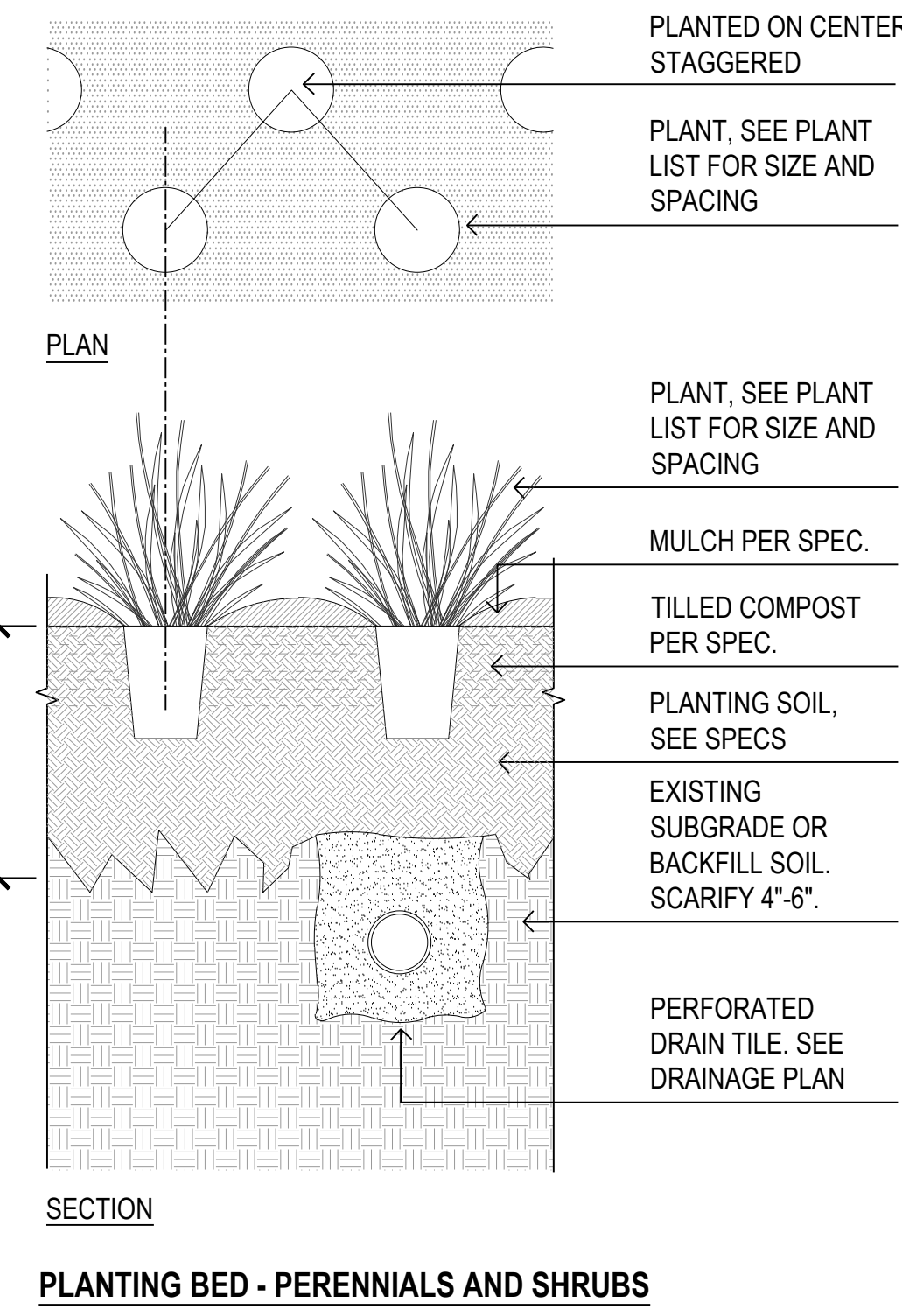
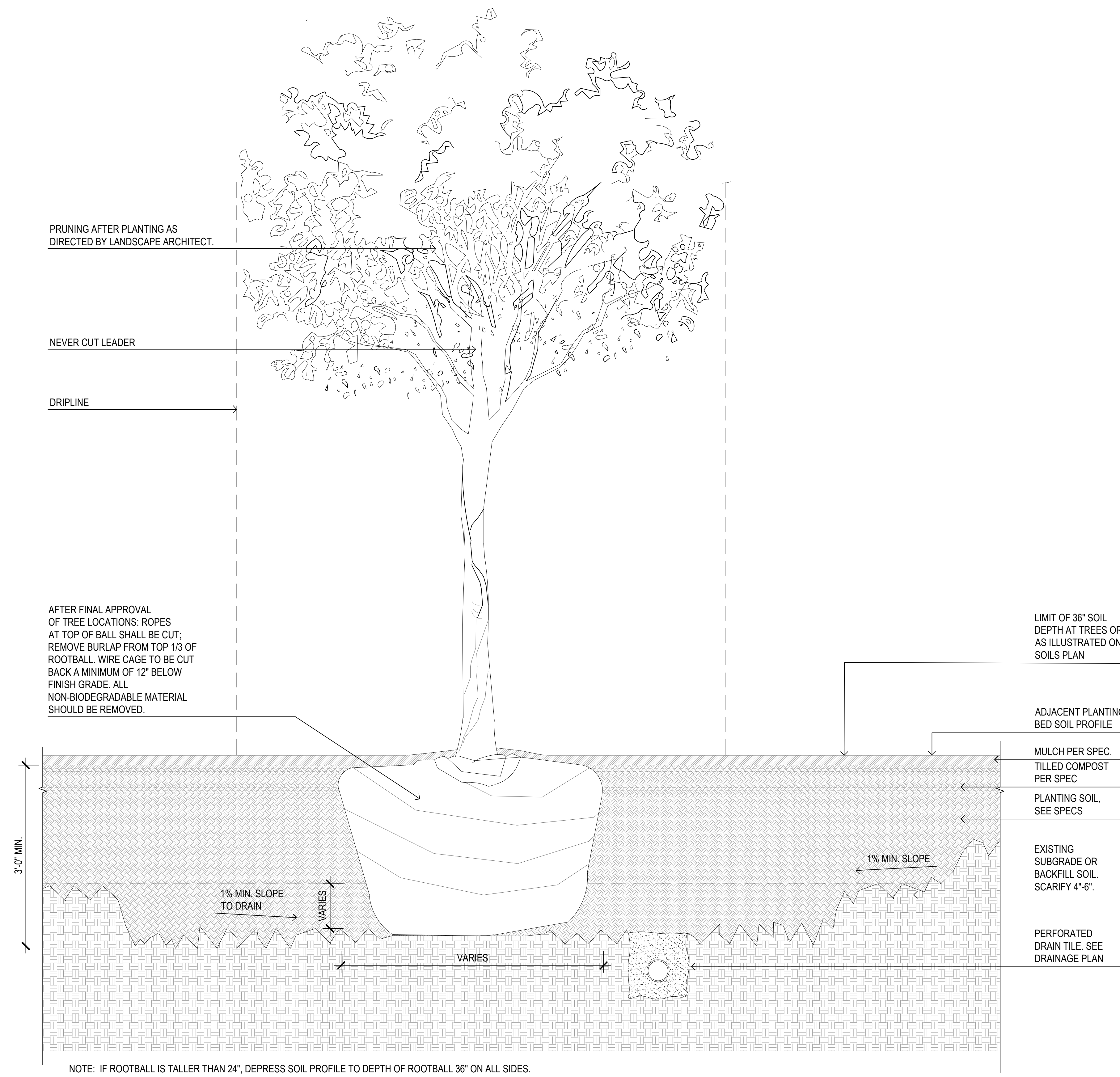
OVERALL PLAN
SCALE: 1" = 30'

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

PIP II : SITE PREPARATION
PHASE II
PLANTING PLAN

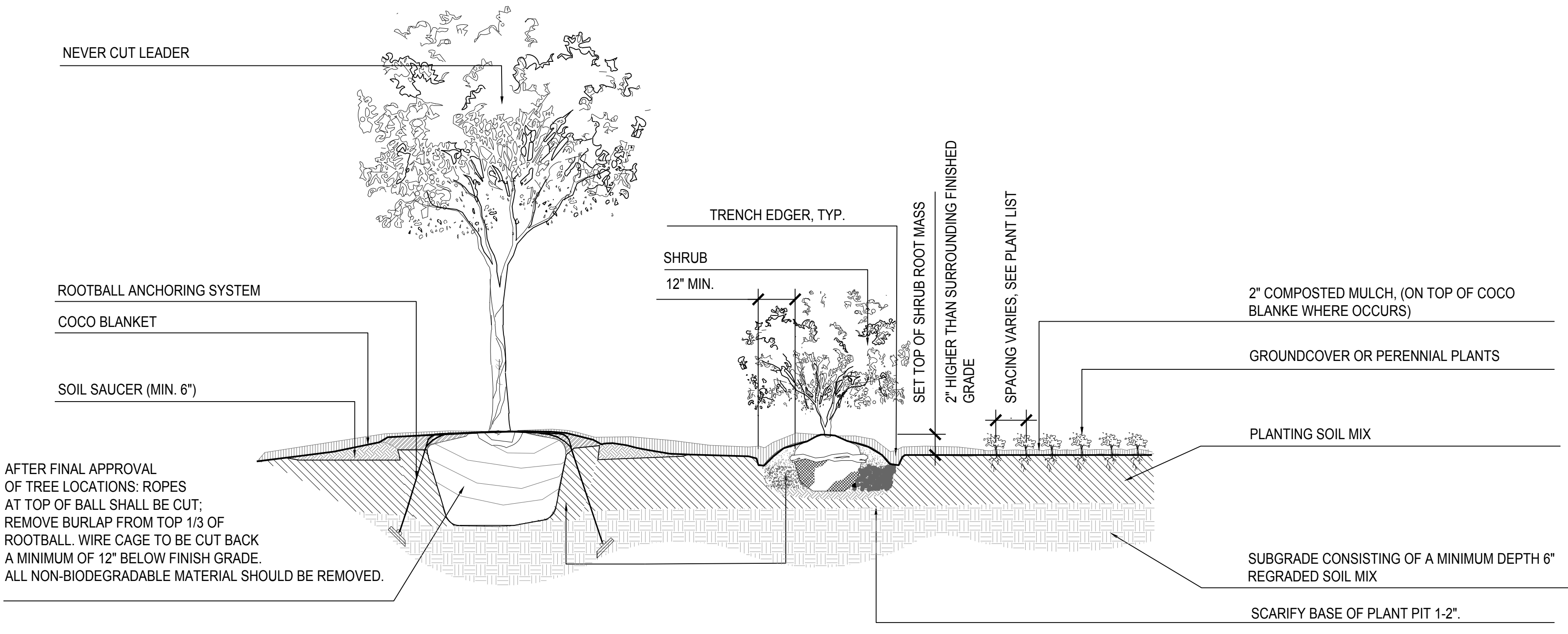
DRAWING NO. **4-3-2** **L-5** REV. 1

17 AUG 2018



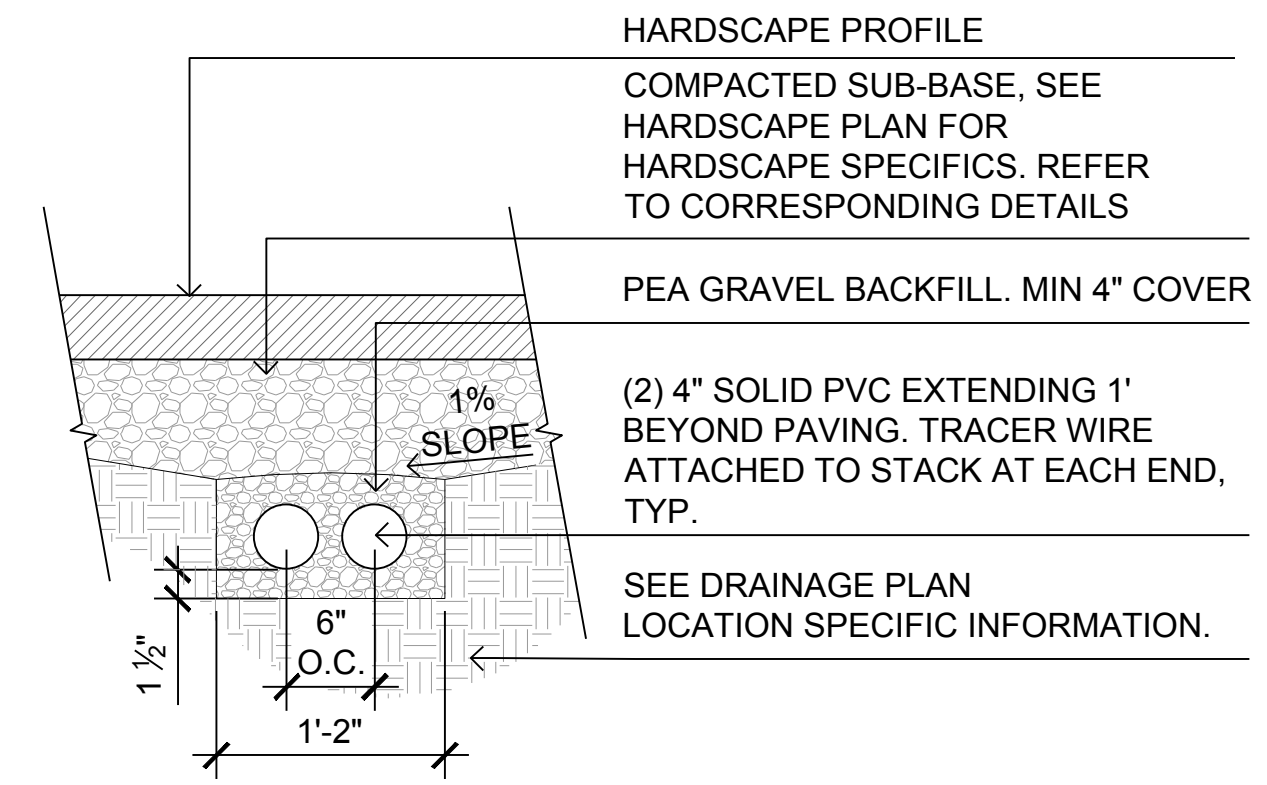
NOTE: IF ROOTBALL IS TALLER THAN 24", DEPRESS SOIL PROFILE TO DEPTH OF ROOTBALL 36" ON ALL SIDES.

D TREE PIT
1" = 1'-0"

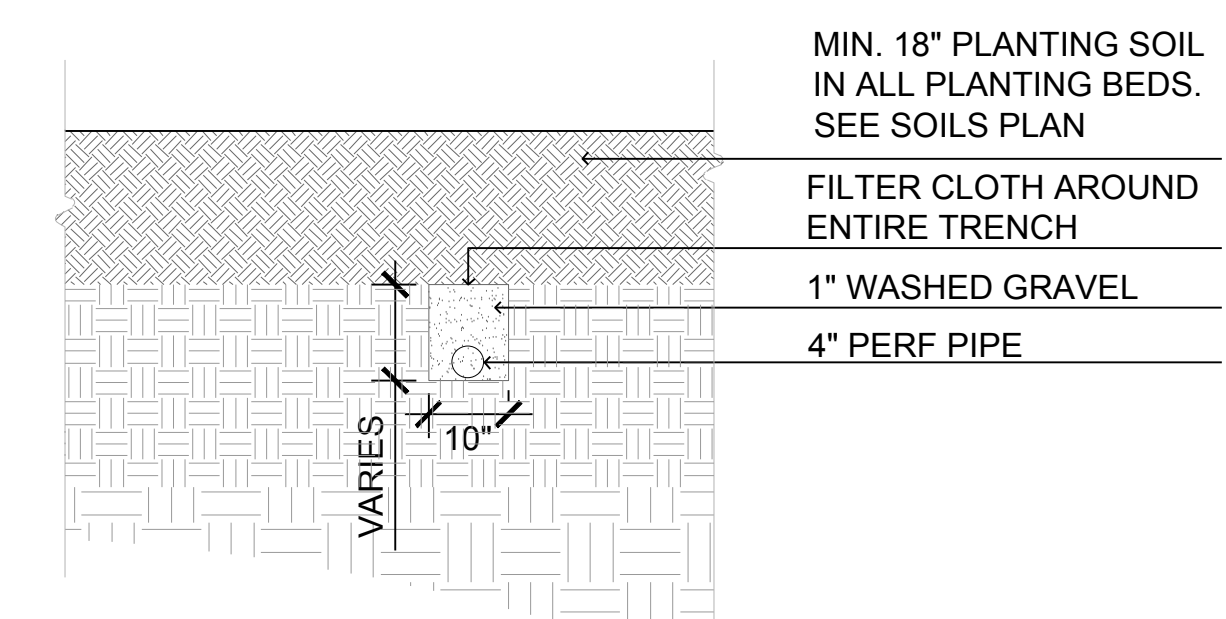


- EVERGREEN & DECIDUOUS TREES:**
- TREES SHALL BEAR SAME RELATION TO FINISHED GRADE AS THEY DID TO PREVIOUSLY EXISTING GRADE ON SITE OR IN NURSERY.
 - DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHEN BACKFILLING.
 - TREE STAKING/GUYING SHOULD BE REVIEWED WITH LANDSCAPE ARCHITECT WHEN CONTRACTOR DEEMS IT NECESSARY.
 - ROOT FLARE OF TREE TO BE SET NO MORE THAN 2" ABOVE FINISHED GRADE IN BORDERS & MASS PLANTINGS.
 - TREES PLANTED WITHIN OR ADJACENT TO PAVING SHALL BE PLANTED WITH ROOT FLARE NO MORE THAN 1" ABOVE ADJACENT GRADE.
 - EVERGREEN TREES WITH TIGHTLY SHEARED FORM WILL BE REJECTED.
 - IF PITS ARE MACHINE EXCAVATED, & GLAZING IS PRONOUNCED, ALL SIDES OF PIT ARE TO BE SCARIFIED.
 - SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
- SHRUBS:**
- DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
 - SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
 - DO NOT BREAK ROOTBALL.
 - IF B&B MATERIAL, REMOVE BURLAP & STRING FROM AROUND TOP 1/3 OF ROOTBALL. IF CONTAINERIZED, LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
- PERENNIALS & GROUND COVER:**
- DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
 - SOAK PLANTS IMMEDIATELY WITH WATER AFTER INSTALLATION.
 - LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
 - PLANT APPROXIMATELY 1" ABOVE PLANTING MEDIA TO ALLOW FOR TYPICAL DRESSING OF MULCH.
 - SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
- NOTE: ALL TREES ON GRADE SHALL HAVE ROOTBALL ANCHORING SYSTEM

C PLANTING DETAILS - STANDARD
1" = 1'-0"



B PVS SLEEVING
1" = 1'-0"



A PERFORATED DRAIN TILE
1/2" = 1'-0"

1	08/17/2018	60% DESIGN DOCUMENTS
REV.	DATE	DESCRIPTIONS REVISIONS

Gensler

Architects
11 East Madison Street
Suite 300
Chicago IL 60602

Tel: 312.456.0123
Fax: 312.456.0124

CMT

Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504

Tel: 630.820.1022
Fax: 630.820.0350

TGRWA
Tjk Gustafson Reckers Wilson Andrews, LLC

Structural Engineers
600 West Van Buren
Suite 900
Naperville, IL 60563

Tel: 312.341.0055
Fax: 312.341.9966

IMEG

MEP Engineers
1100 Warrenville Rd.
Suite 400W
Naperville, IL 60563

Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT

Landscape Architects
850 West Jackson Blvd.
Suite 1420
Chicago, IL 60607

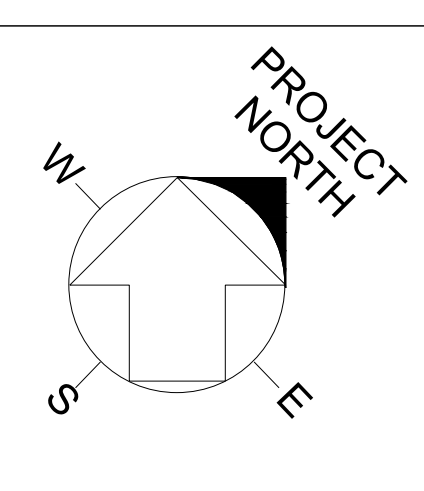
Tel: 312.482.6501
Fax: 312.482.7101

Turner

General Contractor
55 East marroe St.
Suite 1420
Chicago, IL 60603

Tel: 312.327.2770
Fax: 312.492.7101

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SUBMITTED		



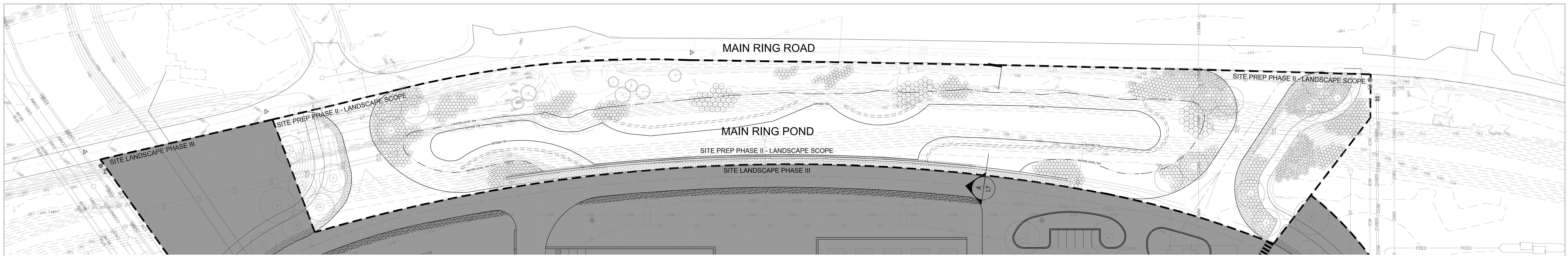
SCALE:

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

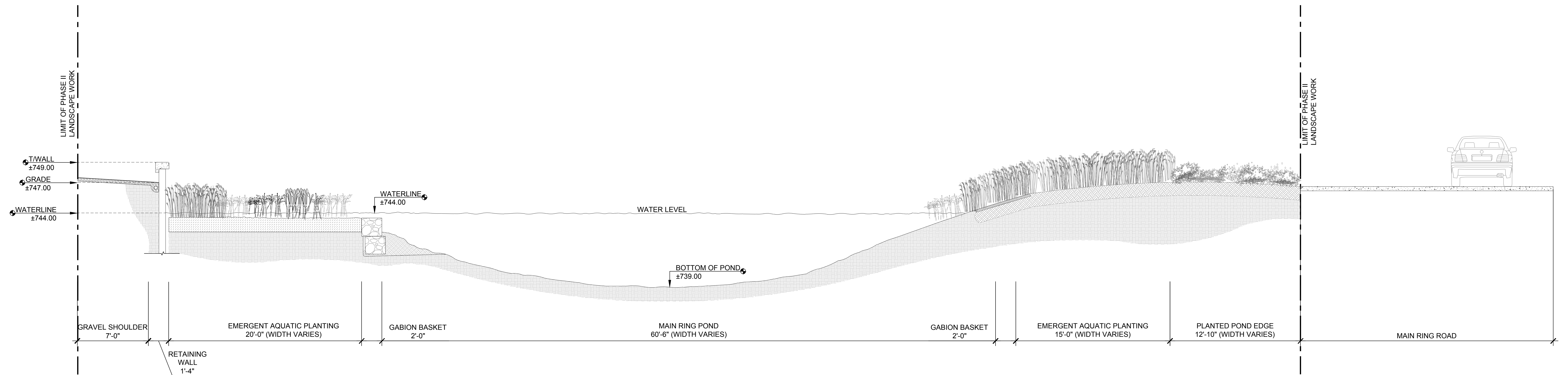
PII II : SITE PREPARATION
PHASE II
SITE DETAILS - PLANTING

DRAWING NO. 4-3-2 **L-6** REV. 1

17 AUG 2018



B ENLARGEMENT PLAN
1" = 40"



A MAIN RING POND - SECTION
1/4" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
Fax: 630.820.0350

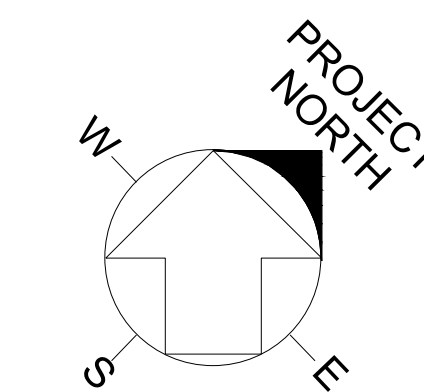
TGRWA
Tjck Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warronville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
General Contractor
55 East marion St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

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CHECKED	SS	08/17/18
APPROVED	SS	08/17/18
SUBMITTED		

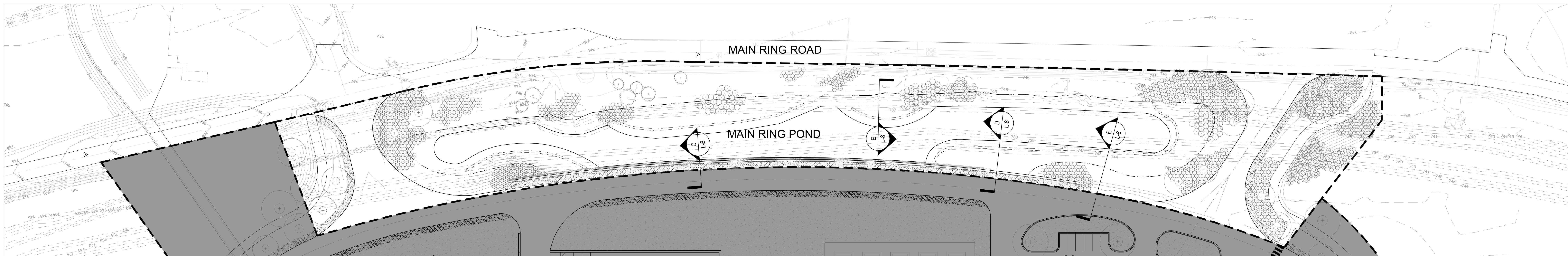


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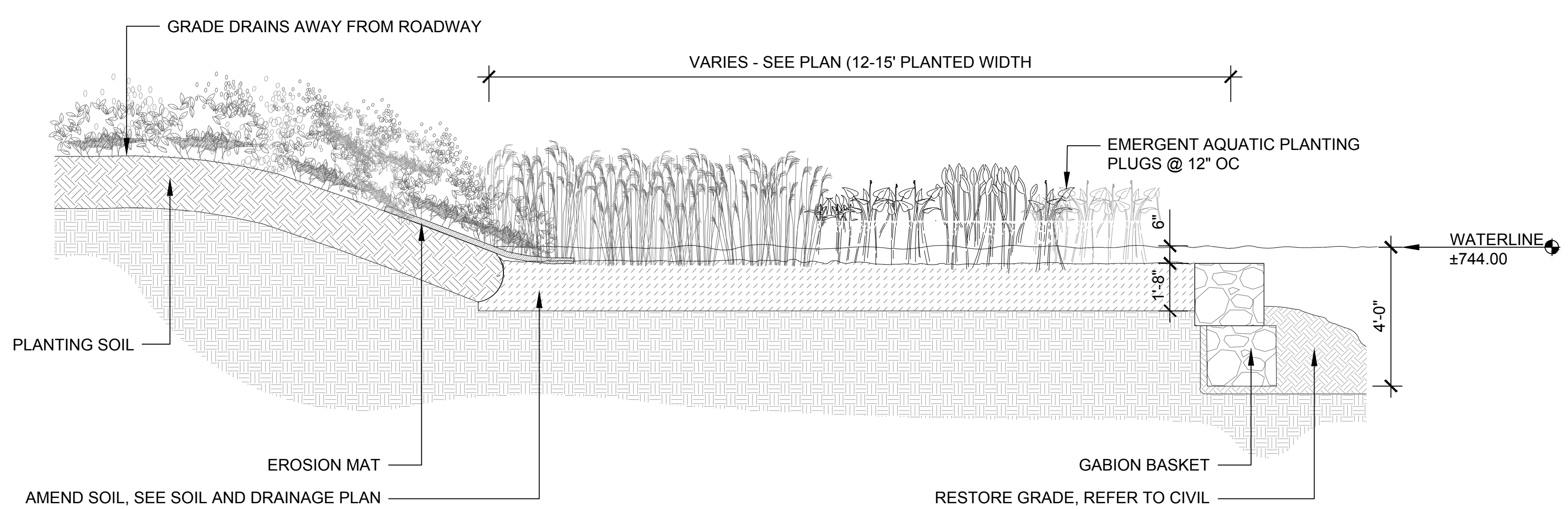
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UNITED STATES DEPARTMENT OF ENERGY

PIP II : SITE PREPARATION
PHASE II
SITE SECTIONS

DRAWING NO. **4-3-2** **L-7** REV. 1 **17 AUG 2018**

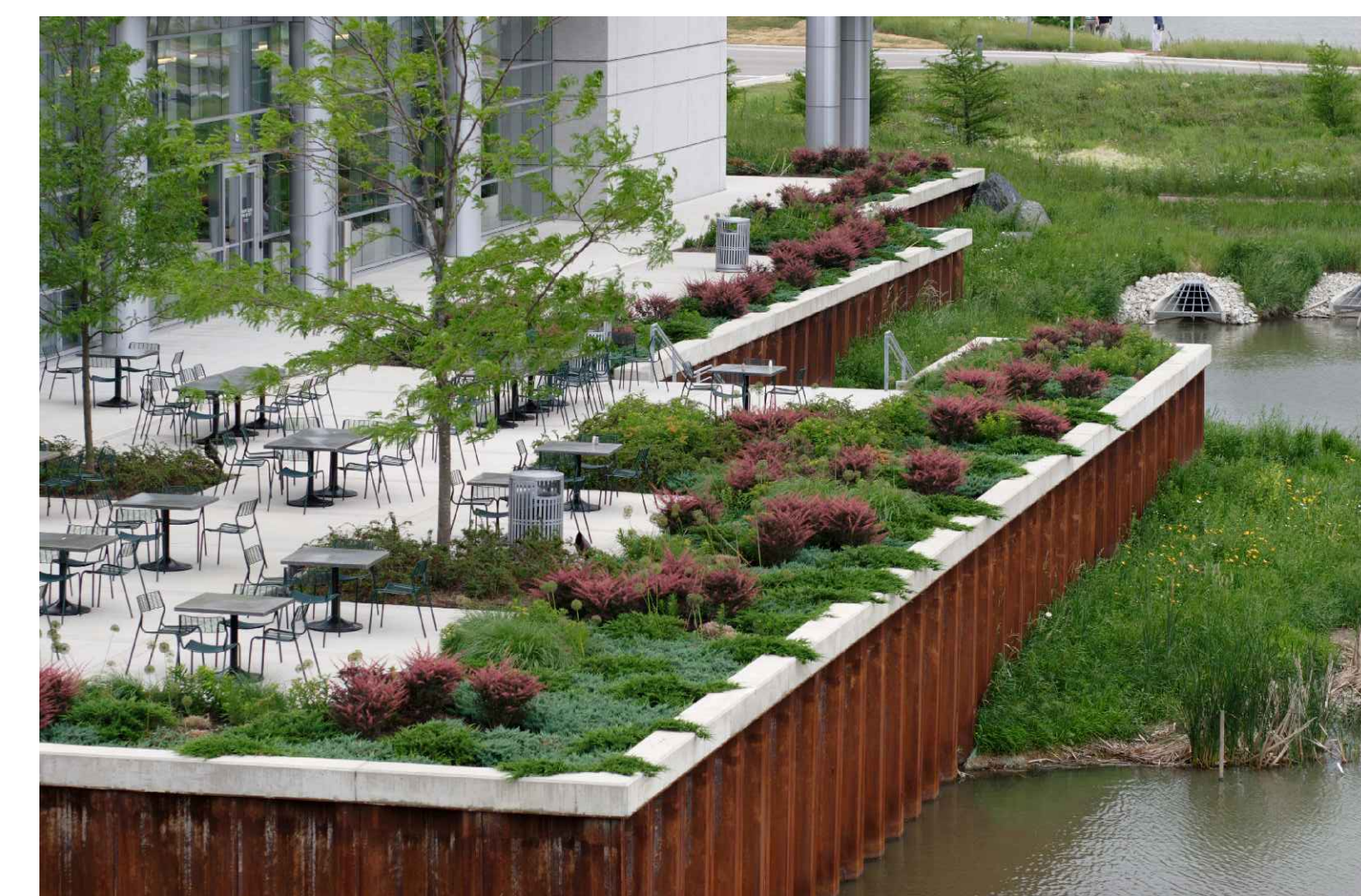
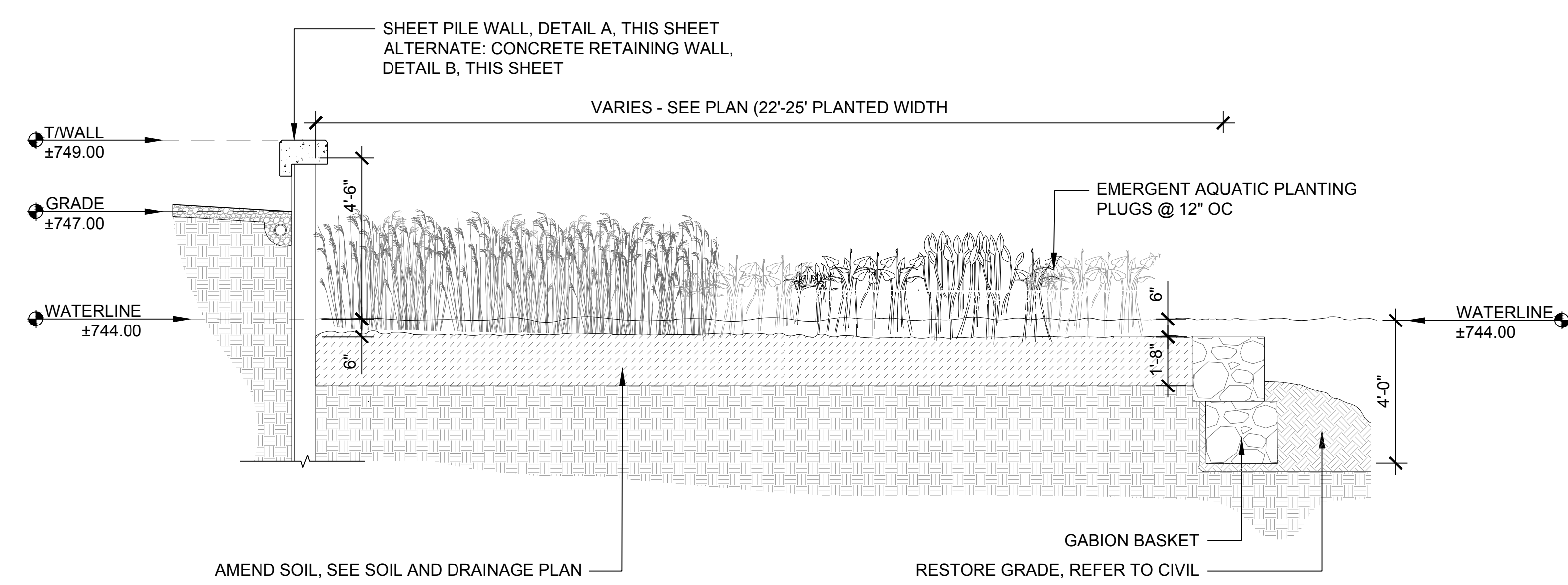


F ENLARGEMENT PLAN
1" = 40'



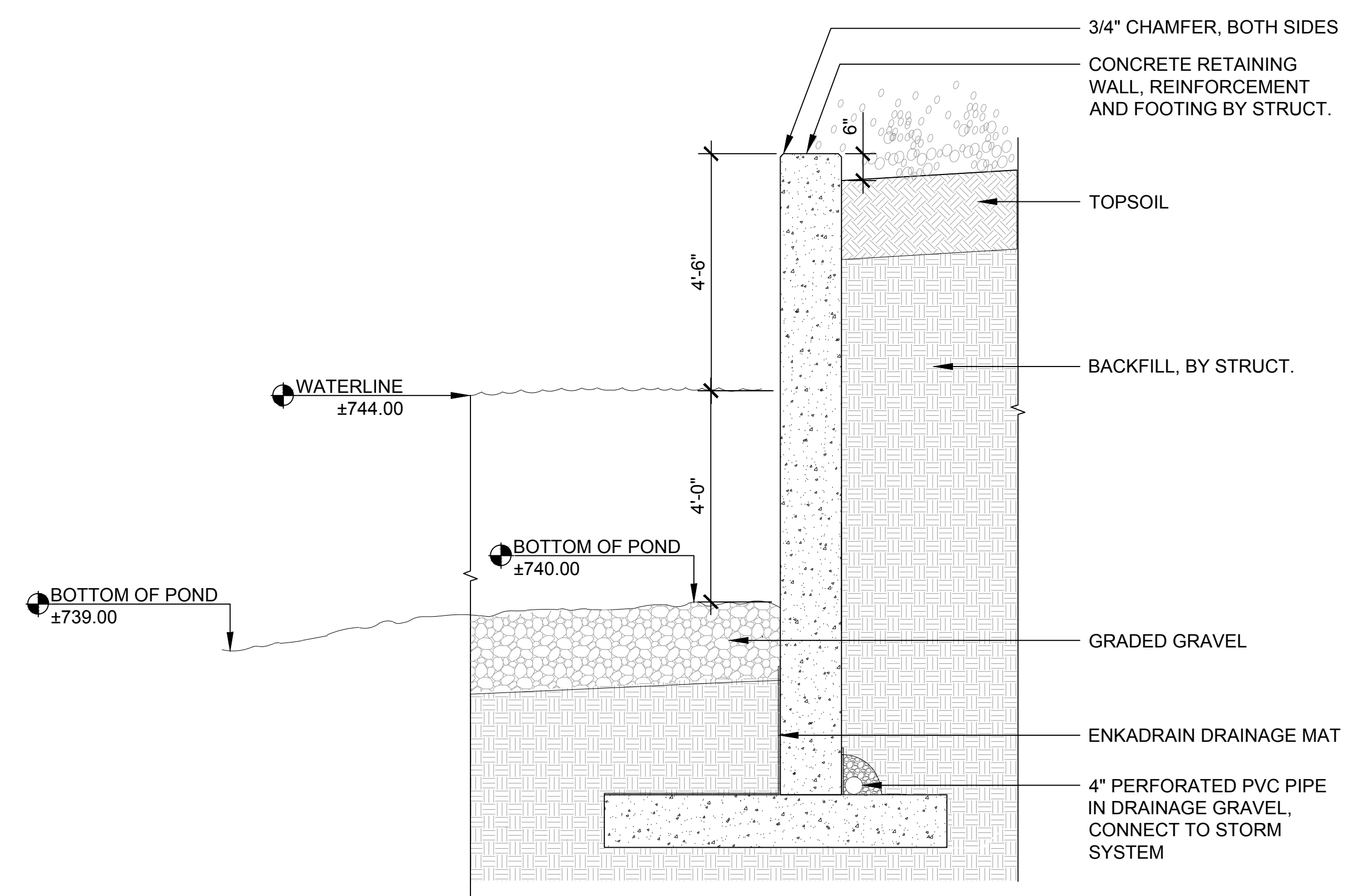
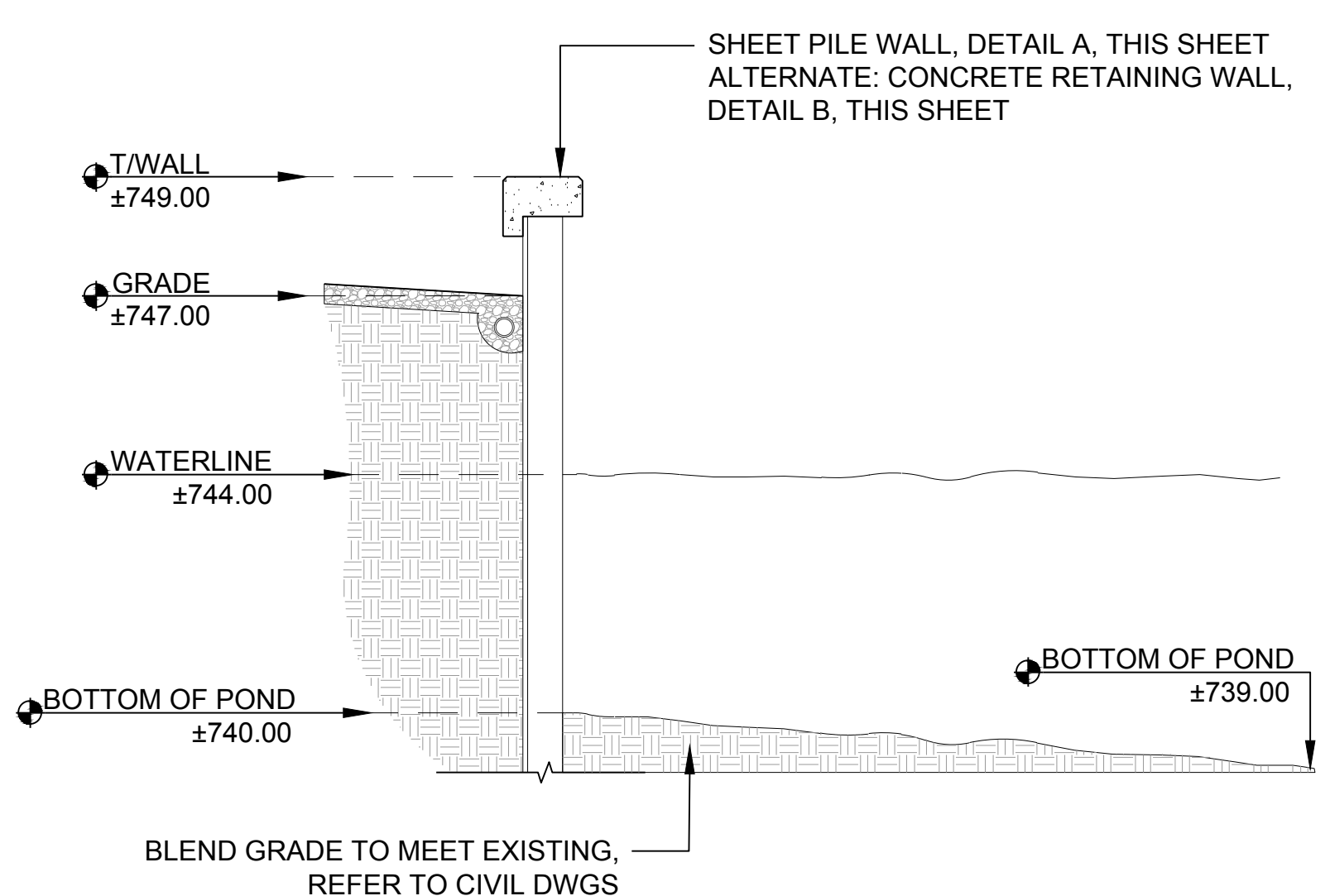
RETAINING WALLS					
	NAME	MATERIAL	USE / AREA	DETAIL	NOTES
	Sheet Pile Wall (Base)	Wall: Steel Cap: Pre-cast Concrete	Soil Retention at Main Ring Pond	A L-8	Refer to Struct
	Concrete Retaining Wall (Option)	Wall: Poured in Place Concrete	Soil Retention at Main Ring Pond	B L-8	Refer to Struct
	Gabion Basket	Wall	Wetland Planting Retention		Refer to Struct

E EMERGENT EDGE - NATURALIZED
3/8" = 1'-0"



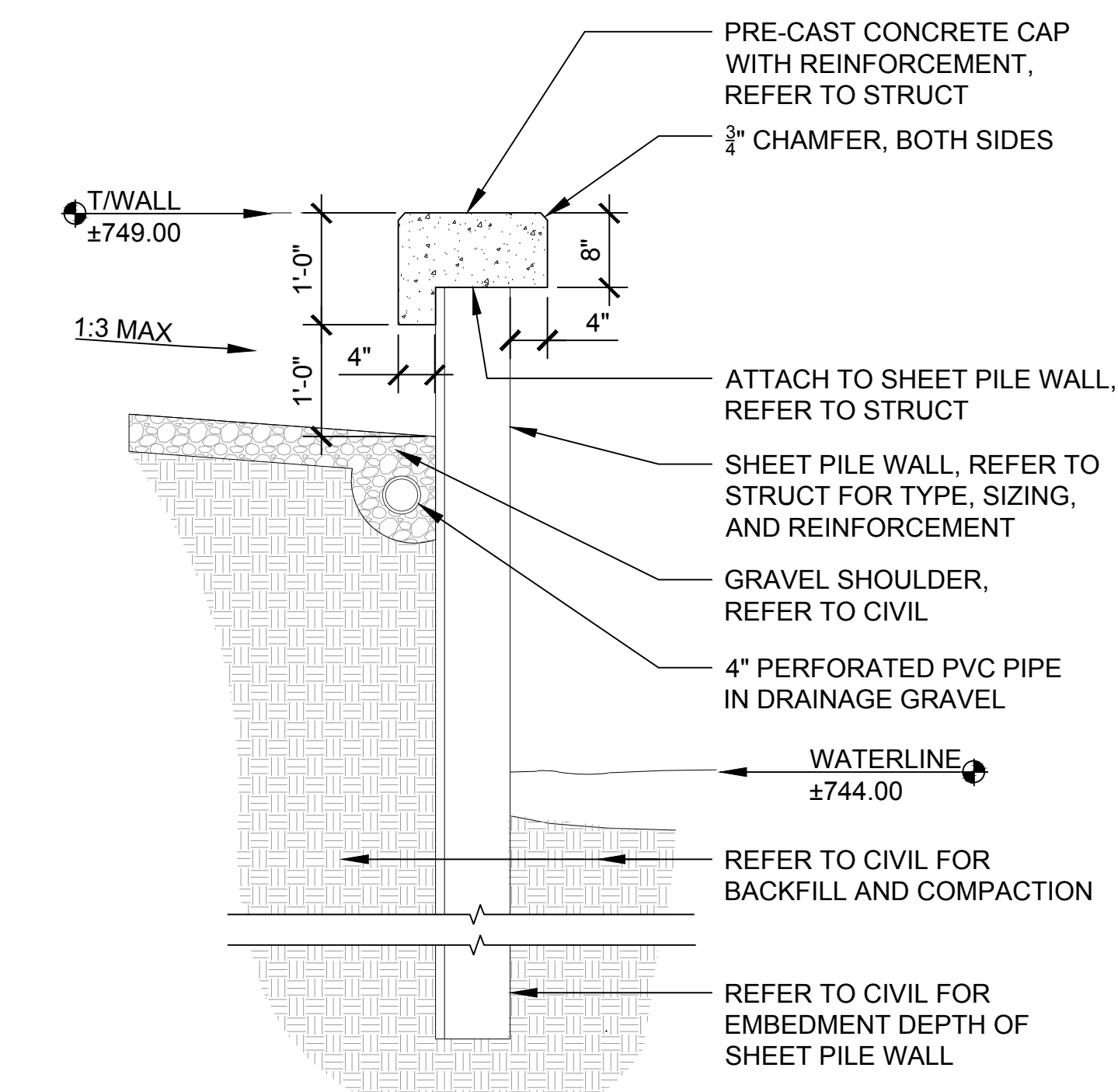
STYLING IMAGE - SHEET PILE WALL

D EMERGENT EDGE- WALL WITH PLANTINGS
3/8" = 1'-0"



NOTES:
1. CONTROL JOINTS REQUIRED IN CONCRETE WALLS @ +/- 18'-0" O.C.
2. HOLD CONTROL JOINTS ABOVE WATER LEVEL ELEVATION, TYP.

B CONCRETE RETAINING WALL (ALTERNATE)
1/2" = 1'-0"



A SHEET PILE WALL DETAIL (BASE)
3/4" = 1'-0"

C EMERGENT EDGE- WALL WITH NO PLANTINGS
3/8" = 1'-0"

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago, IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
500 North Commons Drive
Suite 115
Aurora, IL 60504
Tel: 630.820.1022
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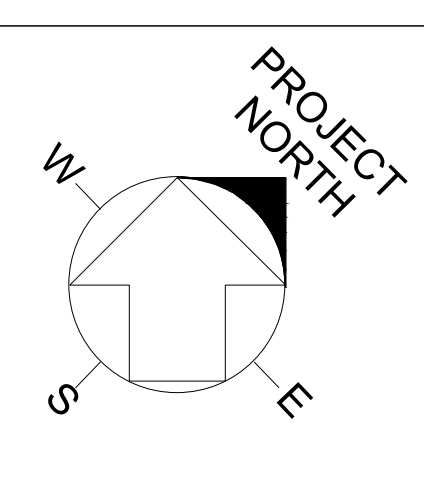
TGRWA
Tjyk Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Naperville, IL 60563
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Warramville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.482.6501
Fax: 312.482.7101

Turner
General Contractor
55 East marion St.
Suite 1420
Chicago, IL 60603
Tel: 312.327.2770
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CHECKED	SS	08/17/18
APPROVED	SS	08/17/18
SUBMITTED		



SCALE:
PROJECT NORTH

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
PIP II : SITE PREPARATION
PHASE II
SITE DETAILS - POND DETAILS
DRAWING NO. 4-3-2 **L-8** REV. 1

**LANDSCAPE ARCHITECTURAL IMPROVEMENTS NARRATIVE – PHASE III
FERMILAB
PIP - II – PRELIMINARY 60% DD PRICING**

GENERAL LANDSCAPE SCOPE

The project consists of the construction of a new terrace at the entry to the Linac; a landscape turnaround and parking area serving the terrace; a landscaped gathering area at the Cryo building; native landscape plantings surrounding the Linac Gallery, Utility, Warm Compressor, and Cryo buildings; a landscape buffer between the new roadway and the new bike path; and landscape restoration of the site outside of the bike path to the limits of construction.

The project limits for Phase III encompass an area of approximately 326,000 square feet for landscape related improvements, including planting areas, pavement, and site restoration.

GENERAL LANDSCAPE IMPROVEMENTS

Finish Grading

The site will be brought to indicated levels, profiles and contours. All paving grades will be designed to meet ADA standards with longitudinal path grades less than 5% except where steeper ramps are unavoidable due to available space. Cross slopes shall not exceed 2%. Terrace and gathering areas will be graded not to exceed 2% in any direction.

During finish grading, damage to existing benchmarks, and all utilities shall be avoided. Subgrade elevation shall be verified by a survey, 24" for planted areas or 40" for trees to allow for spreading of topsoil or fabricated soil mix. Thorough removal of foreign materials like stones, roots, weeds, grass, and construction debris should be performed prior to final grading, to ensure a viable planting medium. Extra care is to be taken around existing trees, plants, utilities and buildings. Around these areas, topsoil should be spread manually to prevent damage that may be caused by grading equipment.

Existing Trees

A grouping of existing trees to remain are located at the north east region of the site. Construction fencing is to be repaired and/or installed prior to construction and is to remain in place through the duration of the project.

Seat Walls

The Cryo Outdoor Gathering Area will have 60 linear feet of seat walls adjacent to planters in the gathering area. They will be Pre-Cast concrete with sandblast finish.

Paved Areas

The Linac Terrace, Cryo Outdoor Gathering area, and walkways shall be pedestrian rated, reinforced CIP concrete paving over free draining base. Work for the terrace and gathering area will include approximately 10,150 square feet of paving. Crushed stone is to be a non-limestone aggregate in order to protect plant materials from soil PH disturbance.

Edge Protection

The Linac Terrace and Cryo Outdoor Gathering Area shall have a 4" pre-cast concrete landscape curb totaling 405 linear feet.

Maintenance Strips

To allow for proper maintenance of the building facades there will be a 24" wide stabilized decomposed granite maintenance path with steel edging used at the building wall where the building abuts landscaped areas, totaling 1670 linear feet.

Site Furnishings

Litter receptacles will be located at seating areas and at building exits, totaling 2 receptacles.

Bike racks shall be provided to achieve a visitor/bike ratio of 2.5% for peak visitors.

Site Lighting

Site lighting shall be provided to meet minimum Fermilab standards for light levels. It is intended that this project will utilize light fixtures that increase efficiency. Additional accent lighting is anticipated in planting areas adjacent to the terrace, gathering area, and terrace parking area.

Landscape and Plant Materials

Plant materials shall be consistent with Fermilab standards and from a native or adapted native palette in order to meet Fermilab design objectives. Plant species are selected to provide four-season interest.

Shade trees and ornamental trees shall be from a local native palette to be consistent with other Fermilab trees, while providing a diversity to protect against disease. There are to be 12 shade trees at 8" caliper, 13 shade trees at 6" caliper, 7 ornamental trees at 15' height, 6 ornamental trees at 10' height, and 4 ornamental trees at 8' height.

All planting beds will receive 18" of high quality topsoil or growing mix, totaling 271,700 square feet. Shrub areas will total 10,000 square feet with 36" diameter shrubs at 42" on center. Perennial areas will total 261,700 square feet with 1 gallon plants at 18" on center. Bulbs will be underplanted in several planting beds totaling 9,400 square feet at 8" on center. Seeded areas to restore the site to the project limit will be amended native soil to a depth of 6" and be overseeded with a native seed mix to match the Phase I landscape seeding mix, totaling approximately 54,300 square feet. Tree planting areas will receive 36" of topsoil. Imported topsoil will be required for all planting beds exclusive of the seed mix areas. As local availability of good quality topsoil is inconsistent, imported material may need to be hauled in from some distance away from the project site. Alternatively, it may be necessary to construct topsoil from local subsoil, sand and compost. If this approach is required, the soil mix will be determined based on soil testing.

All planted areas exclusive of overseeded areas will receive 2"-3" of composted hardwood mulch depending on planting type.

Overseeded areas will have erosion control to remain for a minimum of 1 year.

All planting beds will receive perforated drain pipe connected to the local storm system.

As there is no permanent irrigation planned for the site, temporary irrigation will be provided until plantings are established and in times of drought.

PIP-II: SITE PREPERATION

60% DESIGN DOCUMENTS

08.17.2018

ELECTRICAL - OVERALL

PIP-II: SITE PREPARATION PACKAGE | DRAWING INDEX

ELECTRICAL SHEET INDEX

E-1	ELECTRICAL COVER SHEET
E-2	OVERALL SITE PLAN - ELECTRICAL
E-3	ENLARGED SITE PLAN - ELECTRICAL
E-4	ENLARGED SITE PLAN - ELECTRICAL
E-5	ENLARGED SITE PLAN - ELECTRICAL
E-6	ENLARGED SITE PLAN - ELECTRICAL
E-7	ENLARGED SITE PLAN - ELECTRICAL
E-8	ENLARGED SITE PLAN - COMMUNICATION
E-9	PARTIAL ONE LINE DIAGRAM
E-10	PARTIAL ONE LINE DIAGRAM
E-11	MANHOLE DETAILS
E-12	MANHOLE DETAILS
E-13	MANHOLE DETAILS
E-14	MANHOLE DETAILS
E-15	MANHOLE DETAILS
E-16	MANHOLE DETAILS
E-17	MANHOLE DETAILS
E-18	MANHOLE DETAILS
E-19	MANHOLE DETAILS
E-20	DUCT BANK DETAILS
E-21	ELECTRICAL DETAILS

ELECTRICAL EQUIPMENT TAGS		
TAG:	DESCRIPTION:	RELATED SPECIFICATION
MH:#	MANHOLE	26 05 37
DSTR:#	MEDIUM VOLTAGE AIR SWITCH	

CONTRACTOR ABBREVIATION KEY	
ABBR:	DESCRIPTION:
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR

ELECTRICAL ABBREVIATION KEY	
ABBR:	DESCRIPTION:
C	CONDUIT
NIC	NOT IN CONTRACT
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE



VIEW KEY		
NAME	LEVEL NAME	INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL.
10'-0"	HEIGHT ABOVE PROJECT 0'-0"	
INDICATES DIRECTION OF TRUE NORTH		
PLAN OR DETAIL NUMBER		
PLAN OR DETAIL NAME		
VIEW NAME		
1/8" = 1'-0" PLAN OR DETAIL SCALE		
LINE TYPE KEY:		
NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)		
NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)		
NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)		

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REV.	DATE	DESCRIPTIONS
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Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
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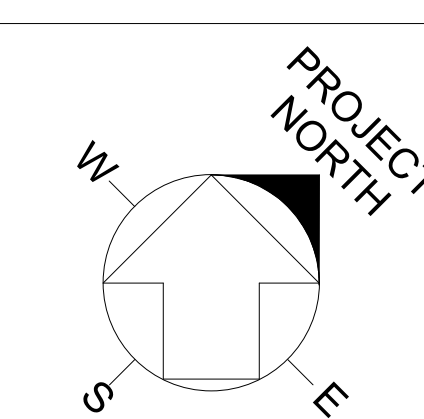
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TyR. Gustafson Reckers Wilson Andrews, LLC
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600 West Van Buren
Suite 500
Chicago, IL 60607
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Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wierenville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
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HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 920
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

Turner
Contractor
55 East Monroe Street
Suite 1450
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
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SUBMITTED		



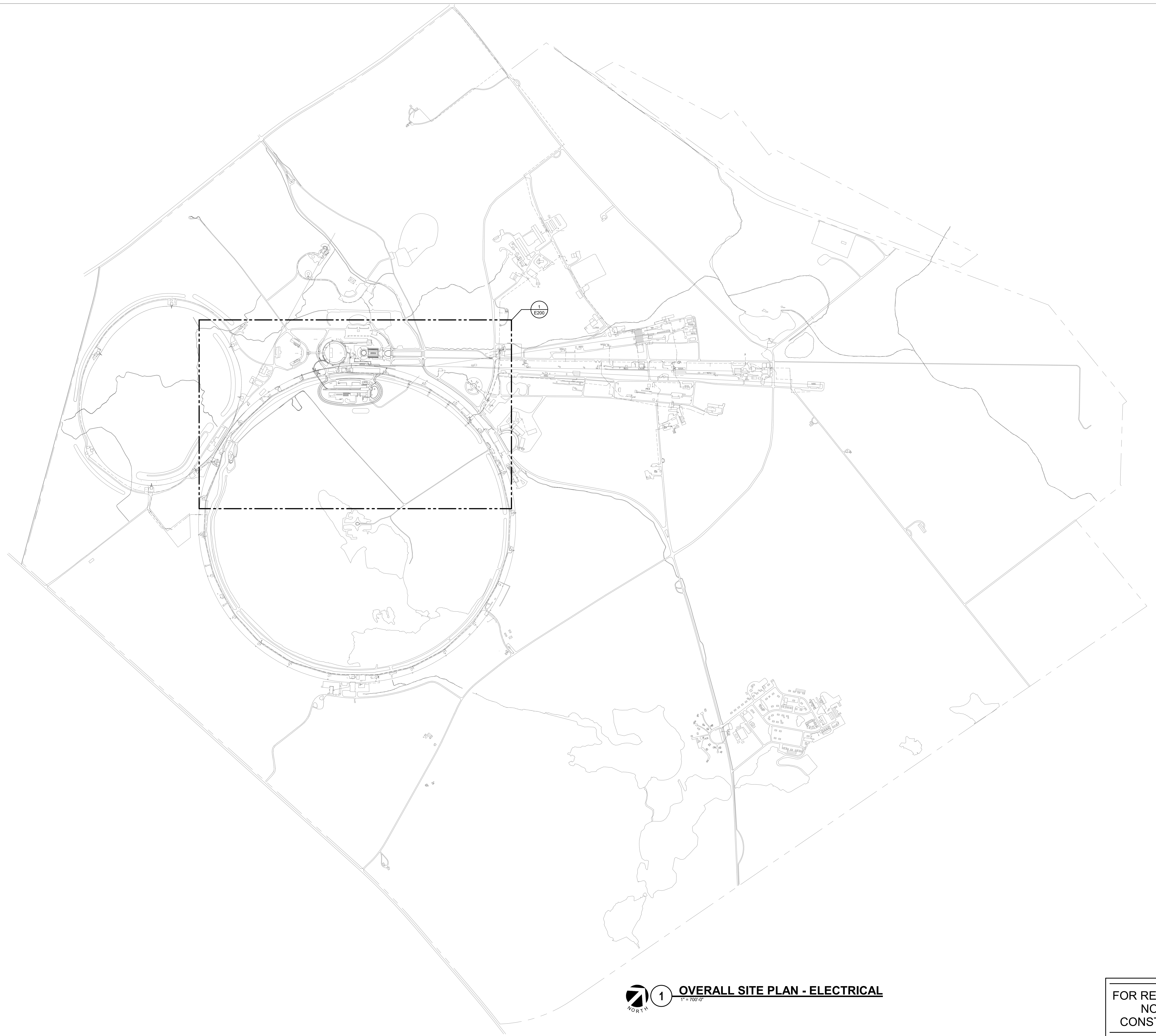
SCALE: NOT TO SCALE
1"=200'-0"
200 0 200 400
SCALE FEET

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UNITED STATES DEPARTMENT OF ENERGY

PIP-II SITE PREPARATION
ELECTRICAL COVER SHEET

DRAWING NO. **4-3-2** E-1 REV.

GENSLER NUMBER: Project Number



1 OVERALL SITE PLAN - ELECTRICAL
 1" = 700'-0"

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		REVISIONS

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
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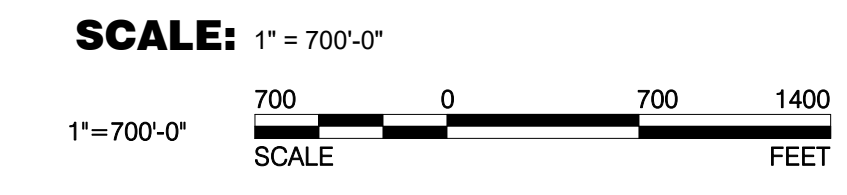
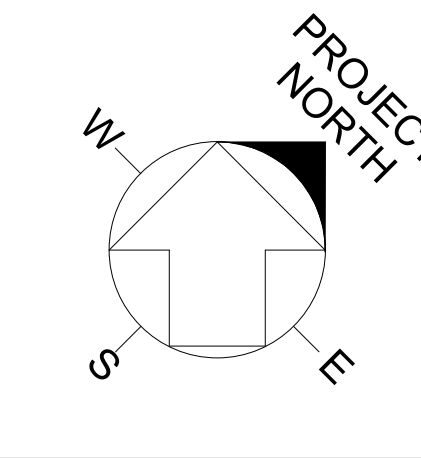
TGRWA
 TyR. Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 820
 Chicago, IL 60607
 Tel: 312.482.6501
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Turner
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 55 East Monroe Street
 Suite 1450
 Chicago, IL 60603
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SUBMITTED		



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 UNITED STATES DEPARTMENT OF ENERGY

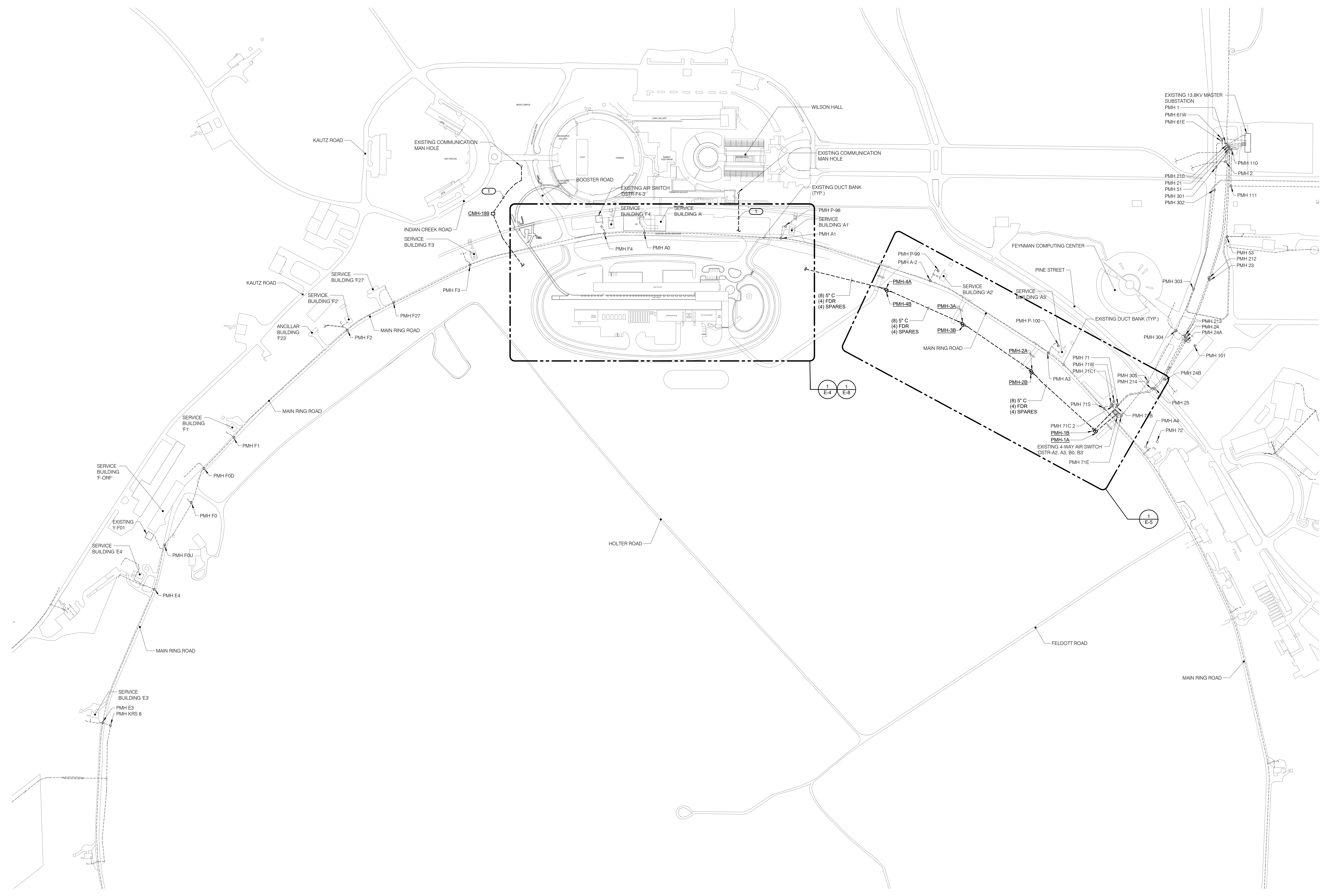
PIP-II SITE PREPARATION
OVERALL SITE PLAN - ELECTRICAL

DRAWING NO. **4-3-2** **E-2** REV.

GENSLER NUMBER: Project Number

17 AUG 2018

KEYNOTES: (#)
 1. BASE BID - PROVIDE 4 CELL
 ALT. BID #2 - PROVIDE 6 CELL



1 SITE PLAN - ELECTRICAL
 1" = 200'-0"

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 CONSTRUCTION

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Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago, IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
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 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

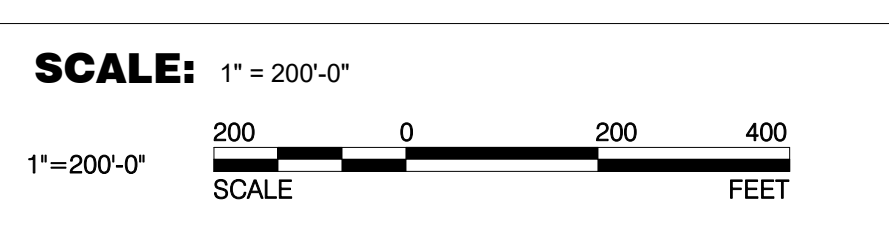
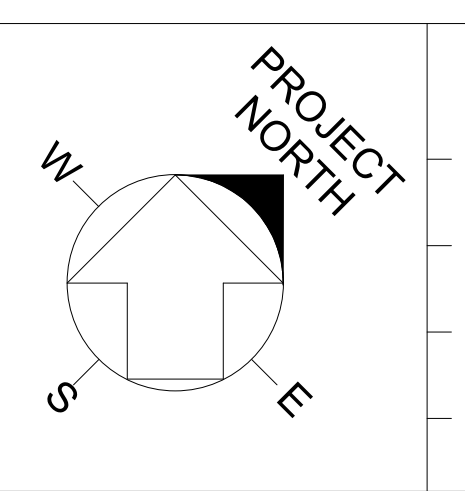
TGRWA
 TyR. Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
 Fax: 312.492.7101

Turner
 Contractor
 55 East Marquette Street
 Suite 1450
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	TB	08/17/18
DRAWN	HP	08/17/18
CHECKED	JML	08/17/18
APPROVED	JML	08/17/18
SUBMITTED		

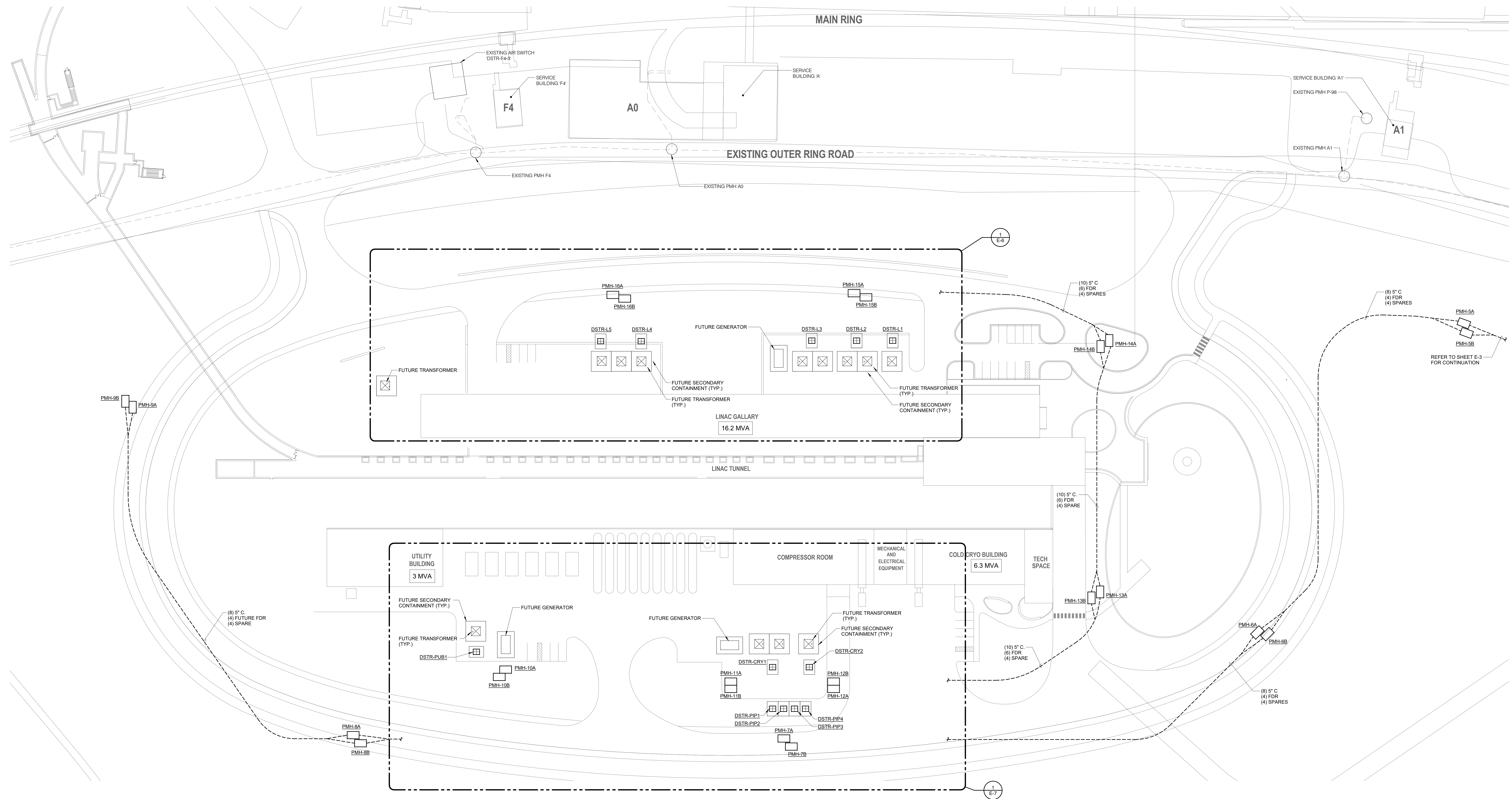


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 UNITED STATES DEPARTMENT OF ENERGY

PIP-II SITE PREPARATION
 ENLARGED SITE PLAN - ELECTRICAL

DRAWING NO. **4-3-2** **E-3** REV.
 GENSLER NUMBER: Project Number

17 AUG 2018



1 ENLARGED SITE PLAN - POWER
1" = 40'-0"

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REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

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Architects
11 East Madison Street
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Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
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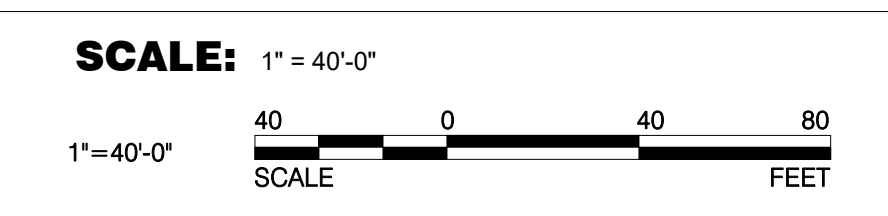
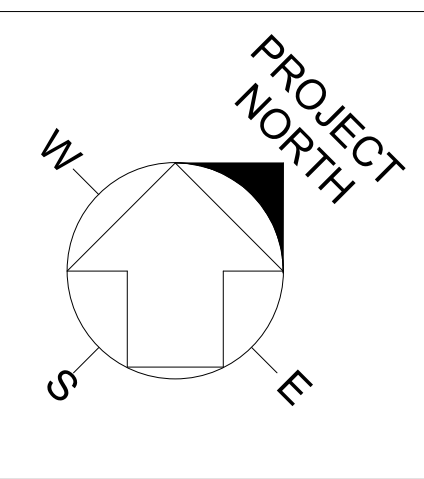
TGRWA
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Naperville, IL 60563
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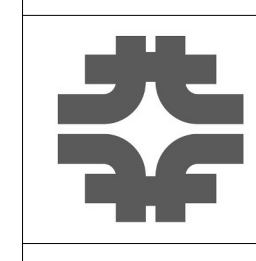
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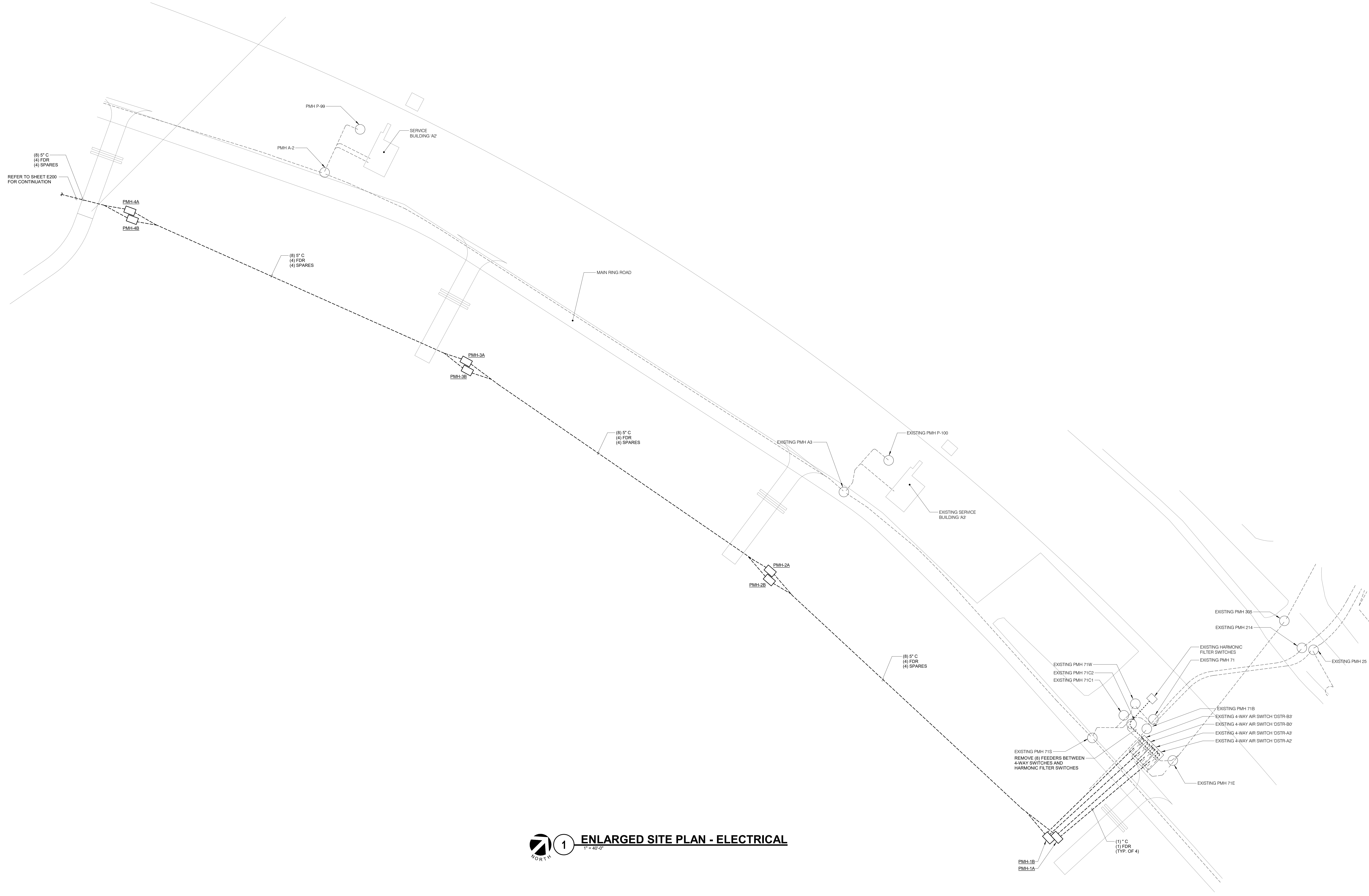


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UNITED STATES DEPARTMENT OF ENERGY



PIP-II SITE PREPARATION
ENLARGED SITE PLAN - ELECTRICAL

DRAWING NO. **4-3-2** **E-4** REV. **17 AUG 2018**
GENSLER NUMBER: Project Number



1 ENLARGED SITE PLAN - ELECTRICAL
1" = 40'-0"

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Chicago IL 60602
Tel: 312.456.0123
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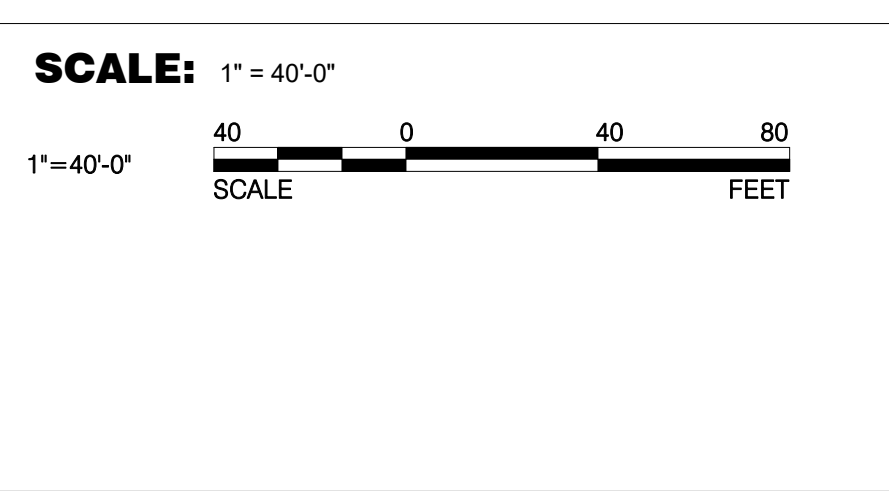
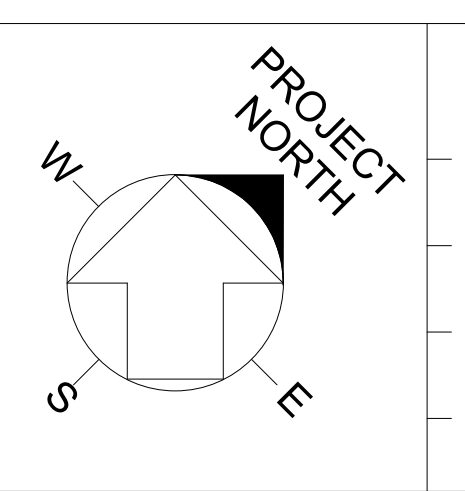
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Suite 500
Chicago, IL 60607
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Fax: 312.341.9966

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MEP Engineers
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Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

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Fax: 312.482.7101

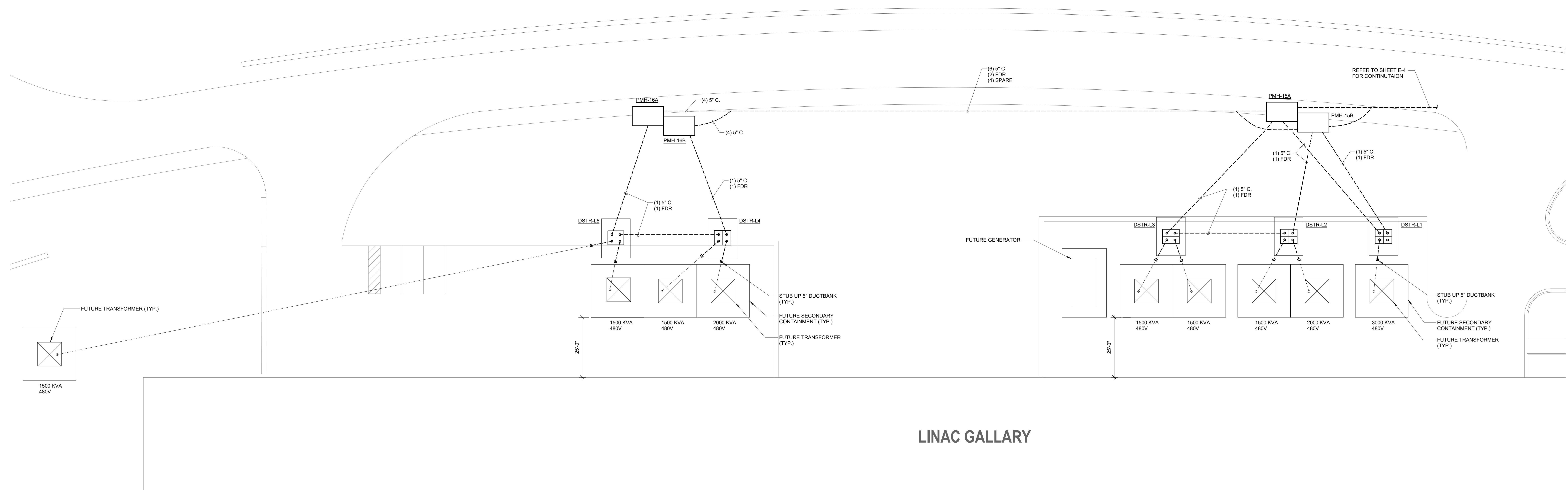
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UNITED STATES DEPARTMENT OF ENERGY
PIP-II SITE PREPARATION
ENLARGED SITE PLAN - ELECTRICAL
DRAWING NO. **4-3-2** **E-5** REV.
GENSLER NUMBER: Project Number

17 AUG 2018



1 ENLARGED SITE PLAN - ELECTRICAL
 1/16" = 1'-0"

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REV.	DATE	DESCRIPTIONS
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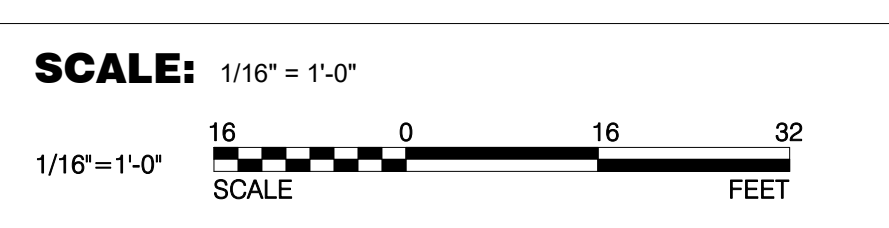
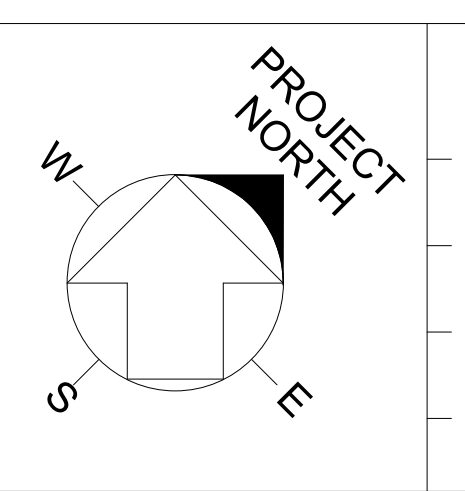
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 MEP Engineers
 1100 Warrenville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
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PIP-II SITE PREPARATION
 ENLARGED SITE PLAN - ELECTRICAL

DRAWING NO. **4-3-2** E-6 REV.
 GENSLER NUMBER: Project Number

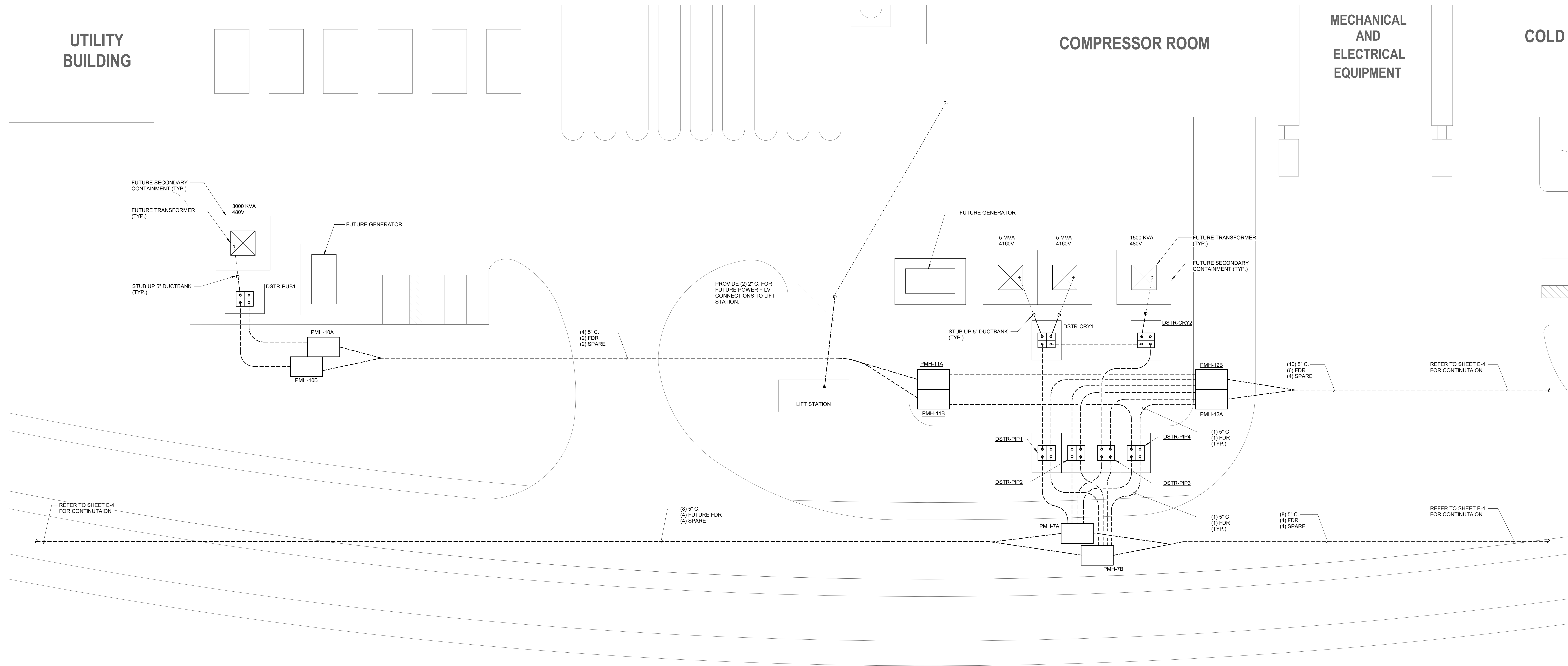
17 AUG 2018

UTILITY BUILDING

COMPRESSOR ROOM

MECHANICAL AND ELECTRICAL EQUIPMENT

COLD CRYO BUILDING



1 ENLARGED SITE PLAN - ELECTRICAL

1/16" = 1'-0"

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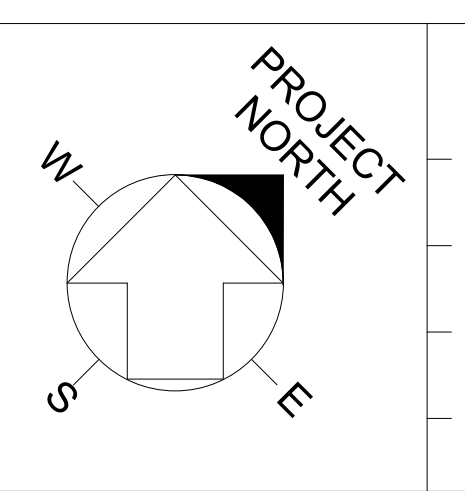
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Structural Engineers
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IMEG
MEP Engineers
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Suite 400W
Naperville, IL 60563
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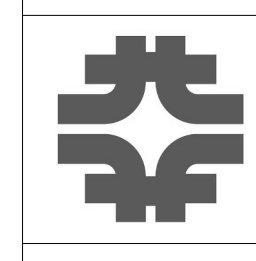
Turner
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APPROVED	JML	08/14/18
SUBMITTED		



SCALE: 1/16" = 1'-0"
1/16" = 1'-0" SCALE
0 16 32
FEET

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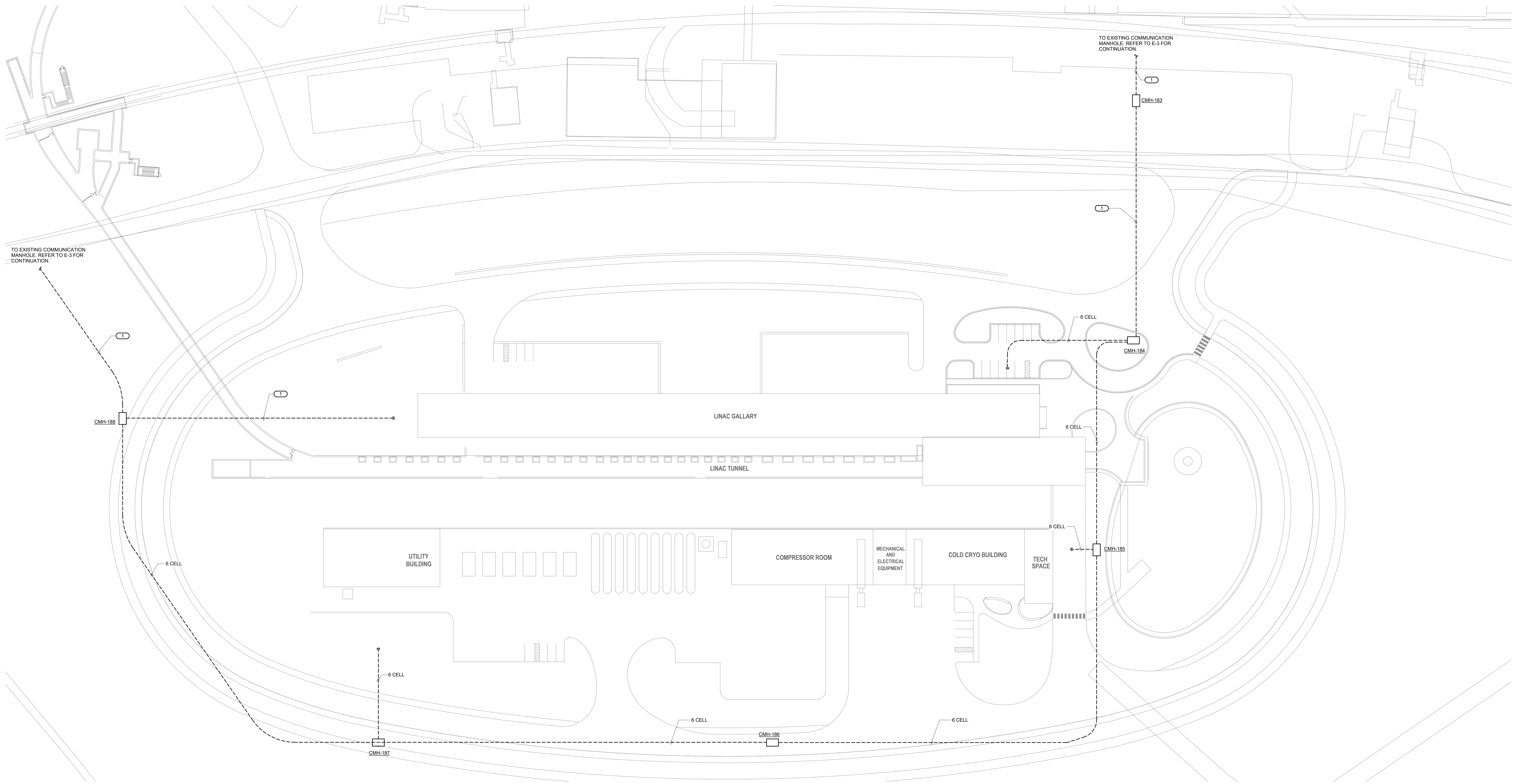


PIP-II SITE PREPARATION
ENLARGED SITE PLAN - ELECTRICAL

DRAWING NO. **4-3-2** REV. **E-7**
GENSLER NUMBER: Project Number

17 AUG 2018

KEYNOTES: **C #**
 1. BASE BID : PROVIDE 4 CELL
 ALTERNATE BID : PROVIDE 6 CELL



1 ENLARGED SITE PLAN - COMMUNICATION
 T=40'-0"

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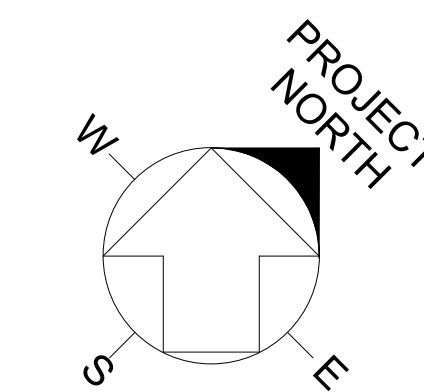
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 Chicago, IL 60607
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IMEG
 MEP Engineers
 1100 Whernville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.492.6501
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Turner
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SUBMITTED		

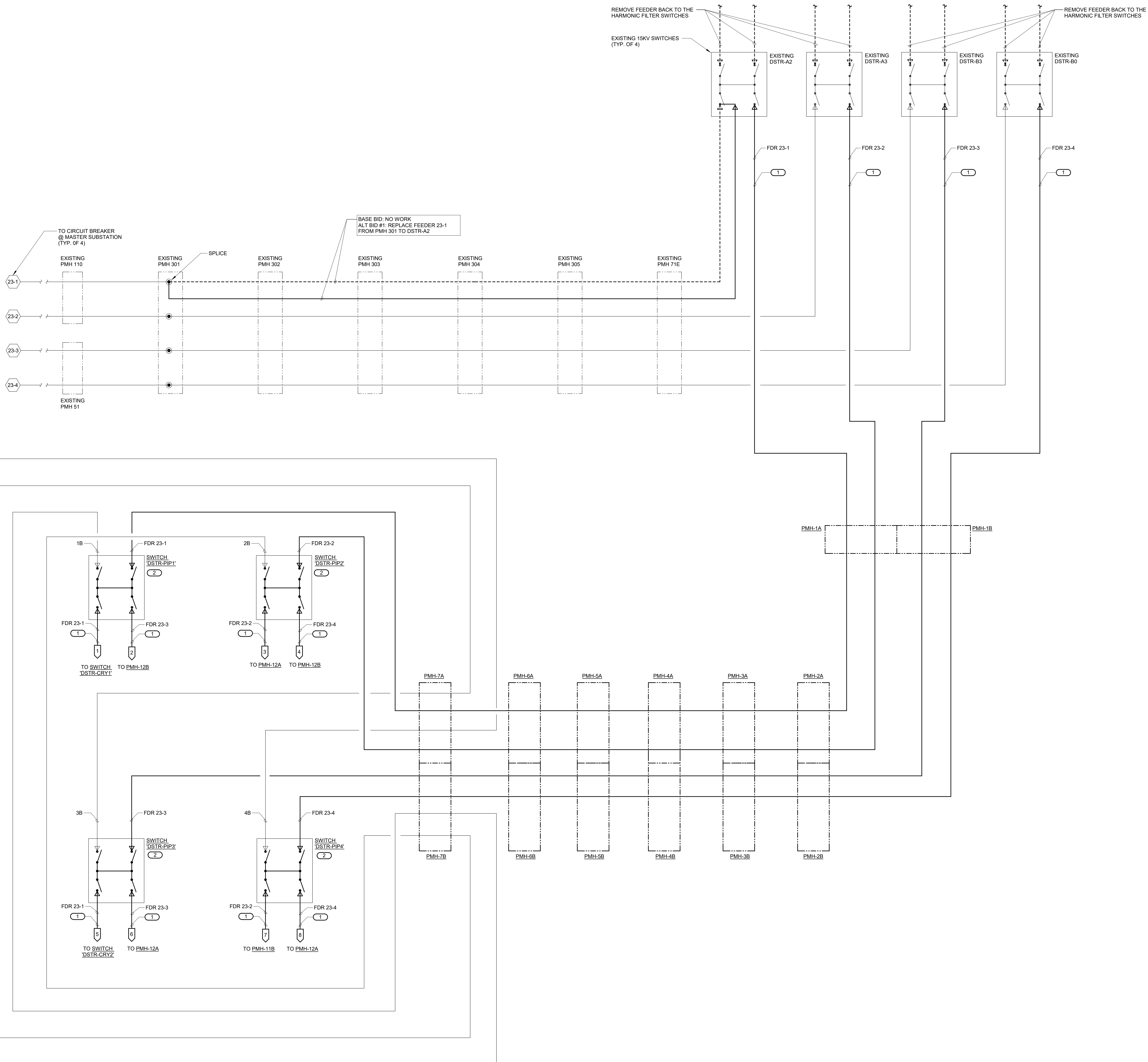


SCALE: 1" = 40'-0"
 1" = 40'-0"
 SCALE 40 0 40 80 FEET

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PIP-II SITE PREPARATION
 ENLARGED SITE PLAN - COMMUNICATION

DRAWING NO. **4-3-2** **E-8** REV. **17 AUG 2018**
 GENSLER NUMBER: Project Number



- KEYNOTES NOTES:**
- 15KV CABLE (TRIPLEX 3/C 750 KCML ALUMINUM WITH GROUND NEUTRAL) PROVIDED BY FERMLAB. INSTALLED AND TERMINATED BY E.C. FERMLAB WILL PROVIDE SPLICE KITS.
 - 15KV, 4-WAY AIR SWITCH PROVIDED BY FERMLAB. INSTALLED AND WIRED BY E.C.

1 PARTIAL ONE LINE DIAGRAM
NO SCALE

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REV.	DATE	DESCRIPTIONS
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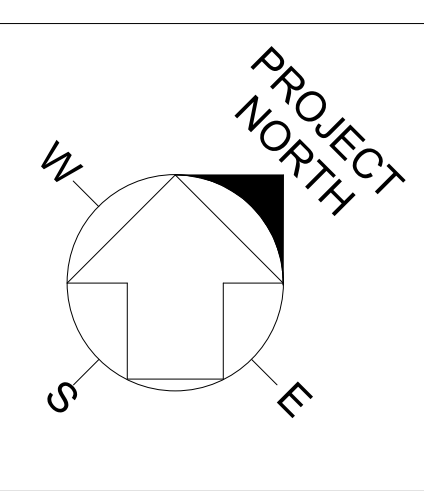
TGRWA
TyR. Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
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IMEG
MEP Engineers
1100 Wrennville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
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HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 800
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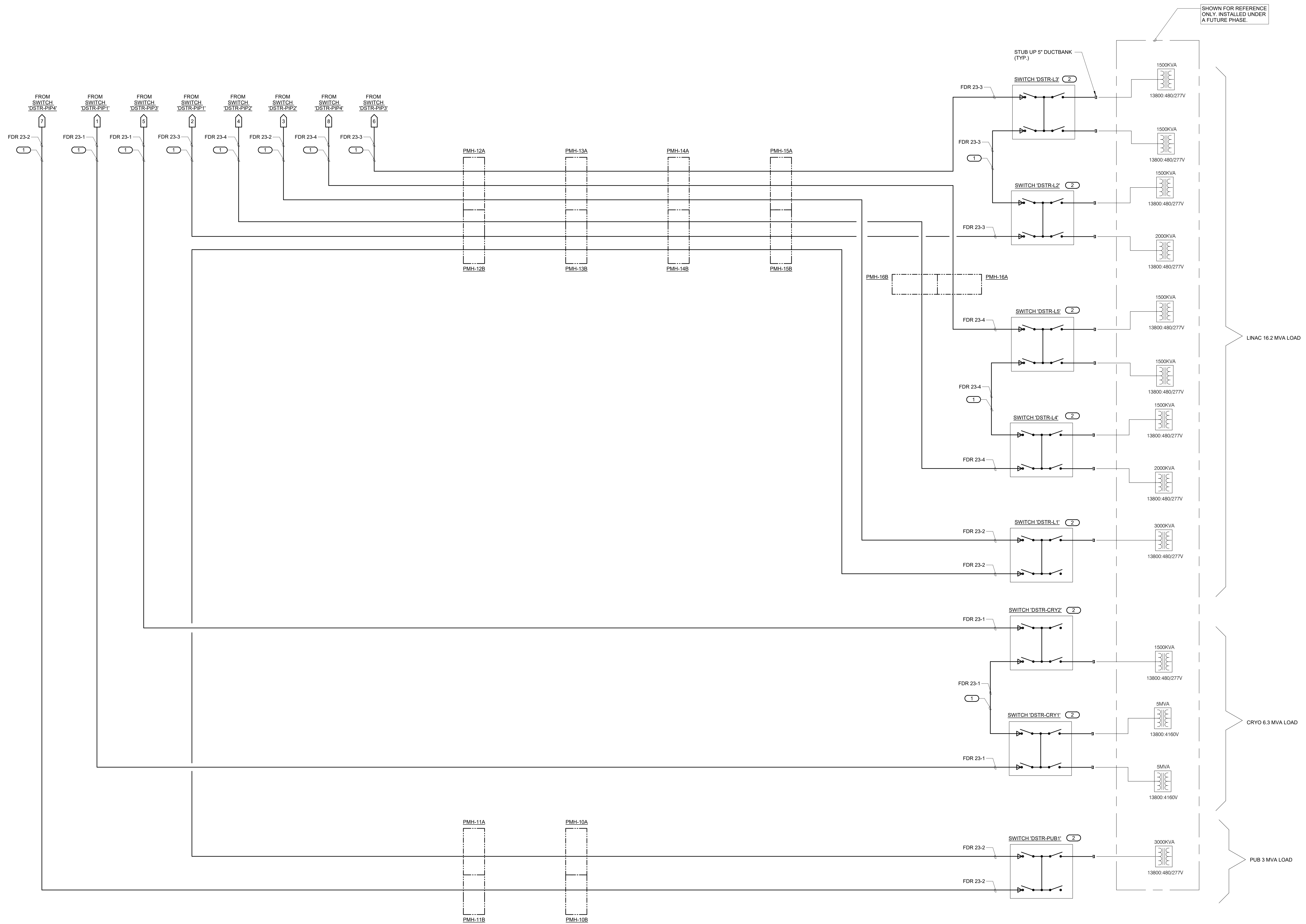
SCALE: NOT TO SCALE

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UNITED STATES DEPARTMENT OF ENERGY

PIP-II SITE PREPARATION
PARTIAL ONE LINE DIAGRAM

DRAWING NO. **4-3-2** E-9 REV. 17 AUG 2018
GENSLER NUMBER: Project Number

- KEYNOTES, NOTES:**
- 15KV CABLE (TRIPLEX 3/C 750 KCMIL ALUMINUM WITH 1/2" NEUTRAL) PROVIDED BY FERMLAB. INSTALLED AND TERMINATED BY E.C. FERMLAB WILL PROVIDE SPLICE KITS.
 - 15KV, 4-WAY AIR SWITCH PROVIDED BY FERMLAB. INSTALLED AND WIRED BY E.C.



1 PARTIAL ONE LINE DIAGRAM
NO SCALE

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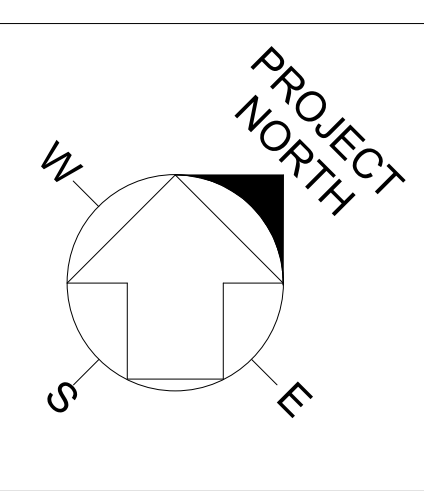
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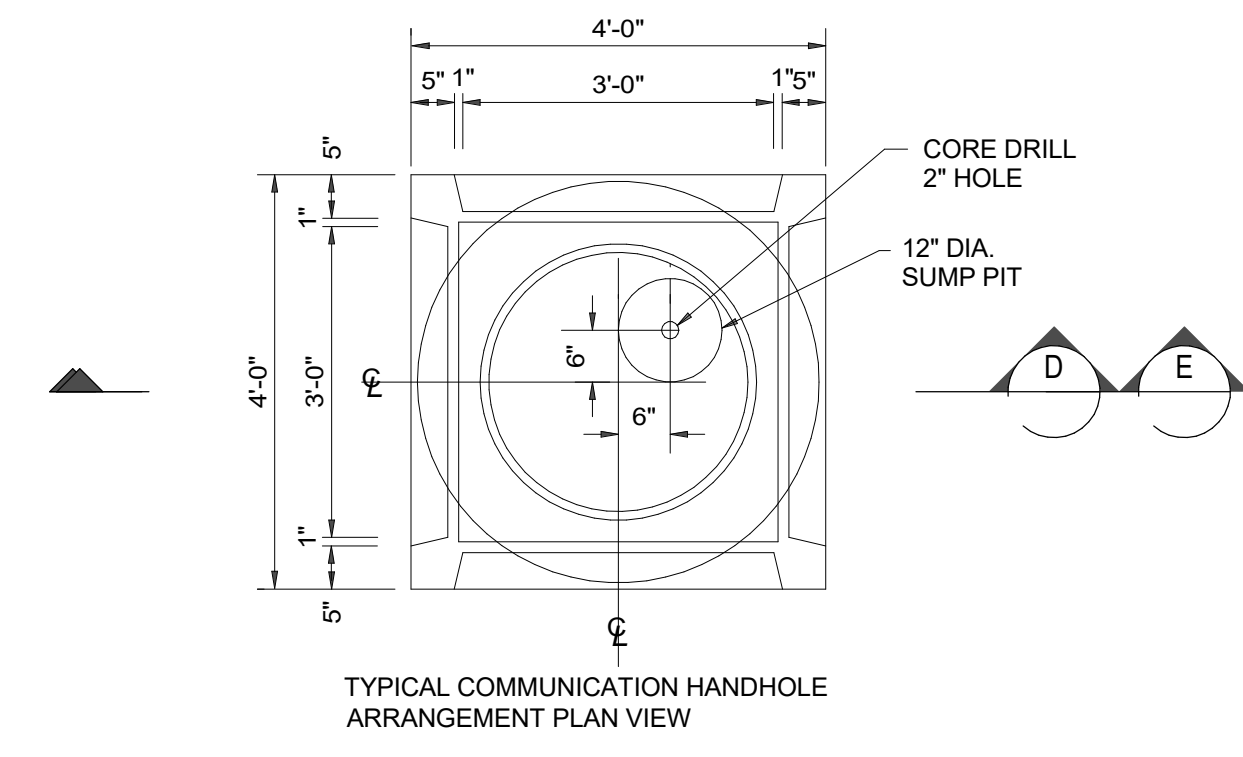
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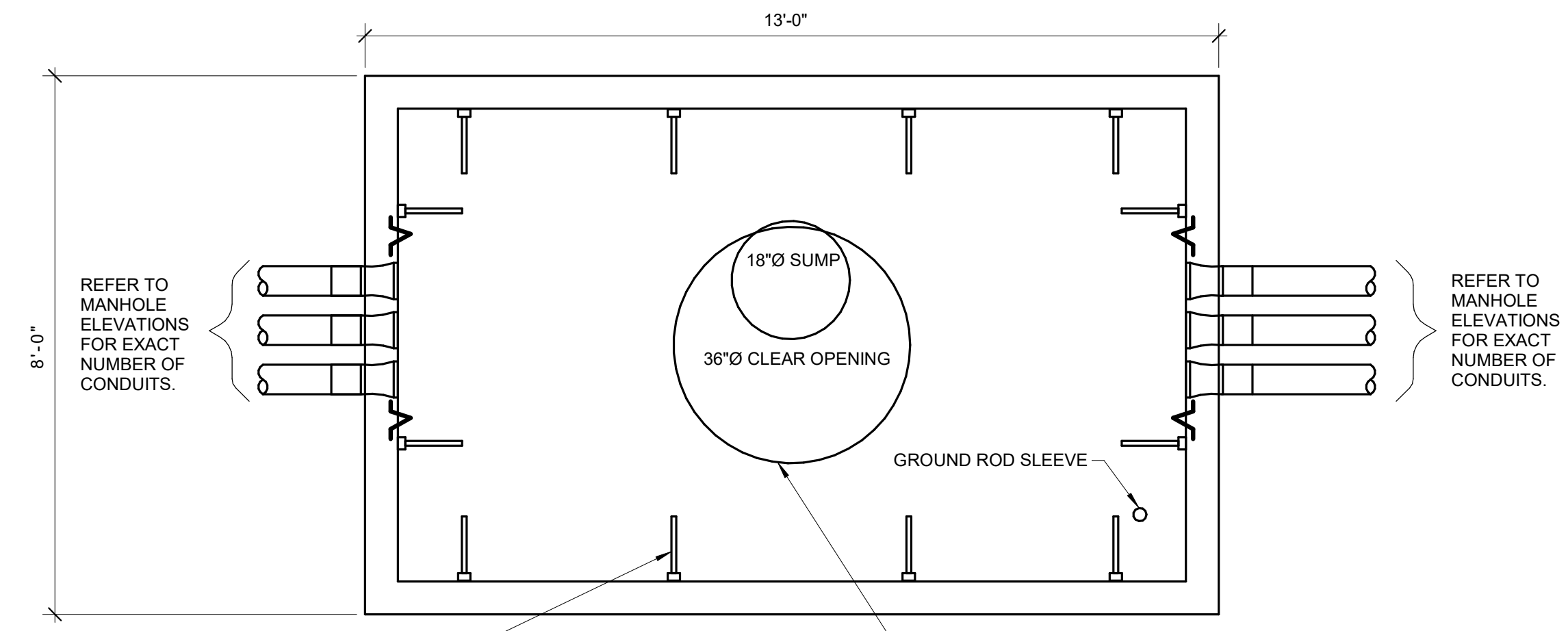
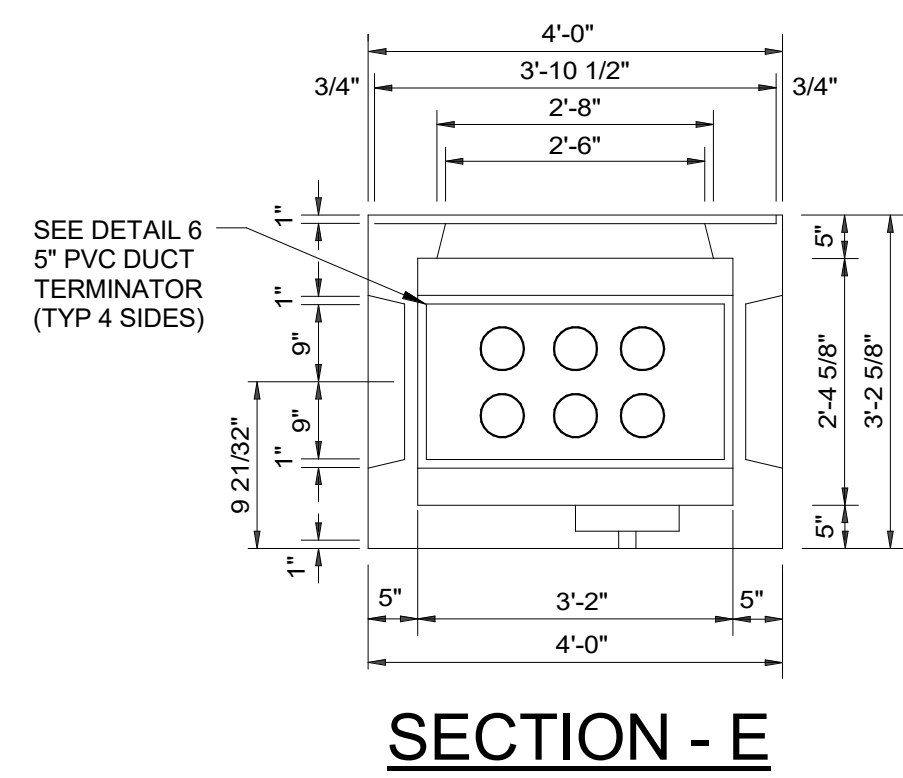
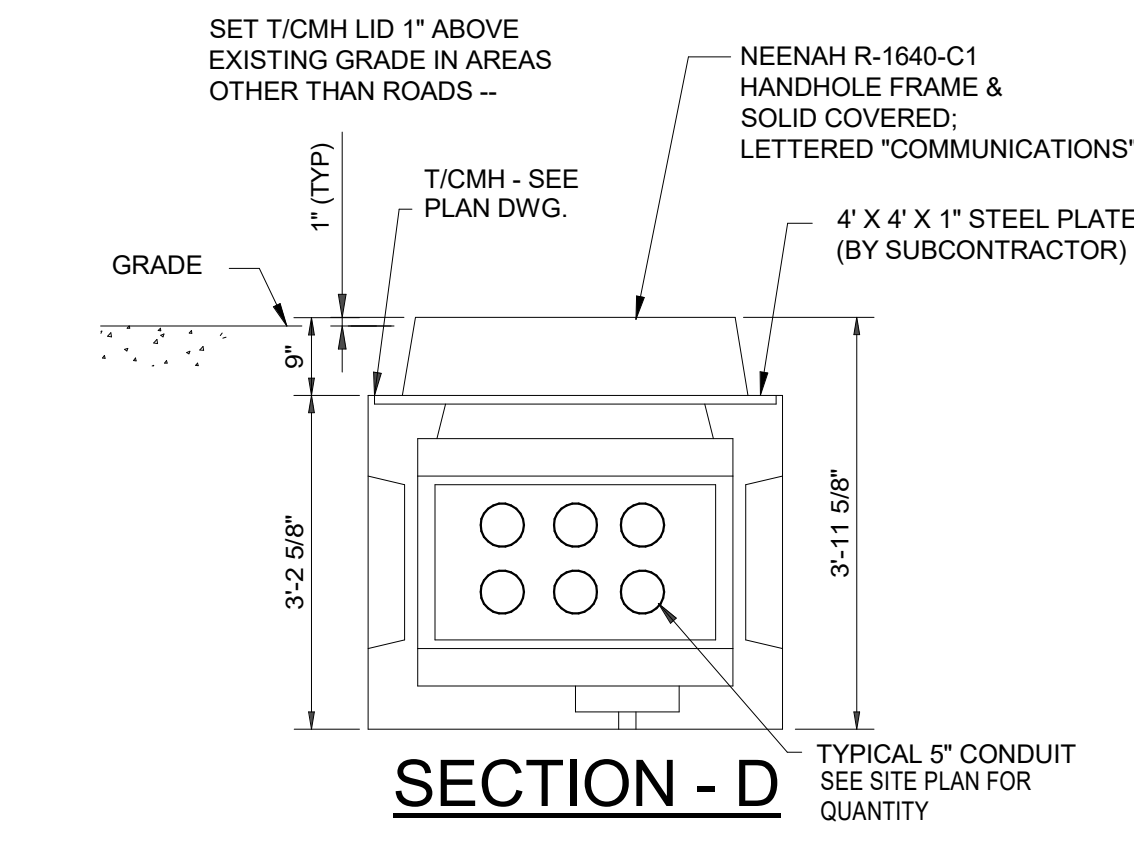


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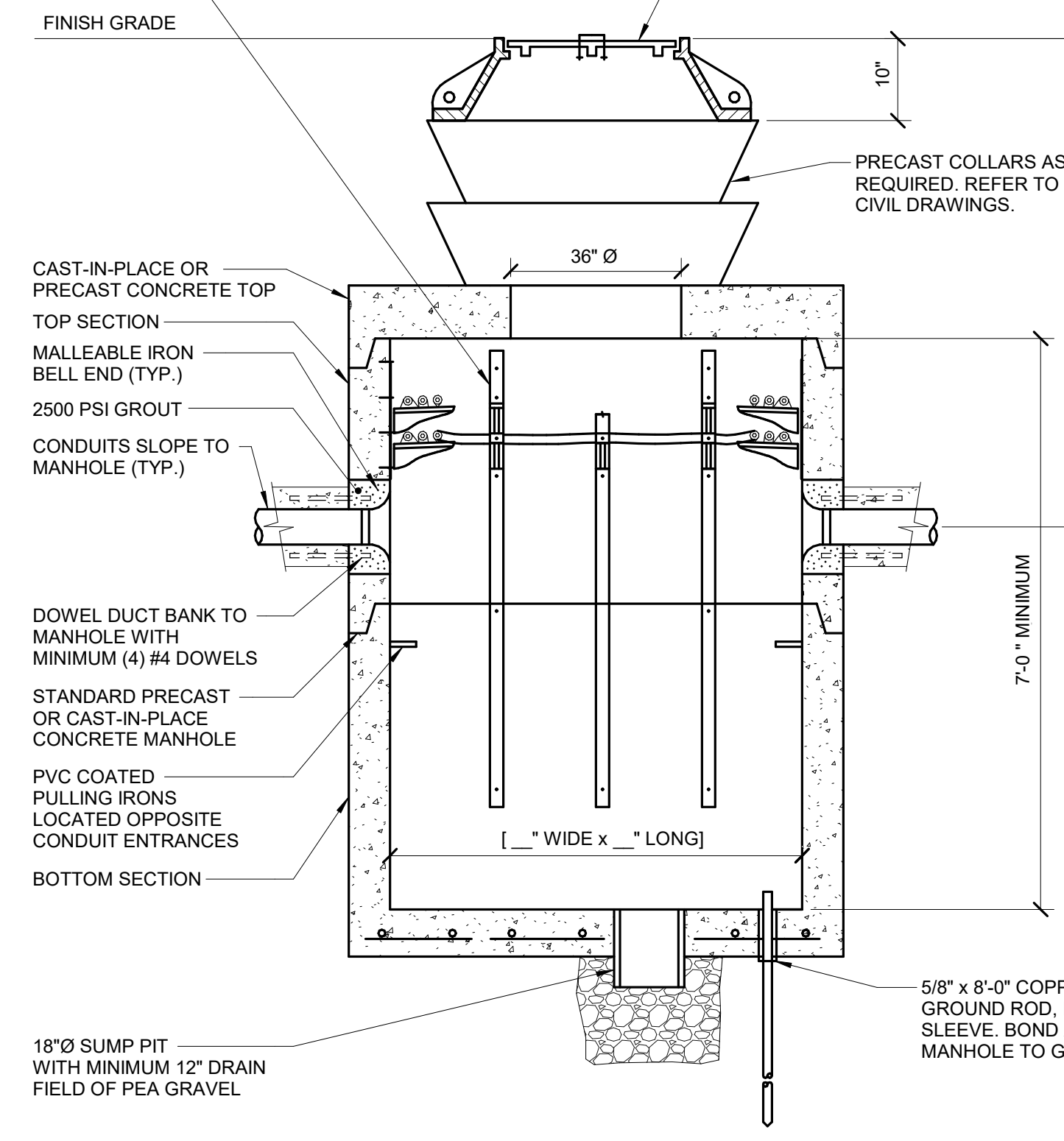
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PIP-II SITE PREPARATION
PARTIAL ONE LINE DIAGRAM
DRAWING NO. **4-3-2** REV. **E-10**
GENSLER NUMBER: Project Number



COMMUNICATION HANDHOLE DETAIL 1
SCALE: NONE



REFER TO MANHOLE ELEVATIONS FOR EXACT NUMBER OF CONDUITS.
REFER TO MANHOLE ELEVATIONS FOR EXACT NUMBER OF CONDUITS.
PROVIDE ANCHORING FOR CABLE SUPPORT BRACKETS AT 2'-0" O.C. ON ALL MANHOLE WALLS. PROVIDE NON-METALLIC CABLE SUPPORT ARMS AS REQUIRED.
MANHOLE FRAME WITH SOLID LID, MARKED "ELECTRICAL", NEENAH FOUNDRY R-1640, OR EQUAL.



2 ELECTRICAL MANHOLE DETAIL
NO SCALE

- NOTES:**
1. MANHOLE SHALL BE DESIGNED TO AASHTO HS-20 LIVE LOADS. SUBMITTAL SHALL SHOW DESIGN LOADING AND MATERIAL SPECIFICATIONS FOR SUPPLIED PRODUCTS.

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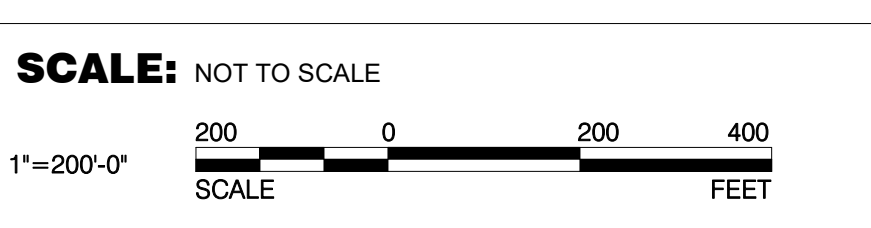
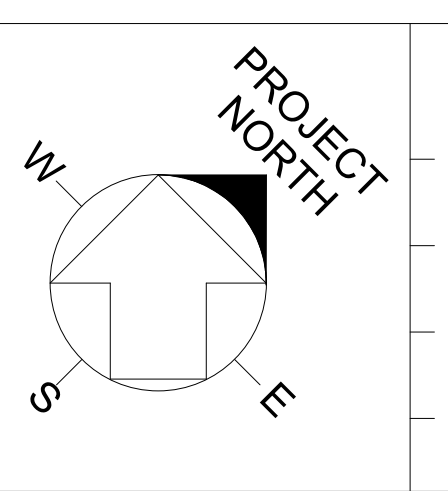
TGRWA
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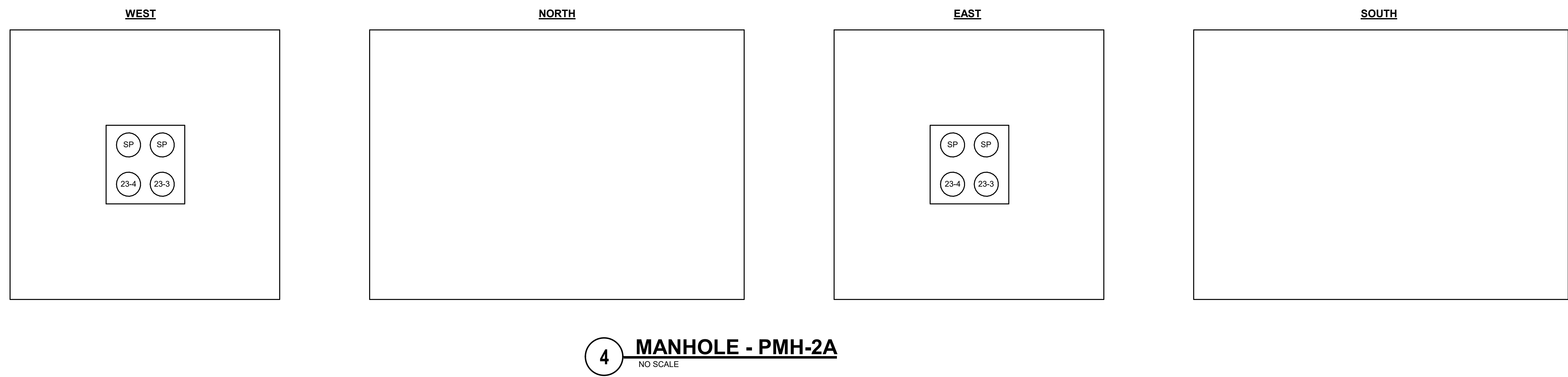
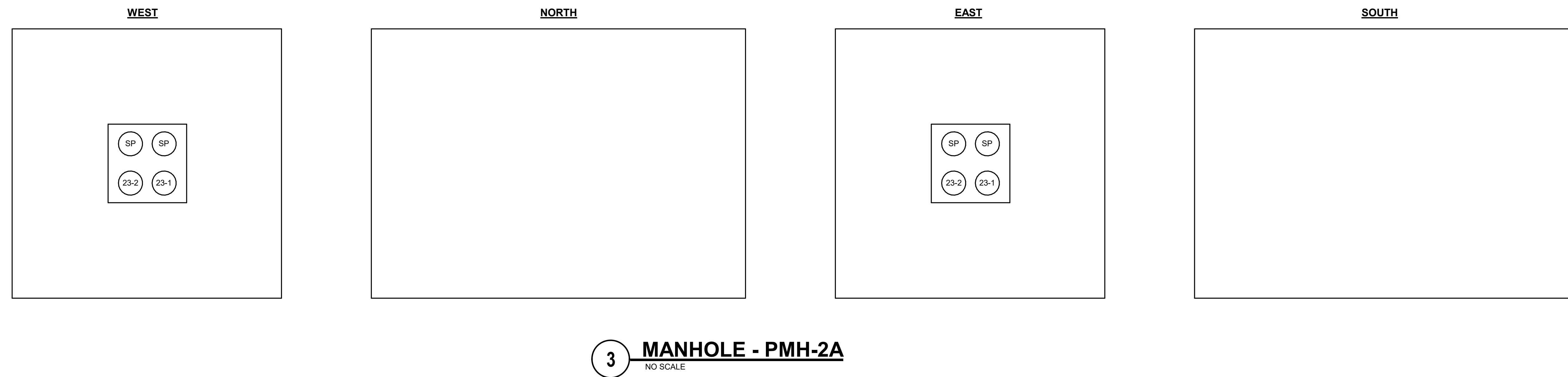
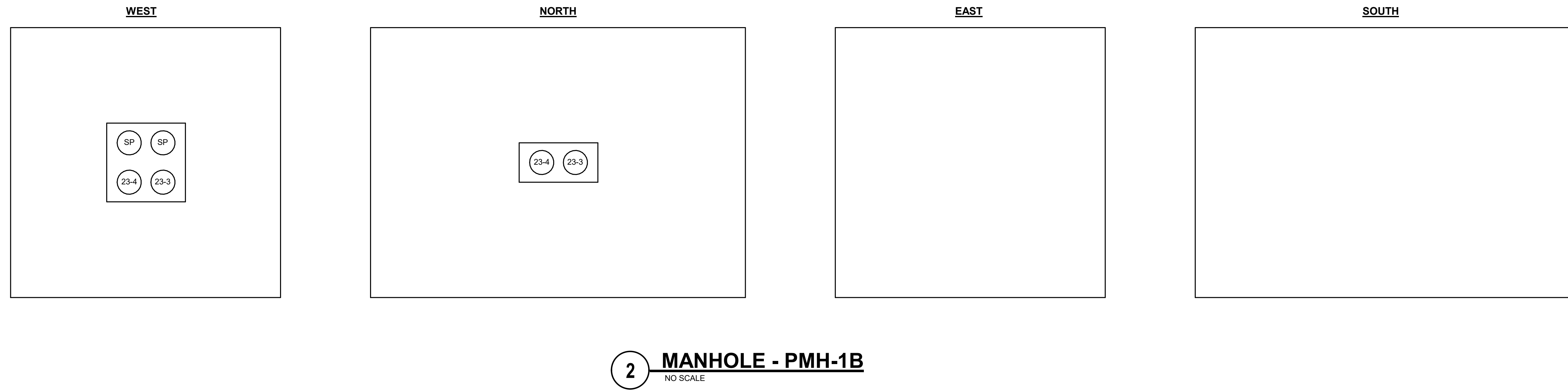
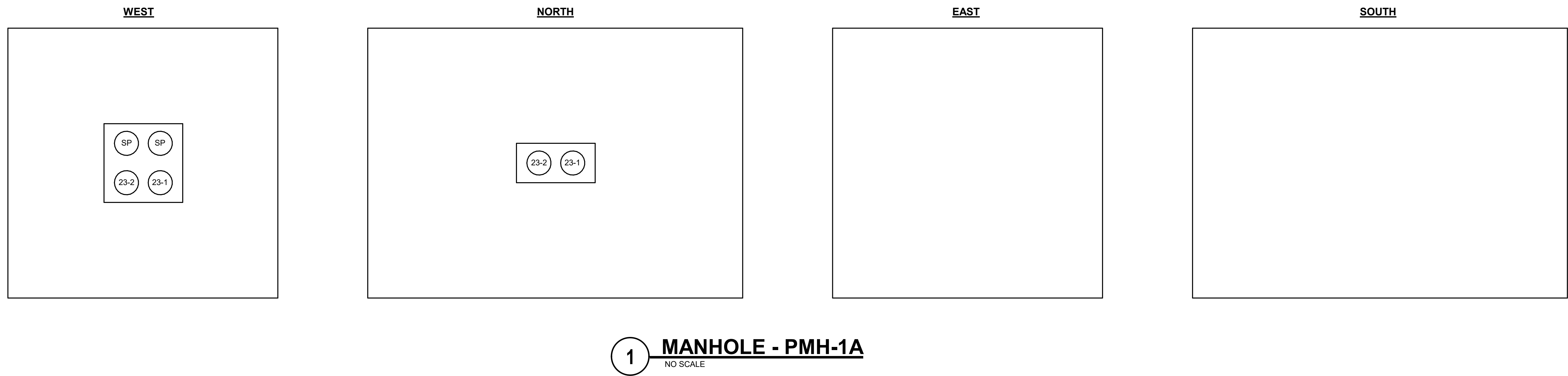
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SUBMITTED		



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UNITED STATES DEPARTMENT OF ENERGY
PIP-II SITE PREPARATION
MANHOLE DETAILS
DRAWING NO. **4-3-2** REV. **E-11**
GENSLER NUMBER: Project Number

GENERAL SHEET NOTES:
 1. REFER TO ELECTRICAL MANHOLE DETAIL ON E-11 FOR TYPICAL CABLE SUPPORT DETAIL.
 2. PROVIDE CABLE IDENTIFICATION. CABLE IDENTIFICATION SHALL BE REVIEWED AND APPROVED BY FERMLAB.

CABLE LEGEND:
 • FEEDER 23-1
 • FEEDER 23-2
 • FEEDER 23-3
 • FEEDER 23-4
 • SPARE SP
 • FUTURE FEEDER 1B
 • FUTURE FEEDER 2B
 • FUTURE FEEDER 3B
 • FUTURE FEEDER 4B



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 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

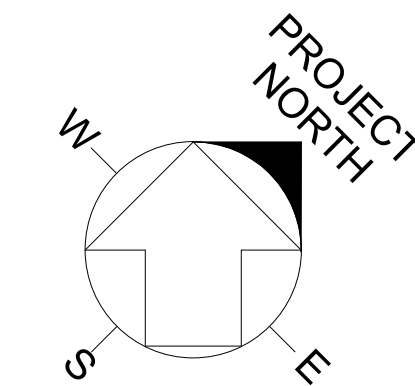
TGRWA
 TyR, Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 400W
 Naperville, IL 60563
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HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60603
 Tel: 312.492.6501
 Fax: 312.492.7101

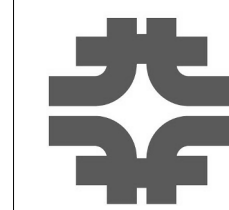
Turner
 Contractor
 55 East Monroe Street
 Suite 1450
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.492.7101

	NAME	DATE
DESIGNED	TB	08/17/18
DRAWN	HP	08/17/18
CHECKED	JML	08/17/18
APPROVED	JML	08/17/18
SUBMITTED		



SCALE: NOT TO SCALE

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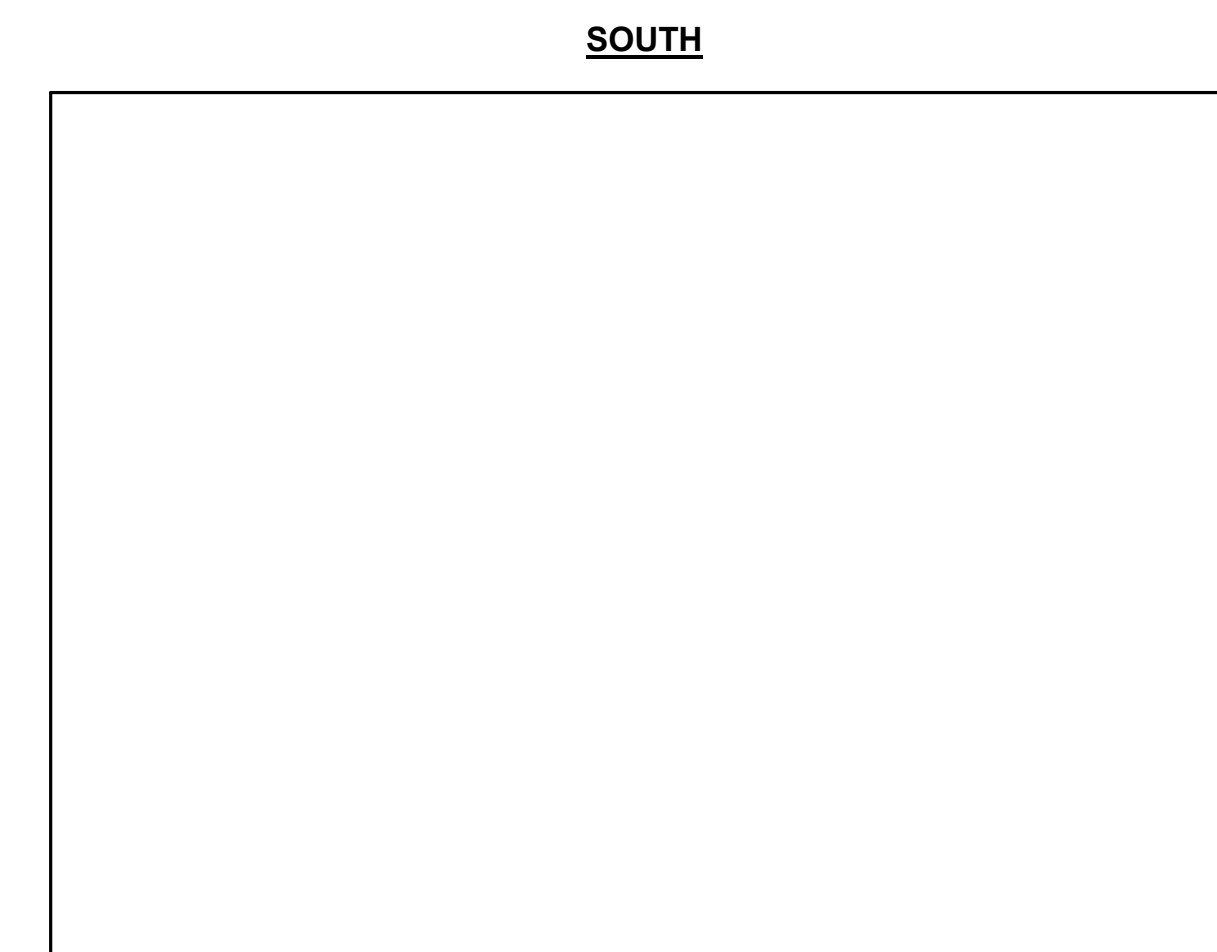
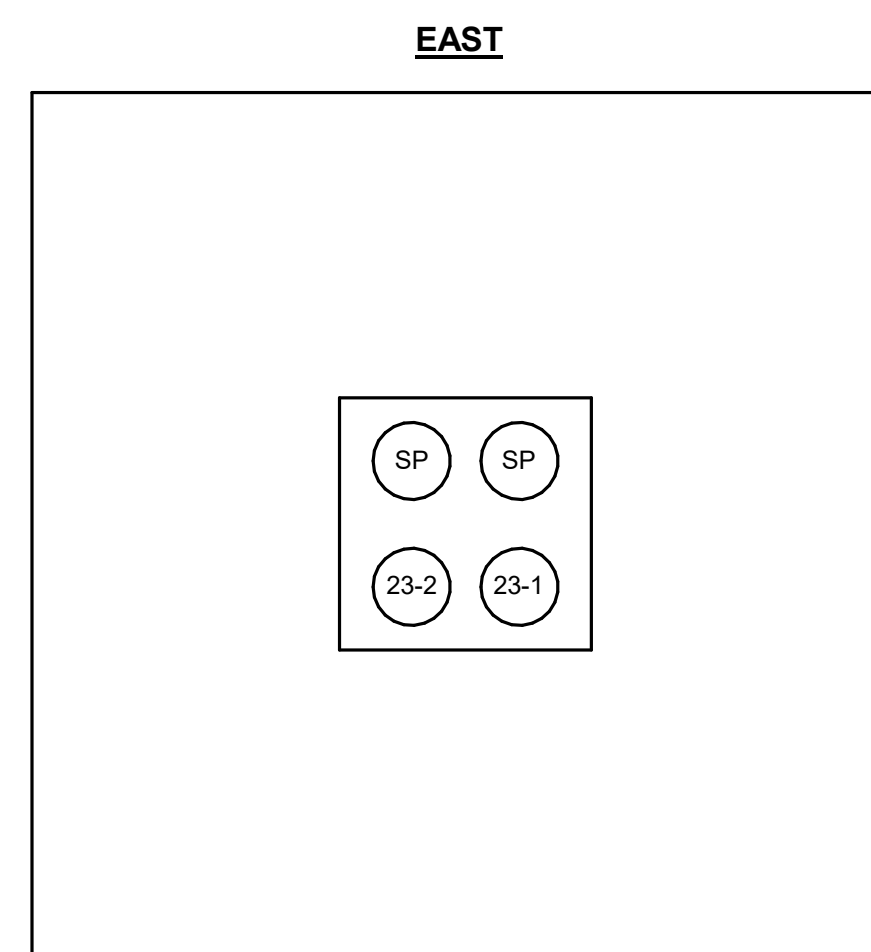
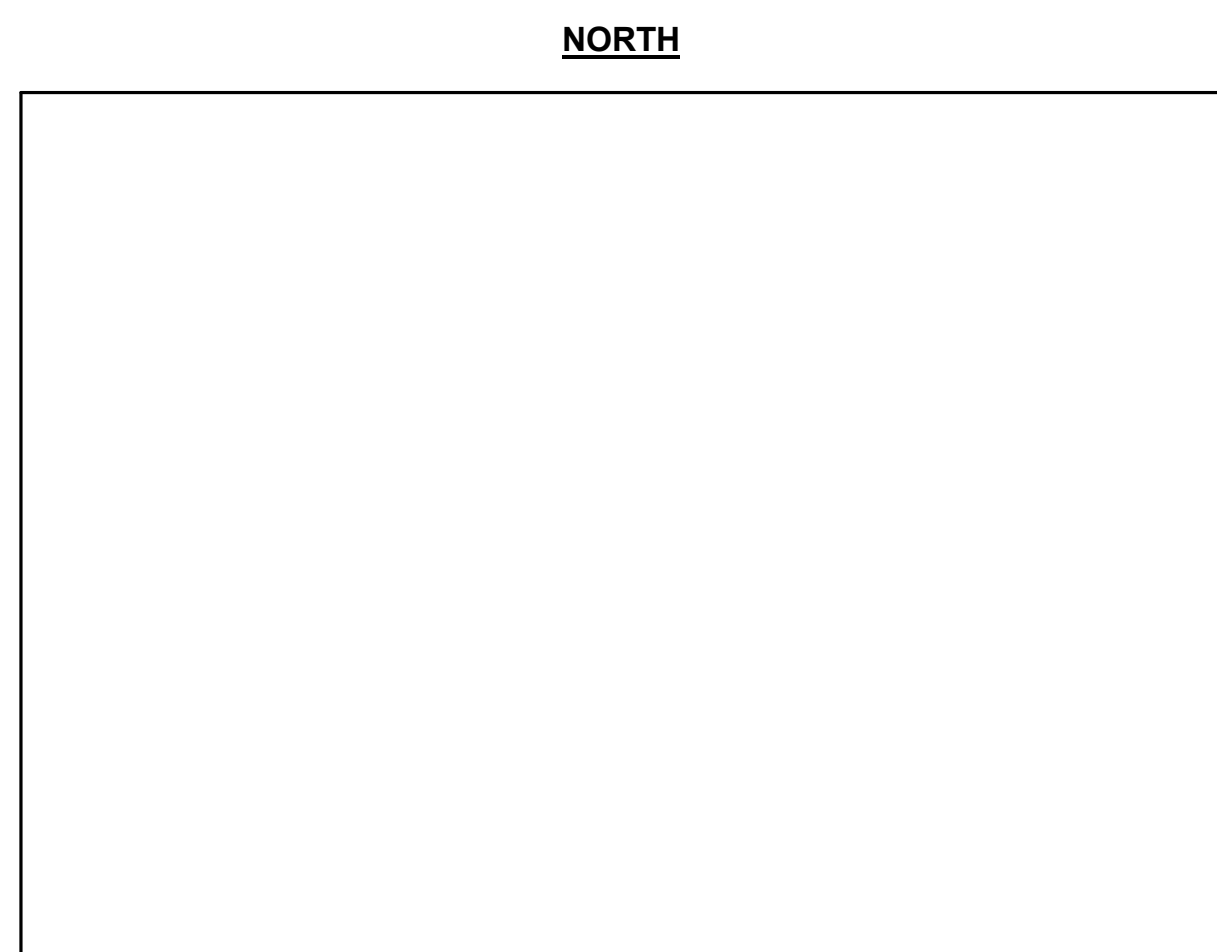
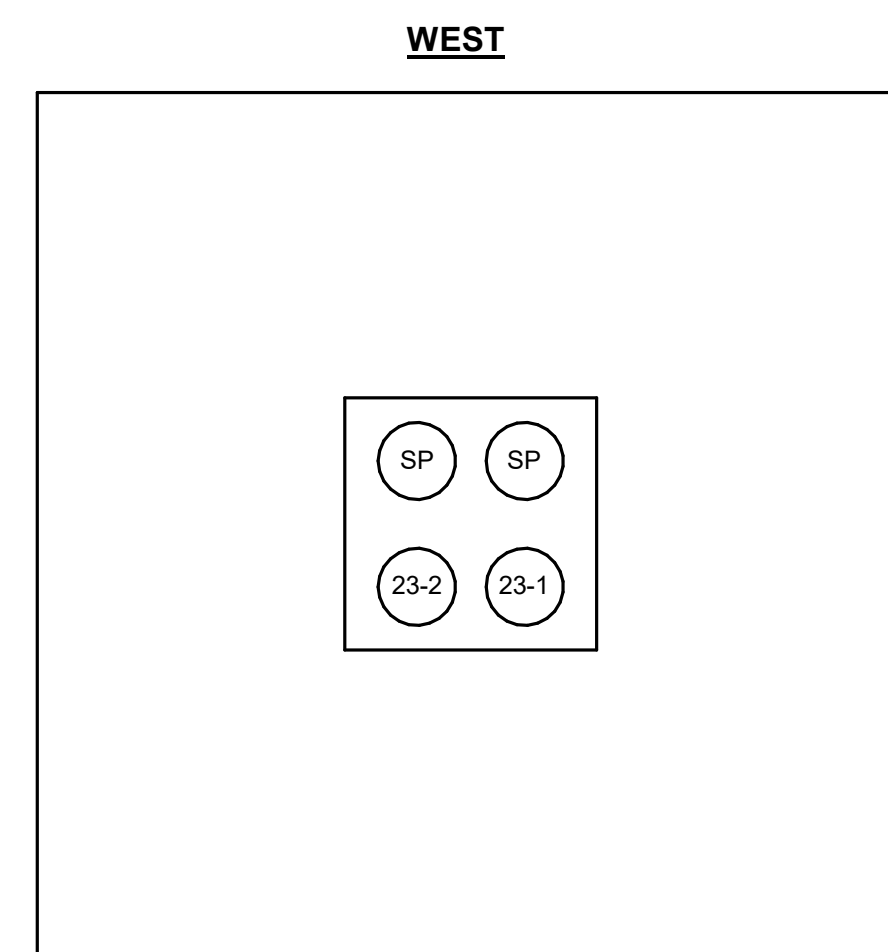


PIP-II SITE PREPARATION
 MANHOLE DETAILS

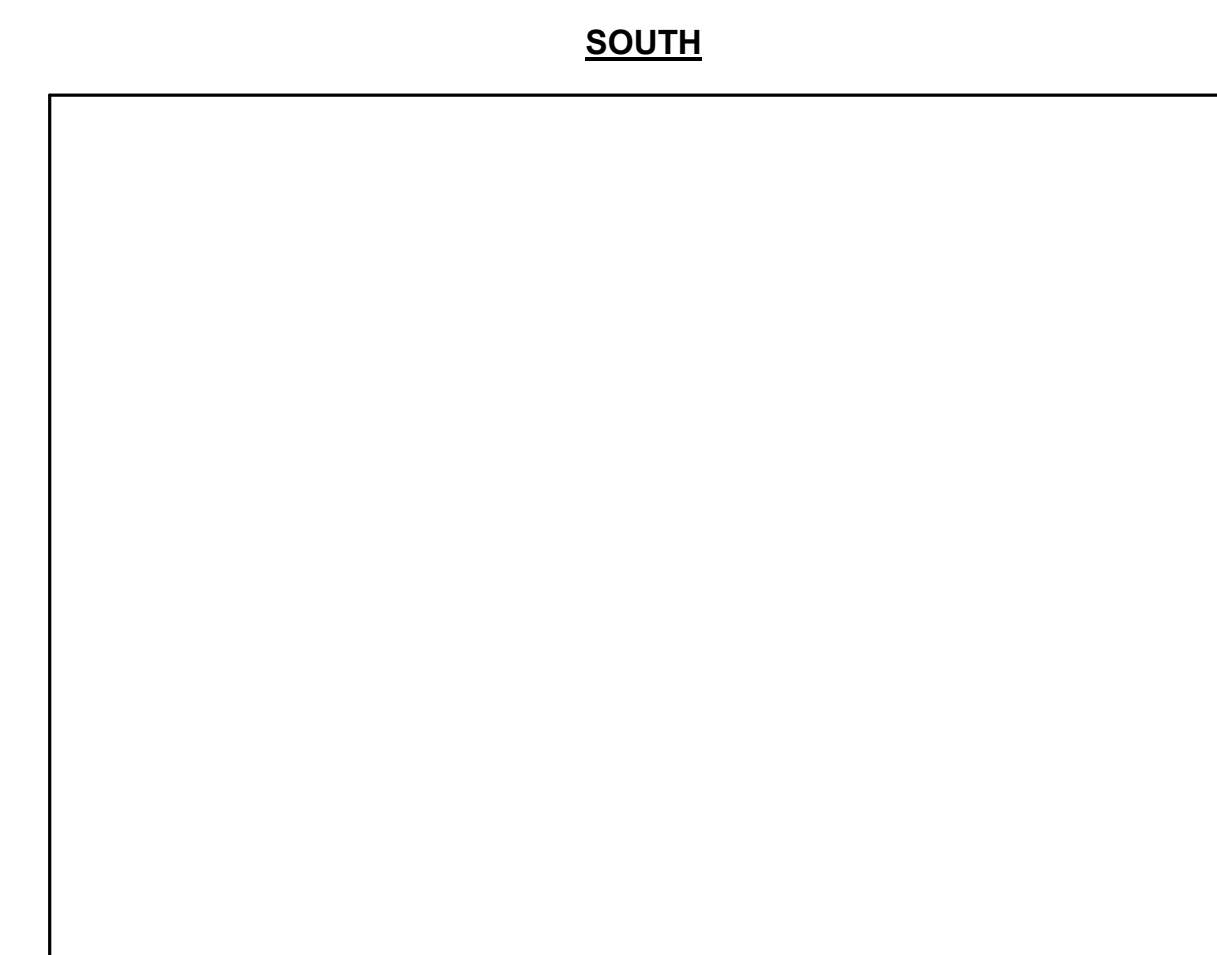
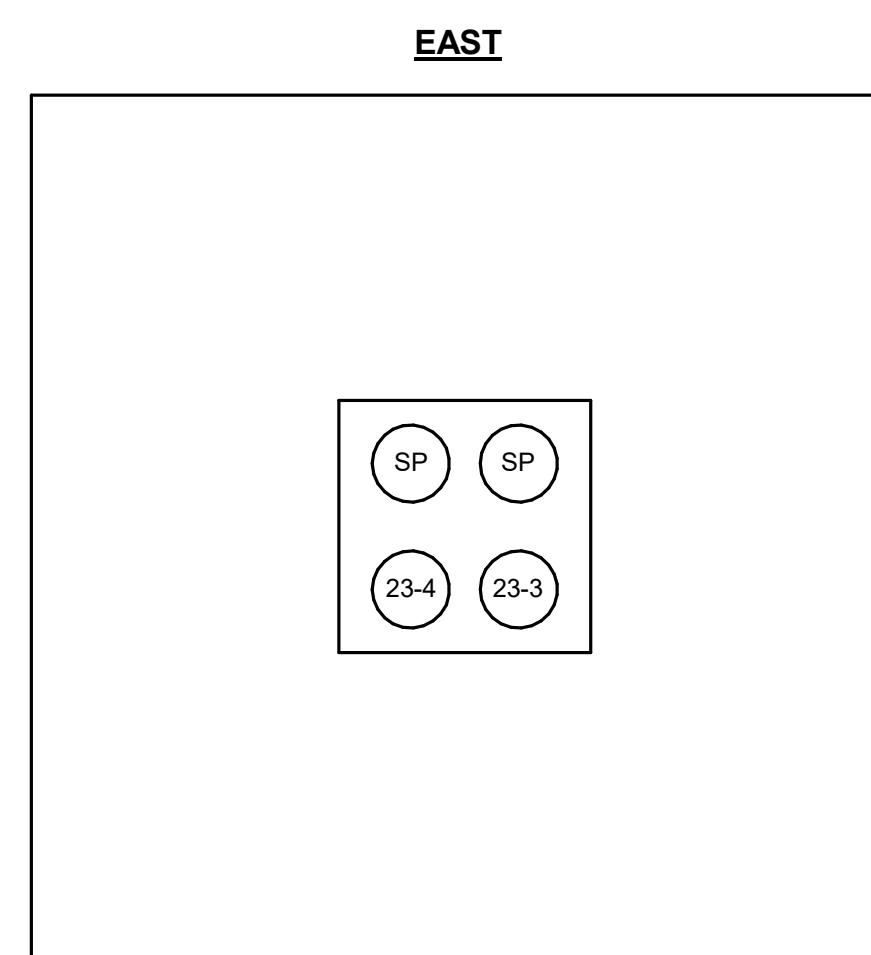
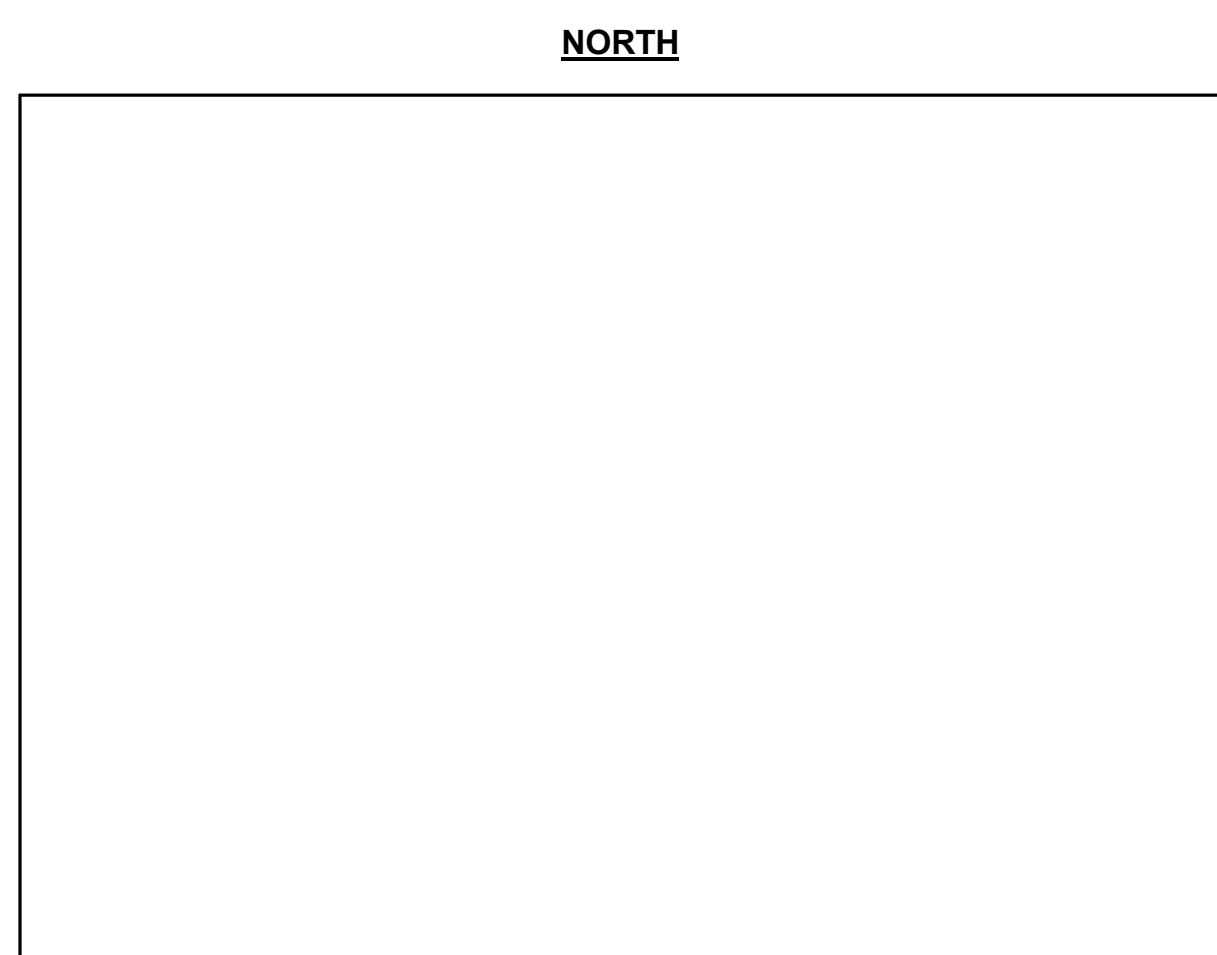
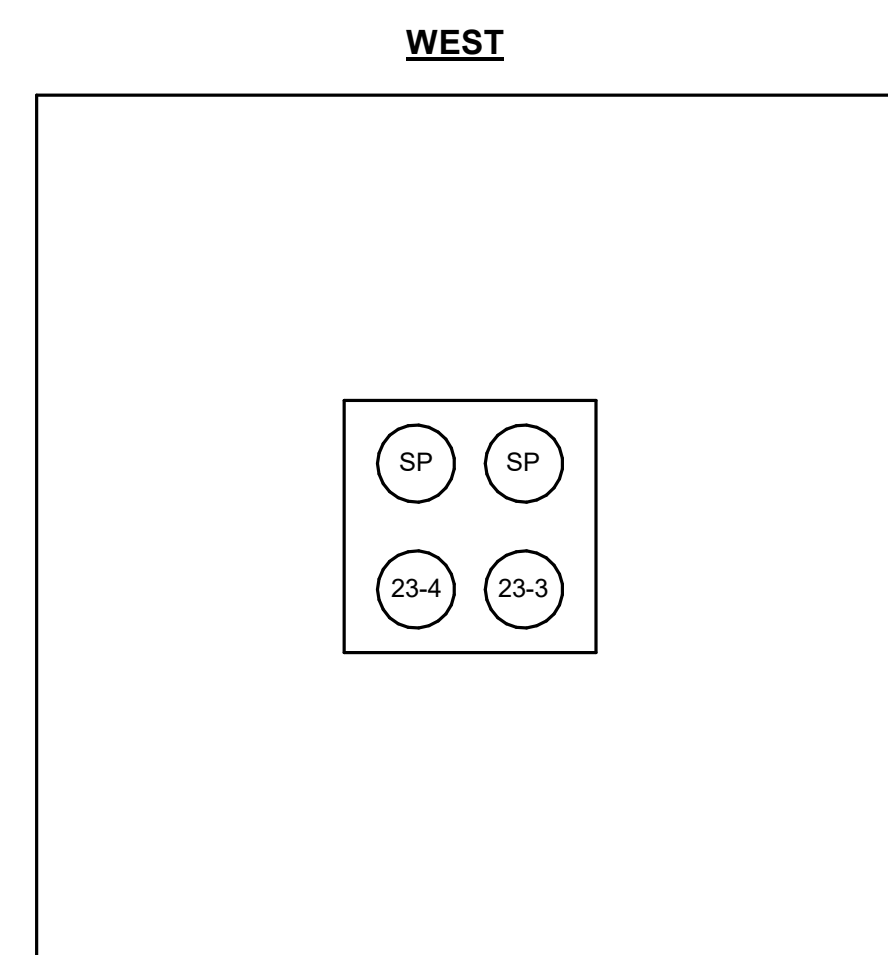
DRAWING NO. **4-3-2**
 GENSLER NUMBER: Project Number

E-12 REV.

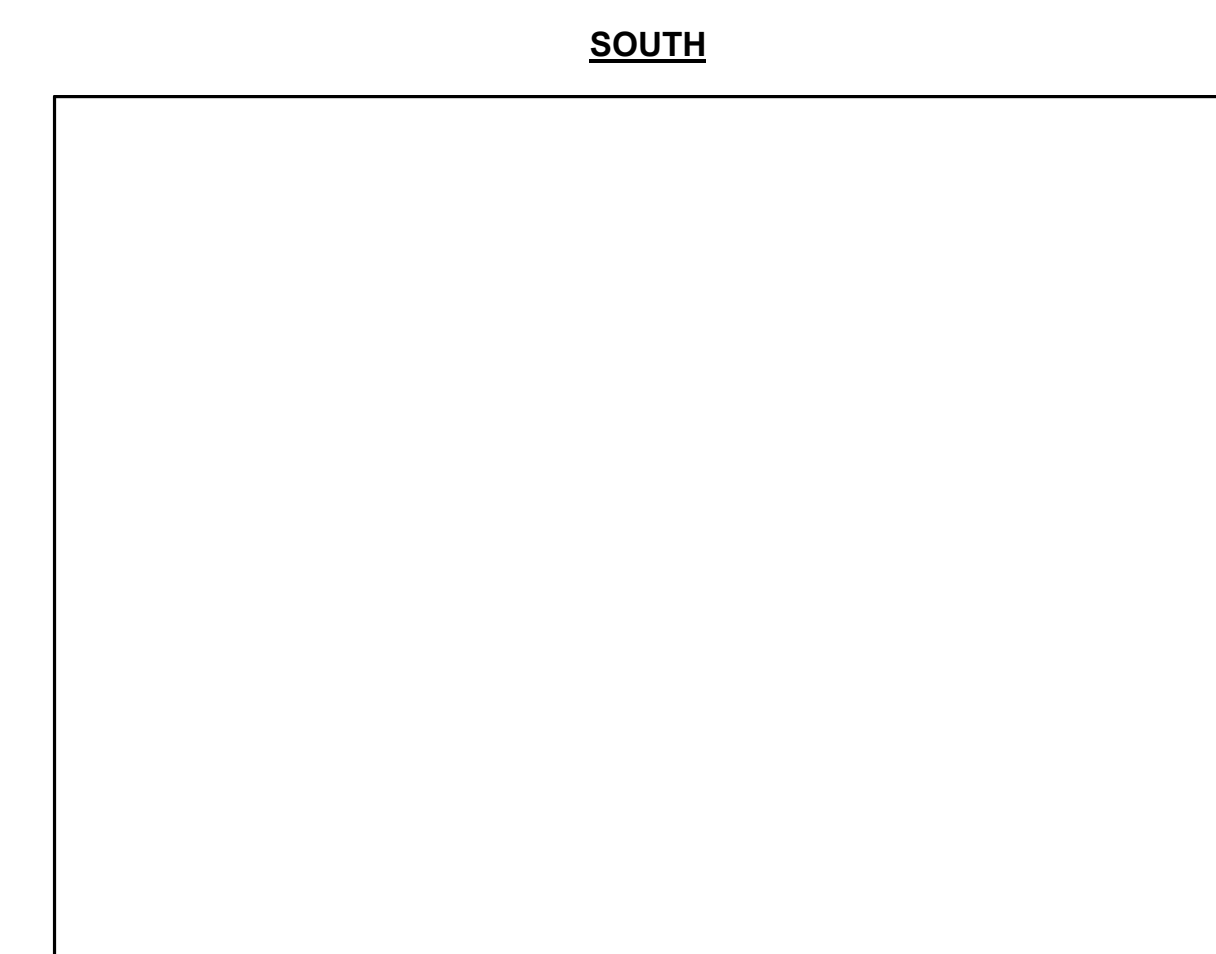
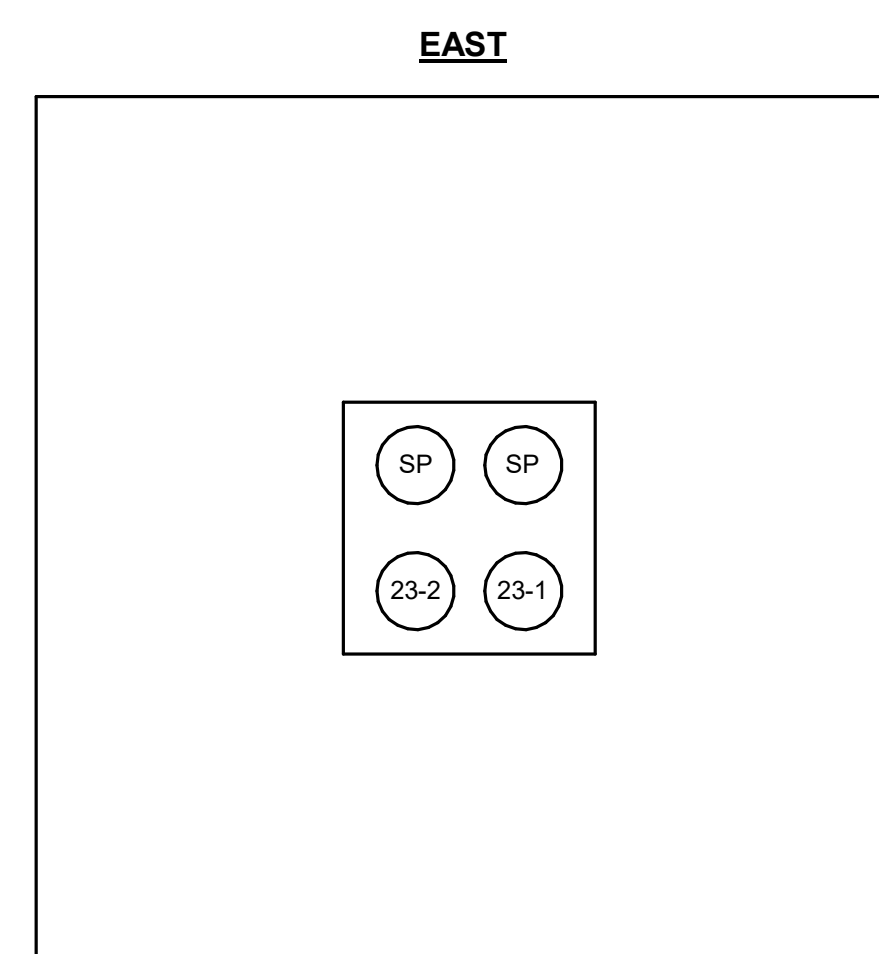
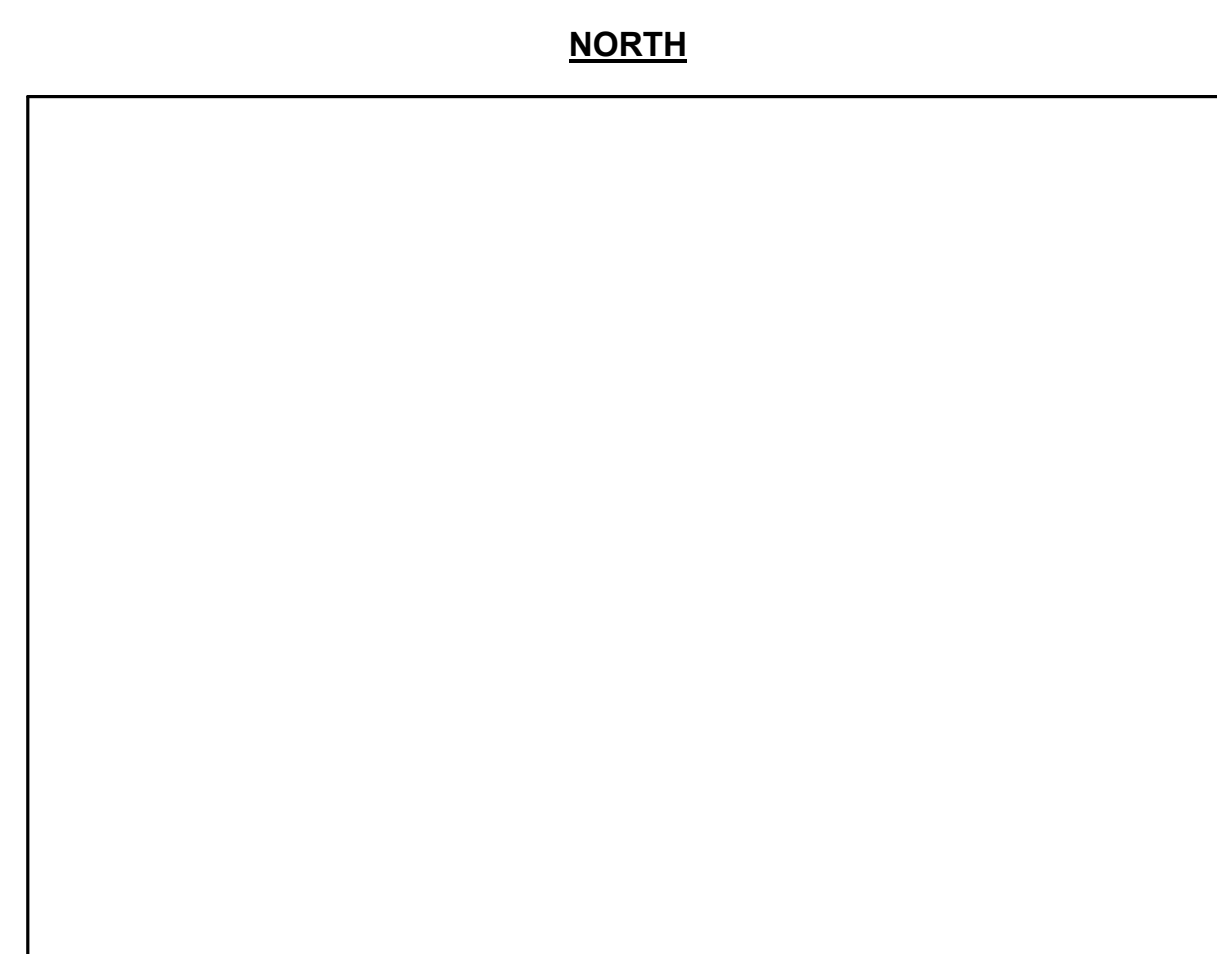
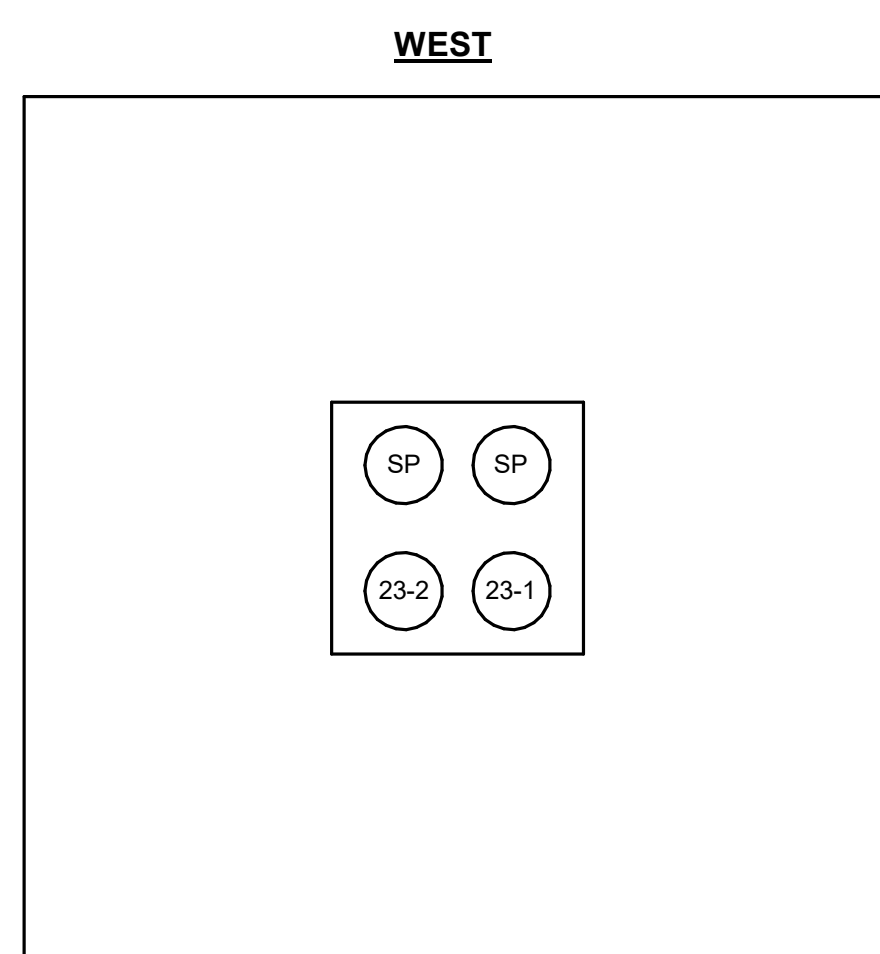
17 AUG 2018



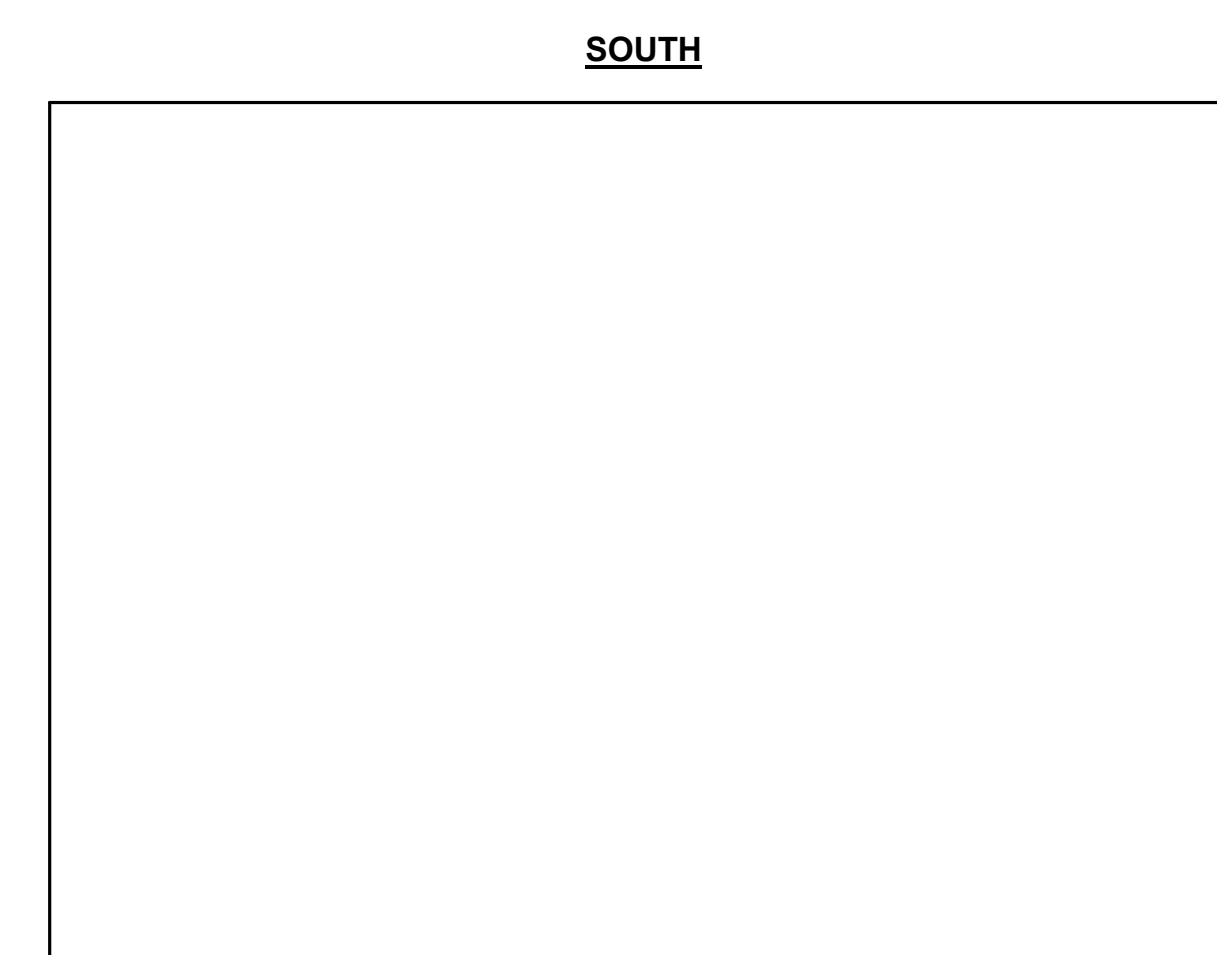
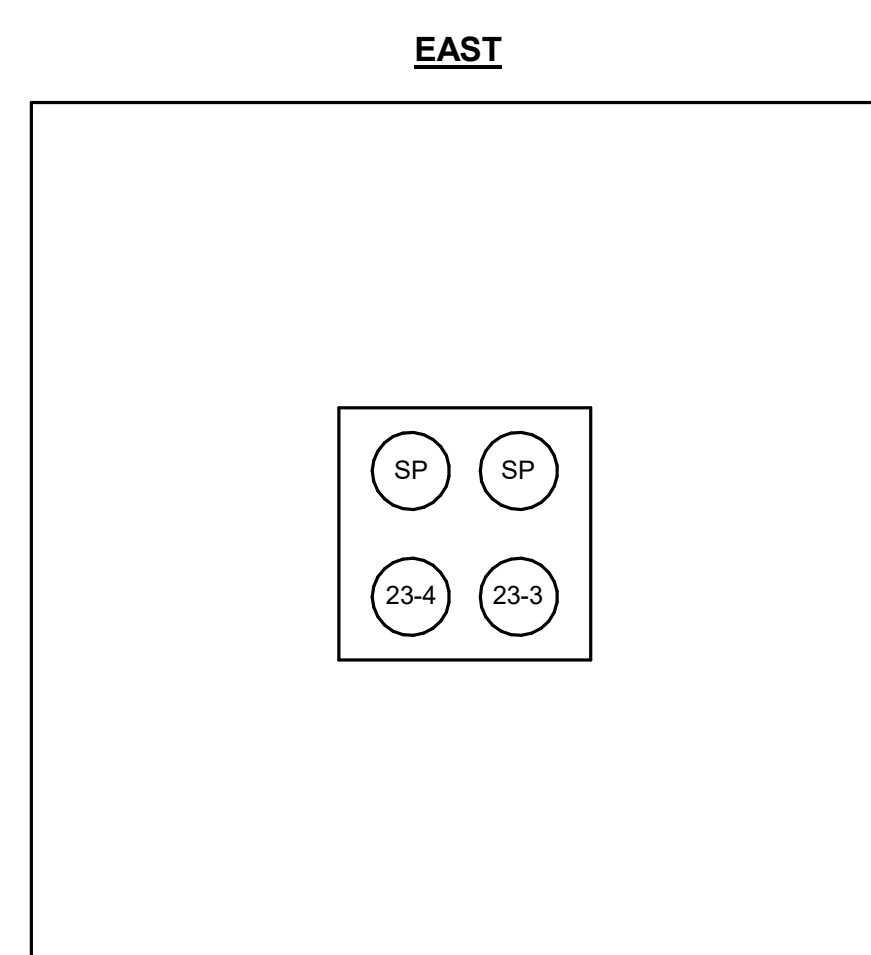
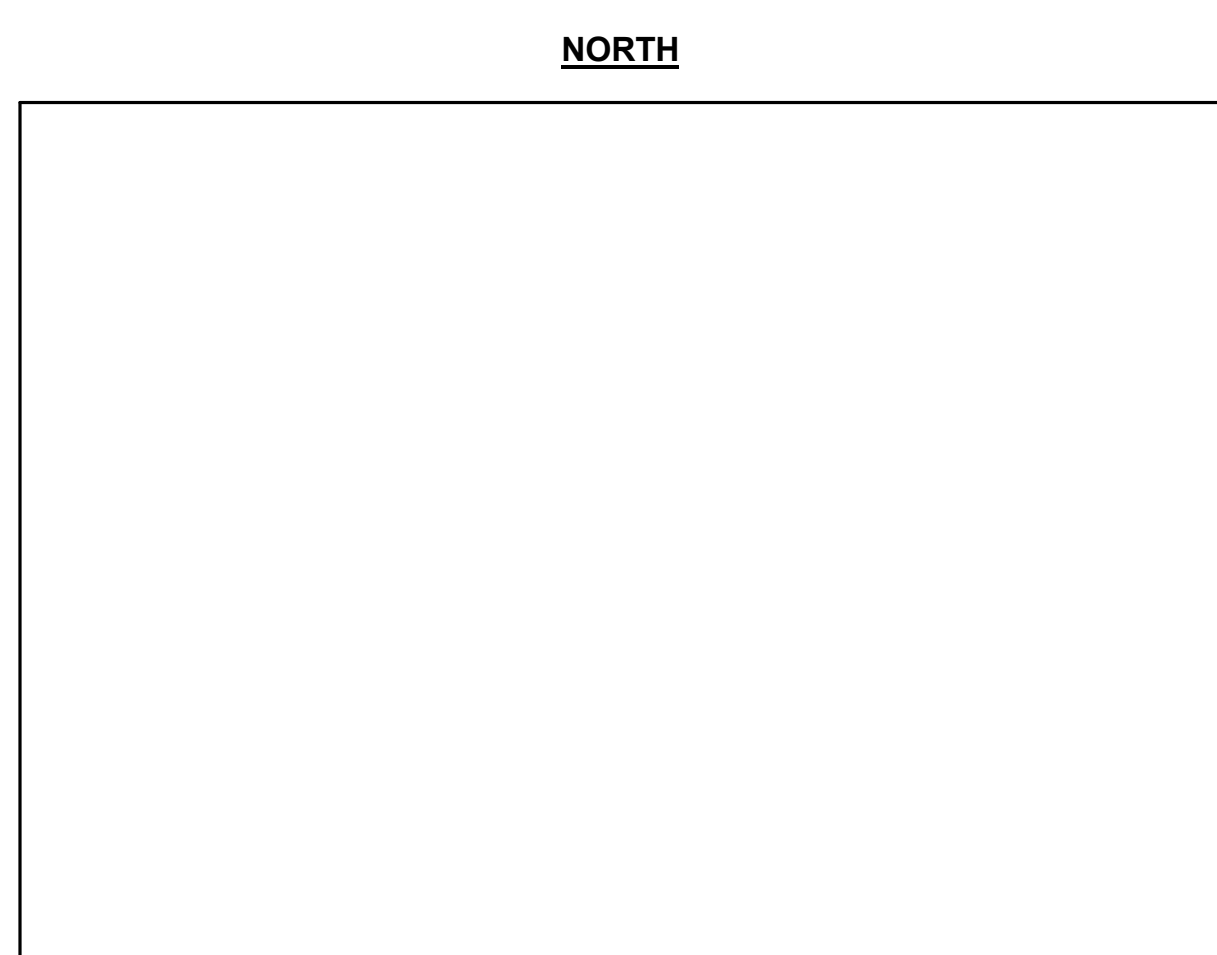
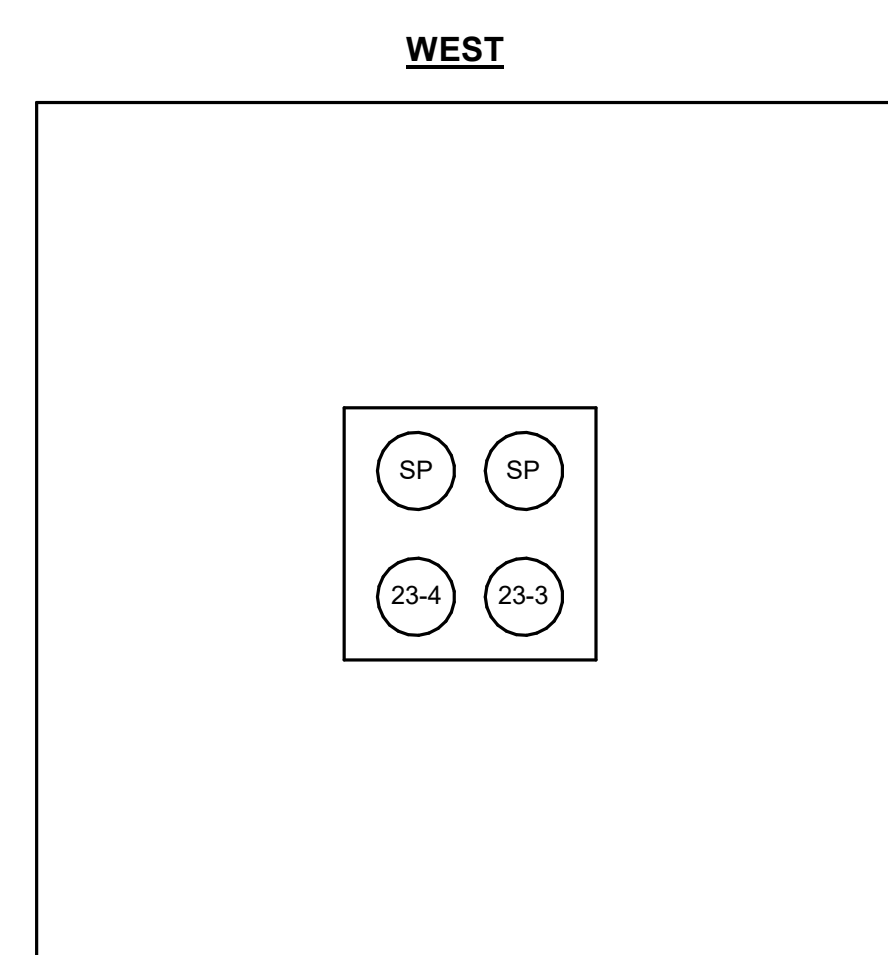
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NO SCALE



2 MANHOLE - PMH-3B
NO SCALE



3 MANHOLE - PMH-4A
NO SCALE



4 MANHOLE - PMH-4B
NO SCALE

GENERAL SHEET NOTES:

- REFER TO ELECTRICAL MANHOLE DETAIL ON E-11 FOR TYPICAL CABLE SUPPORT DETAIL.
- PROVIDE CABLE IDENTIFICATION. CABLE IDENTIFICATION SHALL BE REVIEWED AND APPROVED BY FERMLAB.

CABLE LEGEND:

- FEEDER 23-1
- FEEDER 23-2
- FEEDER 23-3
- FEEDER 23-4
- SPARE SP
- FUTURE FEEDER 1B
- FUTURE FEEDER 2B
- FUTURE FEEDER 3B
- FUTURE FEEDER 4B

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CONSTRUCTION

REV.	DATE	DESCRIPTIONS	REVISIONS
1	08/17/2018	60% DESIGN DOCUMENTS	

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
550 North Commons Drive
Suite 116
Aurora, IL 60504
Tel: 630.820.1022
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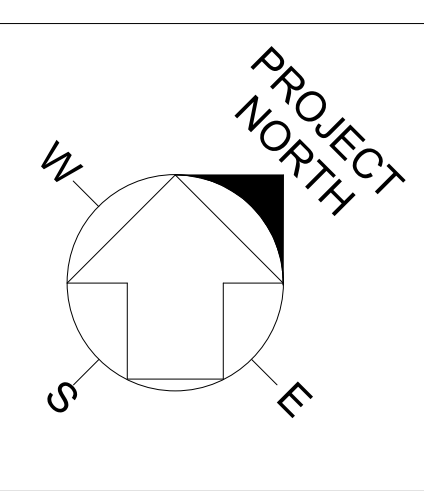
TGRWA
TyR Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
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CHECKED	JML	08/17/18
APPROVED	JML	08/17/18
SUBMITTED		



SCALE: NOT TO SCALE

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UNITED STATES DEPARTMENT OF ENERGY

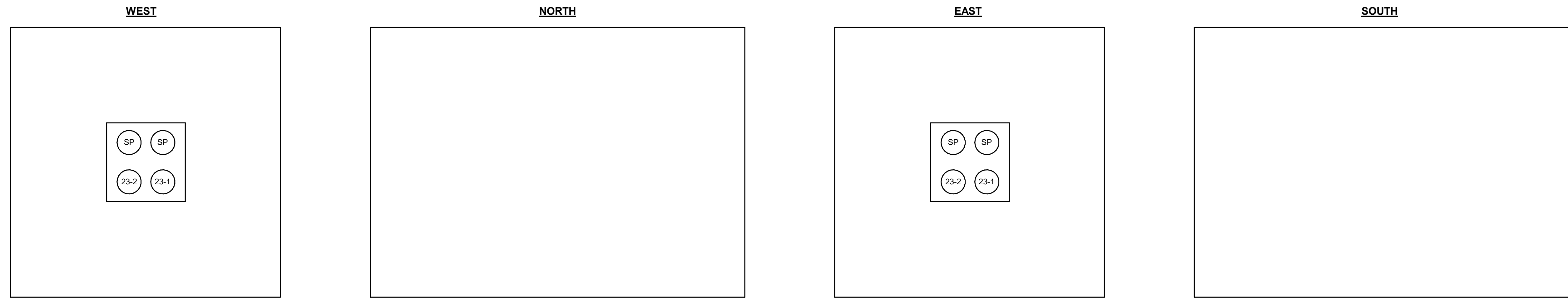
PIP-II SITE PREPARATION
MANHOLE DETAILS

DRAWING NO. **4-3-2** REV. **E-13**

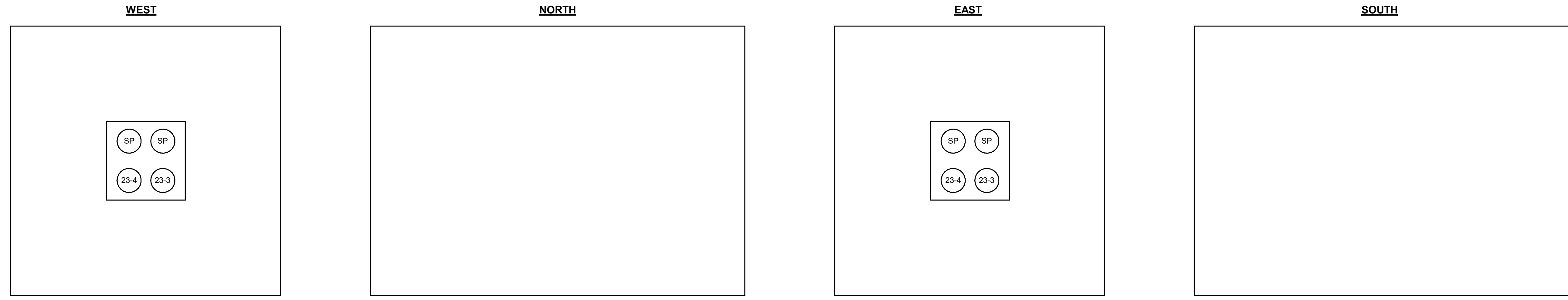
GENSLER NUMBER: Project Number

GENERAL SHEET NOTES:
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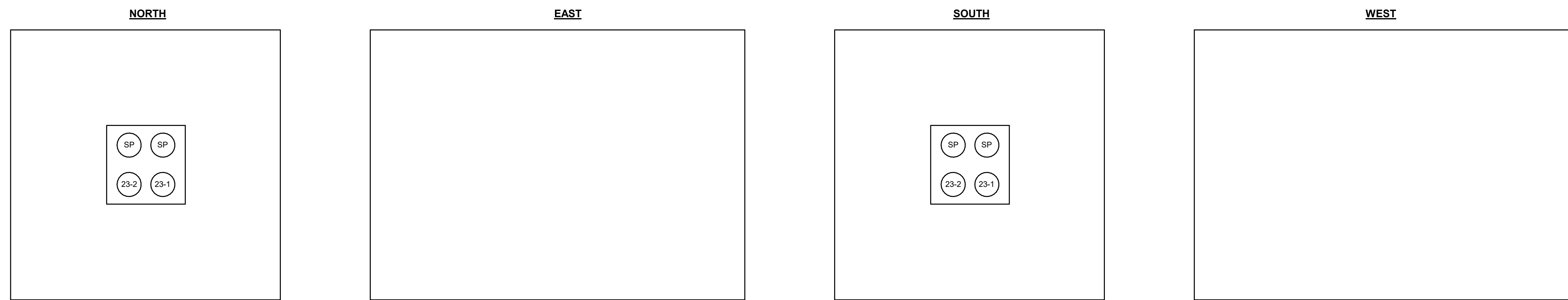
CABLE LEGEND:
 • FEEDER 23-1
 • FEEDER 23-2
 • FEEDER 23-3
 • FEEDER 23-4
 • SPARE SP
 • FUTURE FEEDER 1B
 • FUTURE FEEDER 2B
 • FUTURE FEEDER 3B
 • FUTURE FEEDER 4B



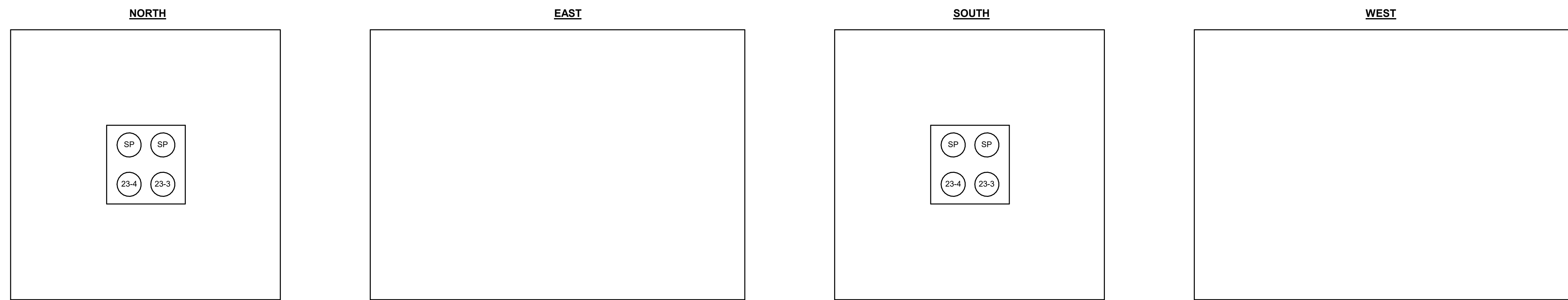
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NO SCALE



2 MANHOLE - PMH-5B
NO SCALE



3 MANHOLE - PMH-6A
NO SCALE



4 MANHOL - PMH-6B
NO SCALE

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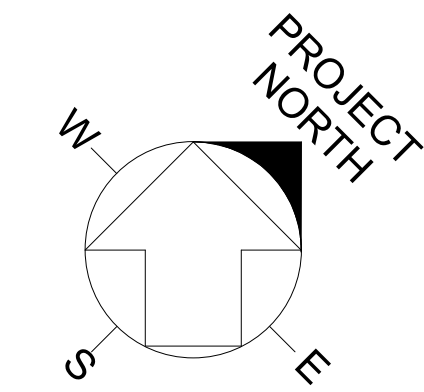
TGRWA
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 Suite 400W
 Naperville, IL 60563
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APPROVED	JML	08/17/18
SUBMITTED		



SCALE: NOT TO SCALE

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 UNITED STATES DEPARTMENT OF ENERGY

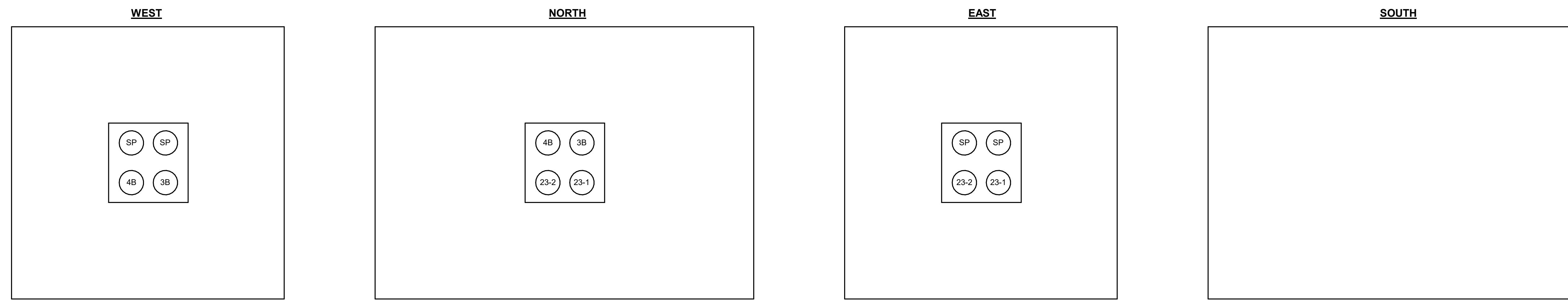
PIP-II SITE PREPARATION
MANHOLE DETAILS
 DRAWING NO. **4-3-2** REV. **E-14**
 GENSLER NUMBER: Project Number

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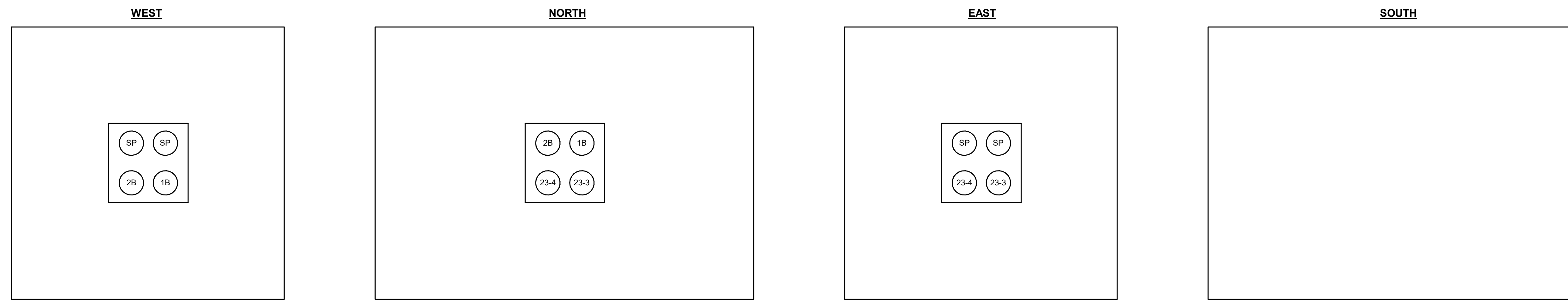
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CABLE LEGEND:

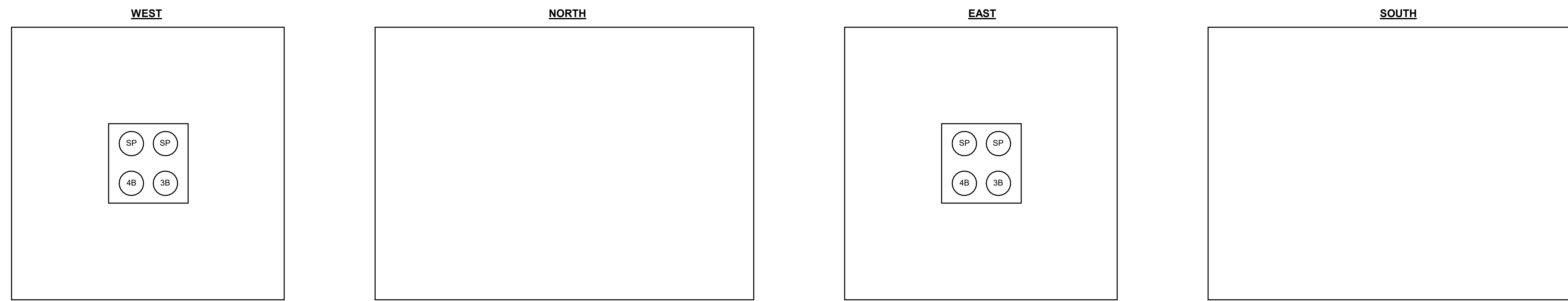
- FEEDER 23-1
- FEEDER 23-2
- FEEDER 23-3
- FEEDER 23-4
- SPARE SP
- FUTURE FEEDER 1B
- FUTURE FEEDER 2B
- FUTURE FEEDER 3B
- FUTURE FEEDER 4B



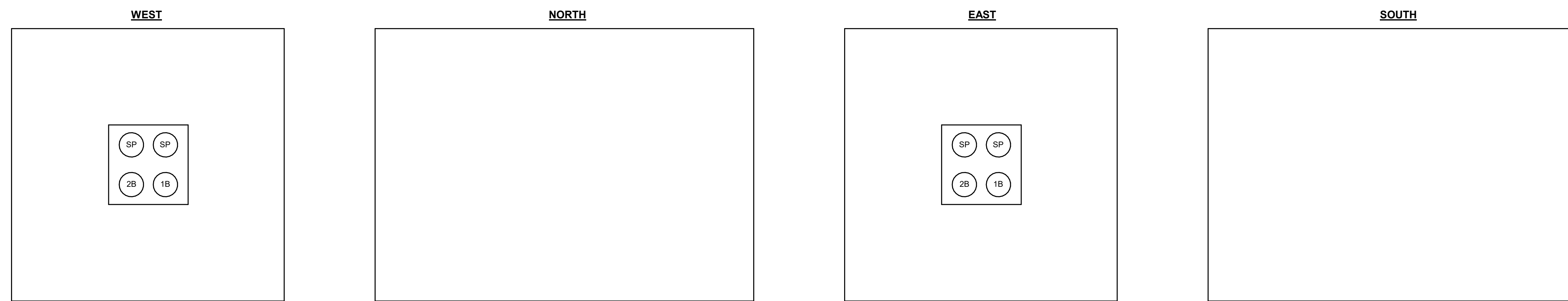
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NO SCALE



2 MANHOLE - PMH-7B
NO SCALE



3 MANHOLE - PMH-8A
NO SCALE



4 MANHOLE - PMH-8B
NO SCALE

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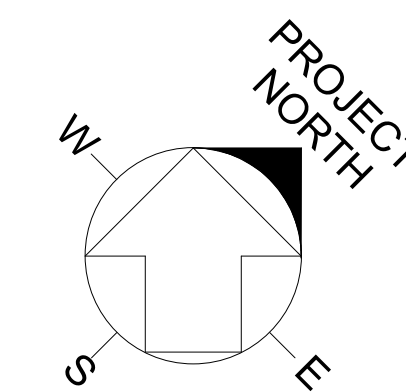
TGRWA
Tyrk Gustafson Reckers Wilson Andrews, LLC
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APPROVED	JML	08/17/18
SUBMITTED		



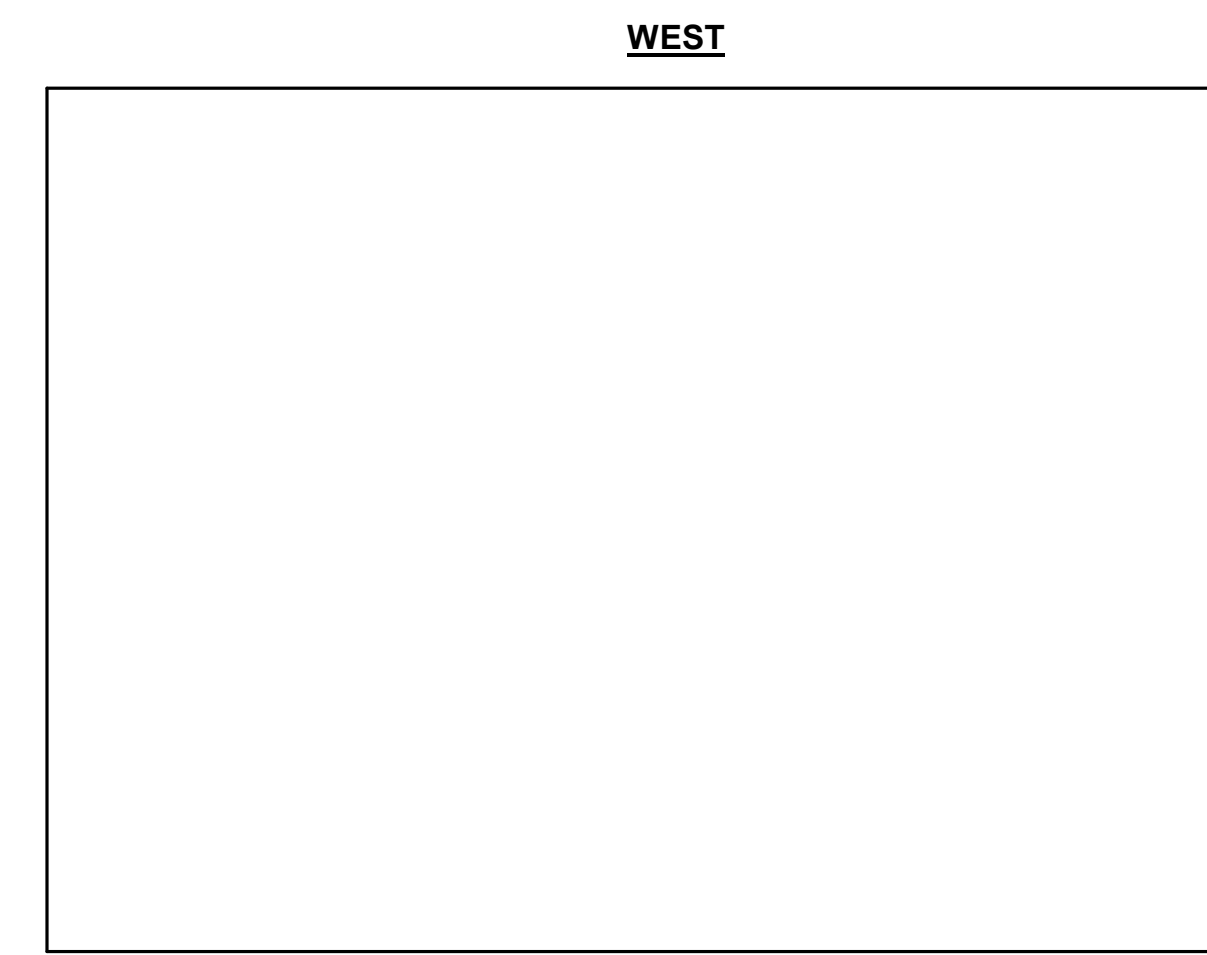
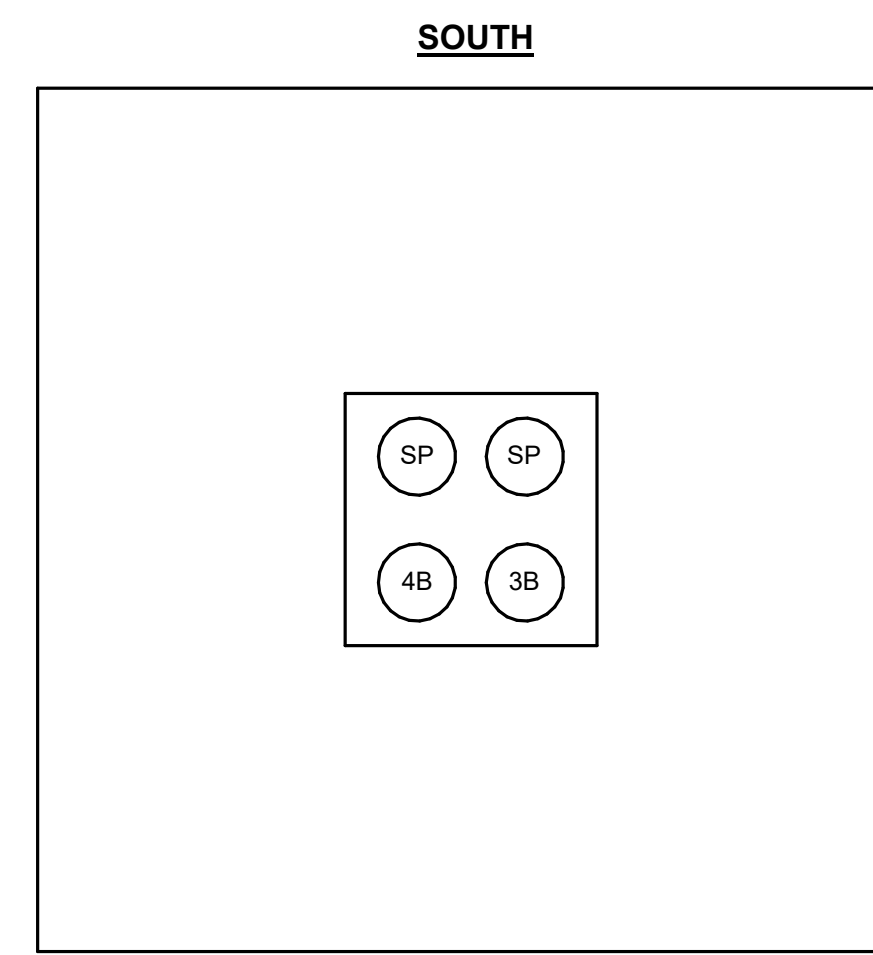
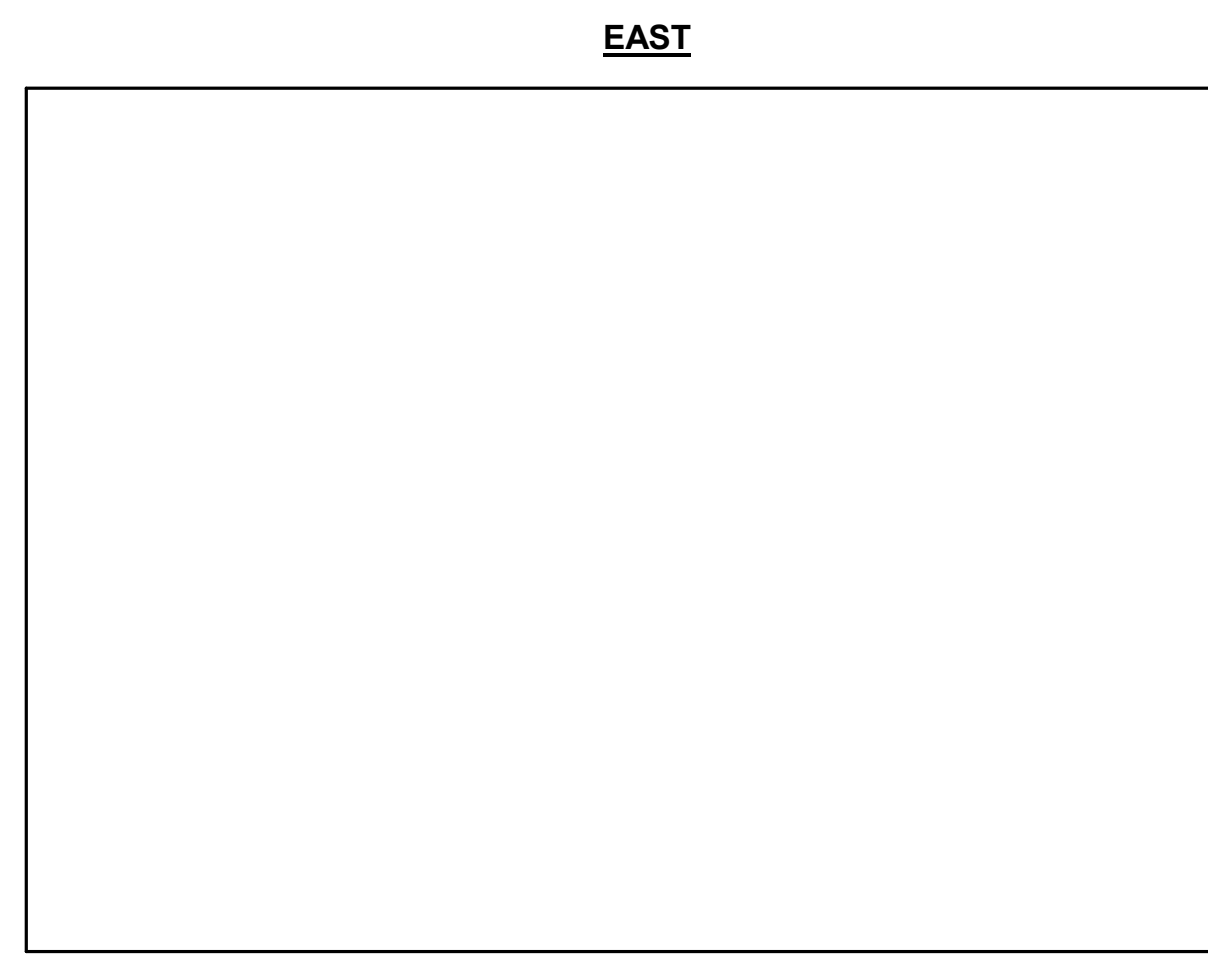
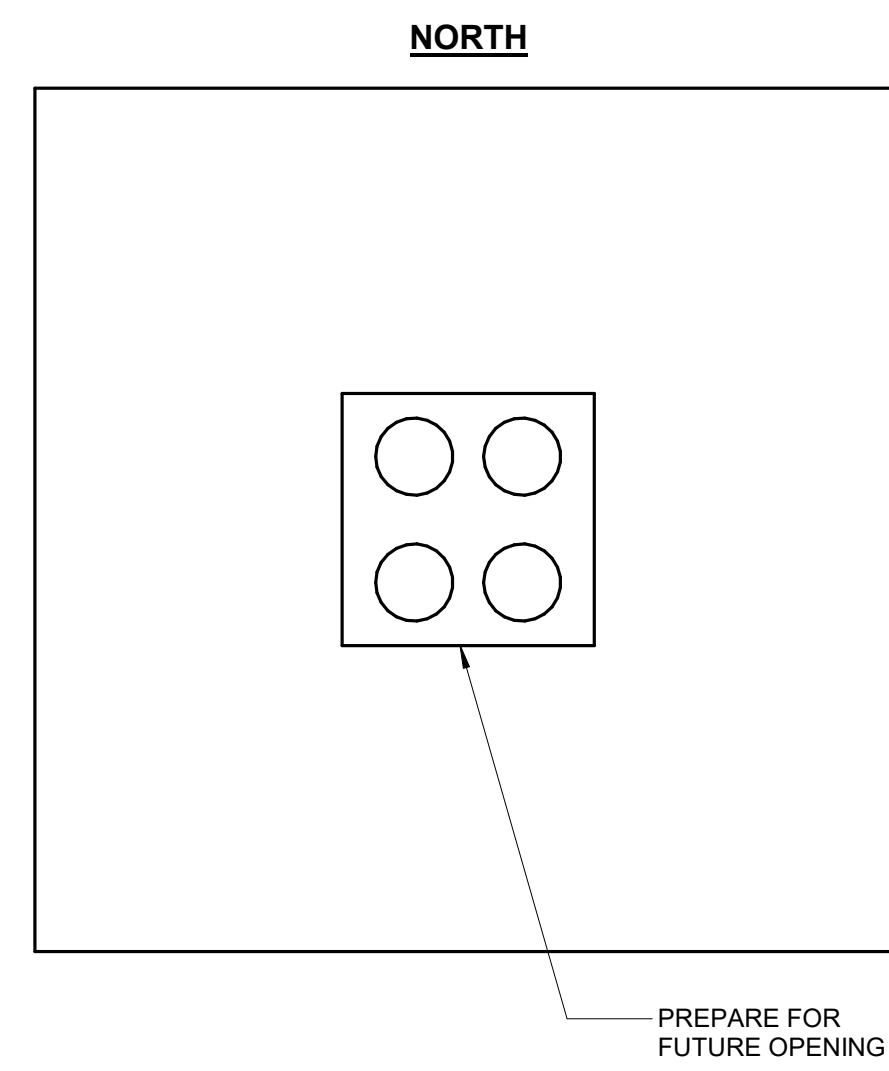
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UNITED STATES DEPARTMENT OF ENERGY

PIP-II SITE PREPARATION
MANHOLE DETAILS

DRAWING NO. **4-3-2** REV. **E-15**

GENSLER NUMBER: Project Number



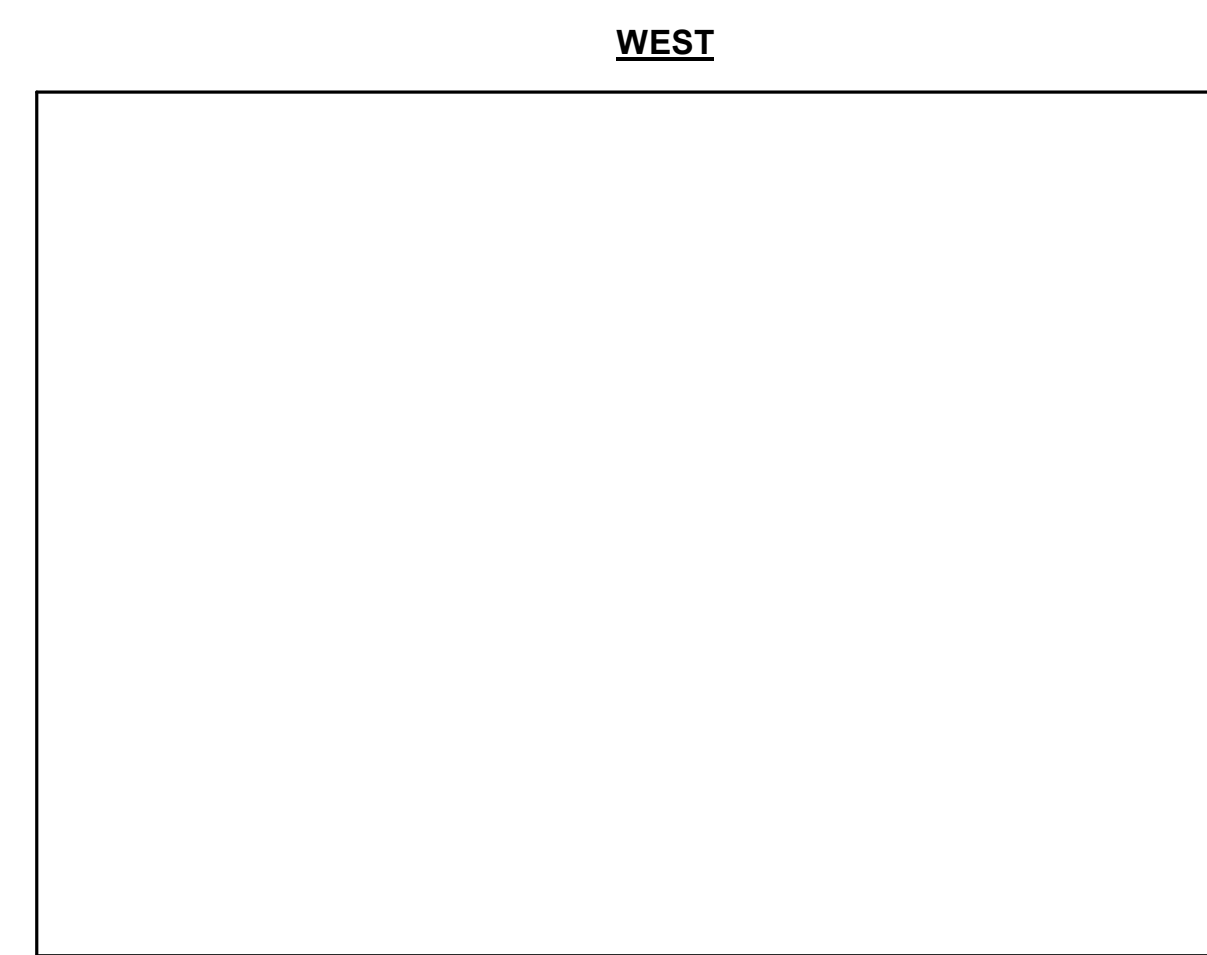
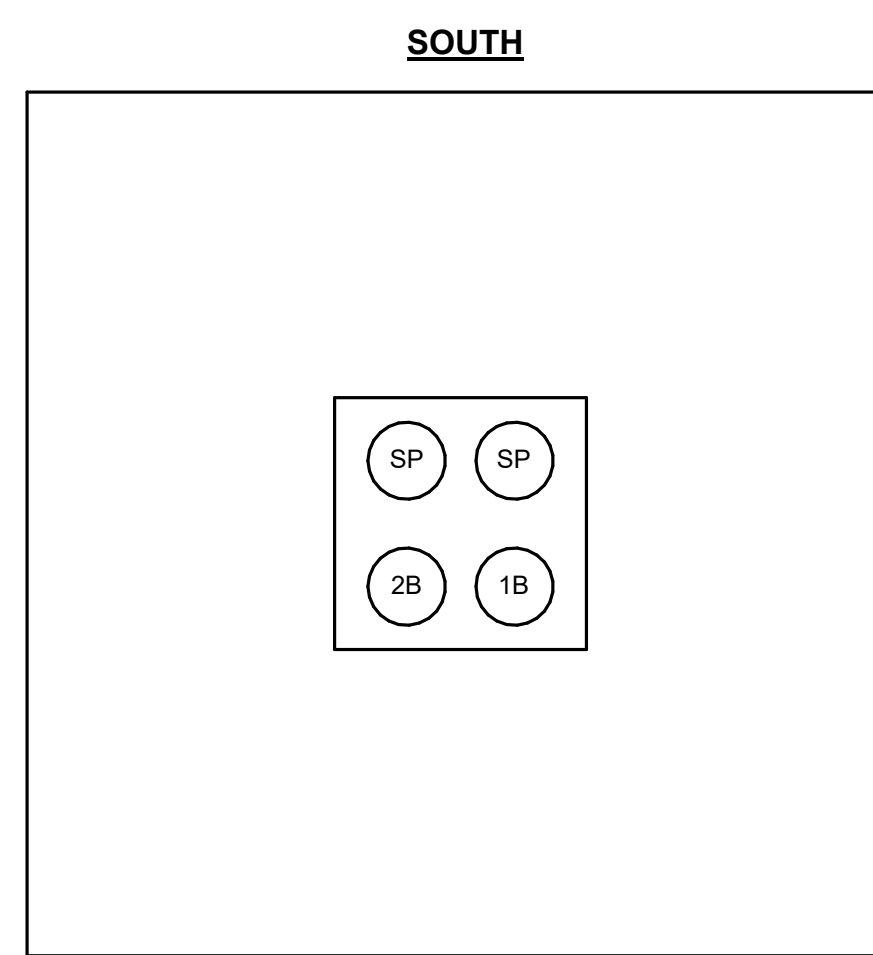
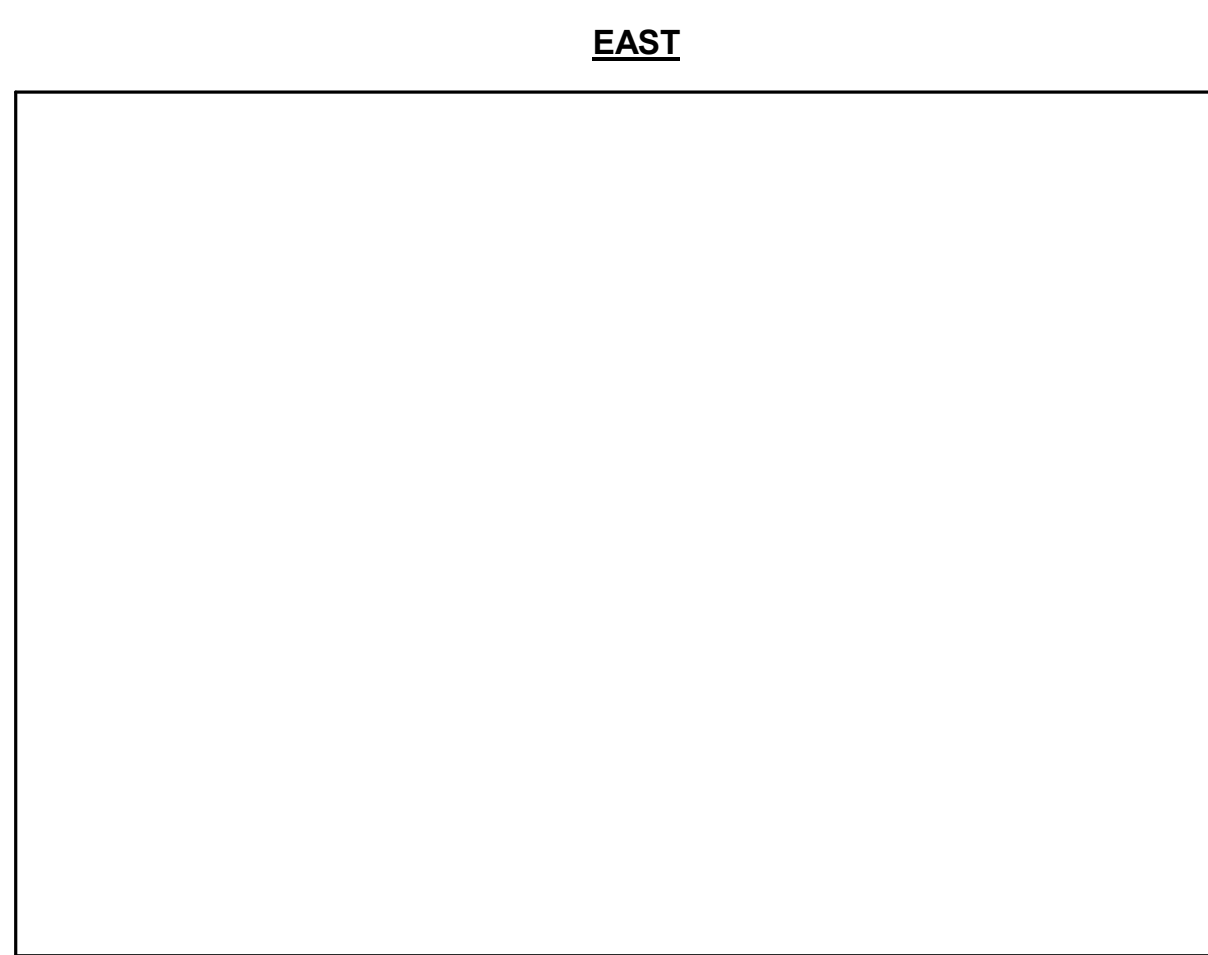
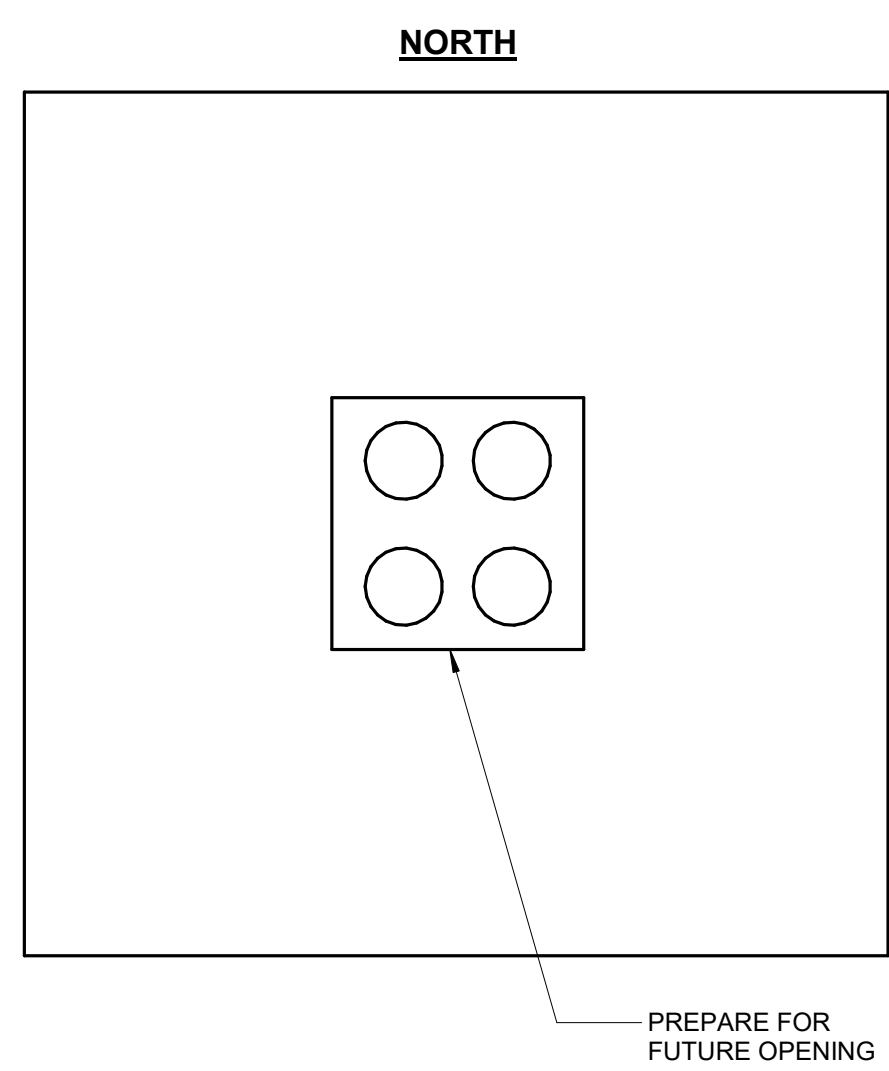
1 MANHOLE - PMH-9A
NO SCALE

GENERAL SHEET NOTES:

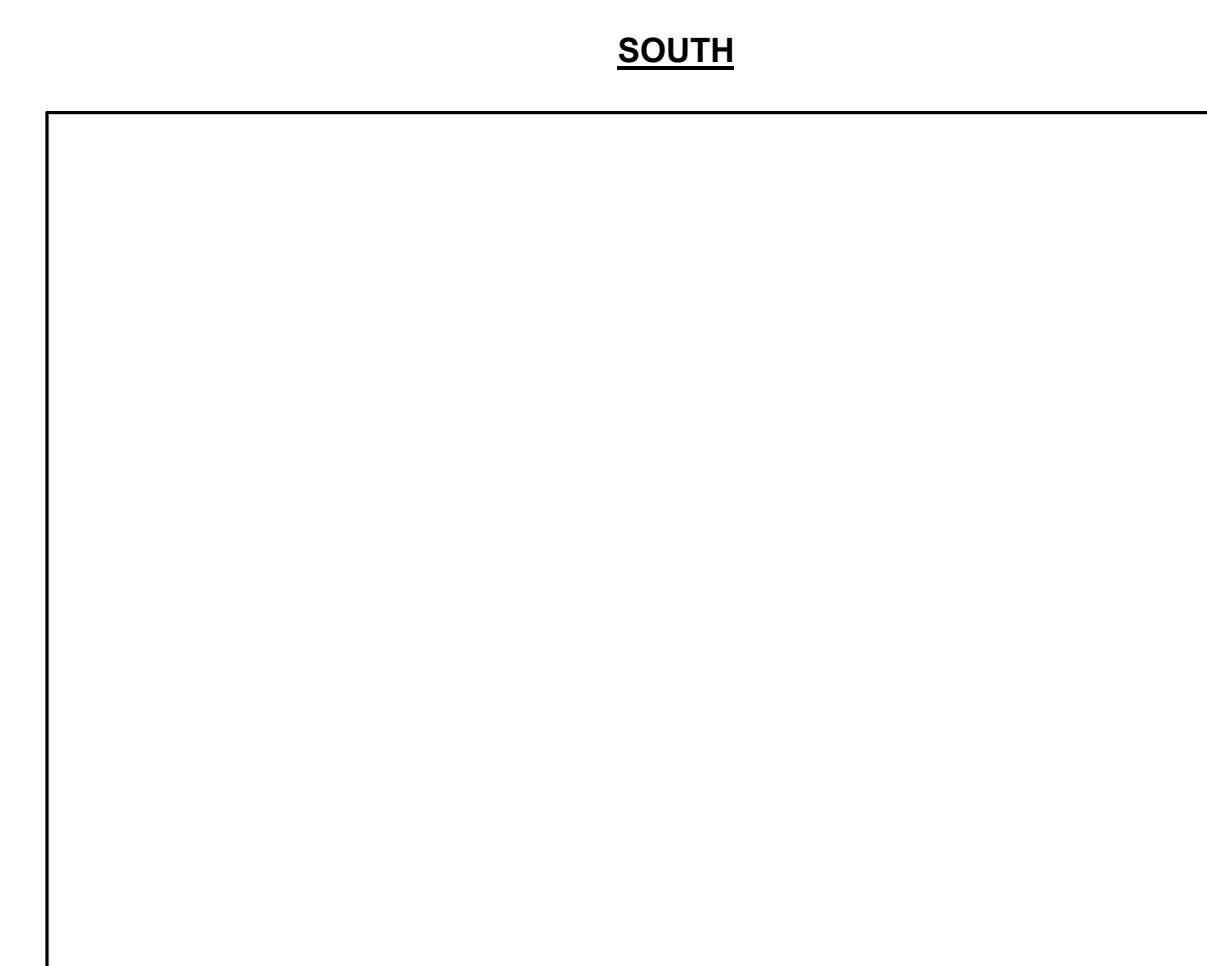
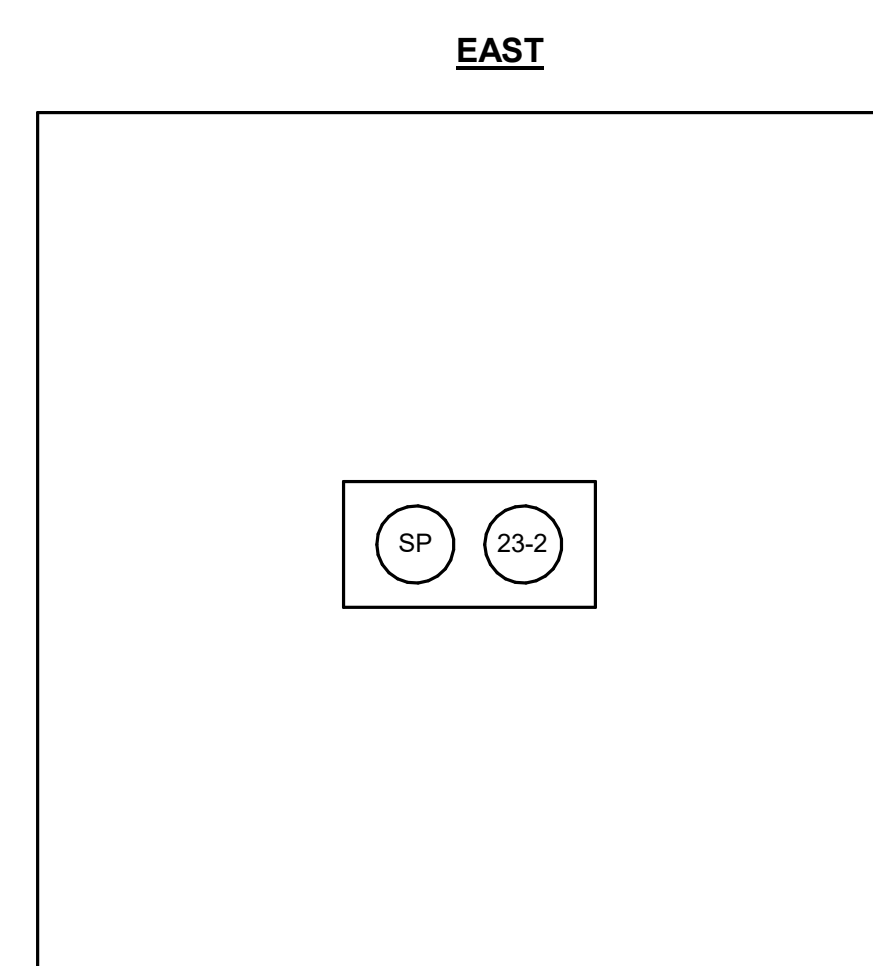
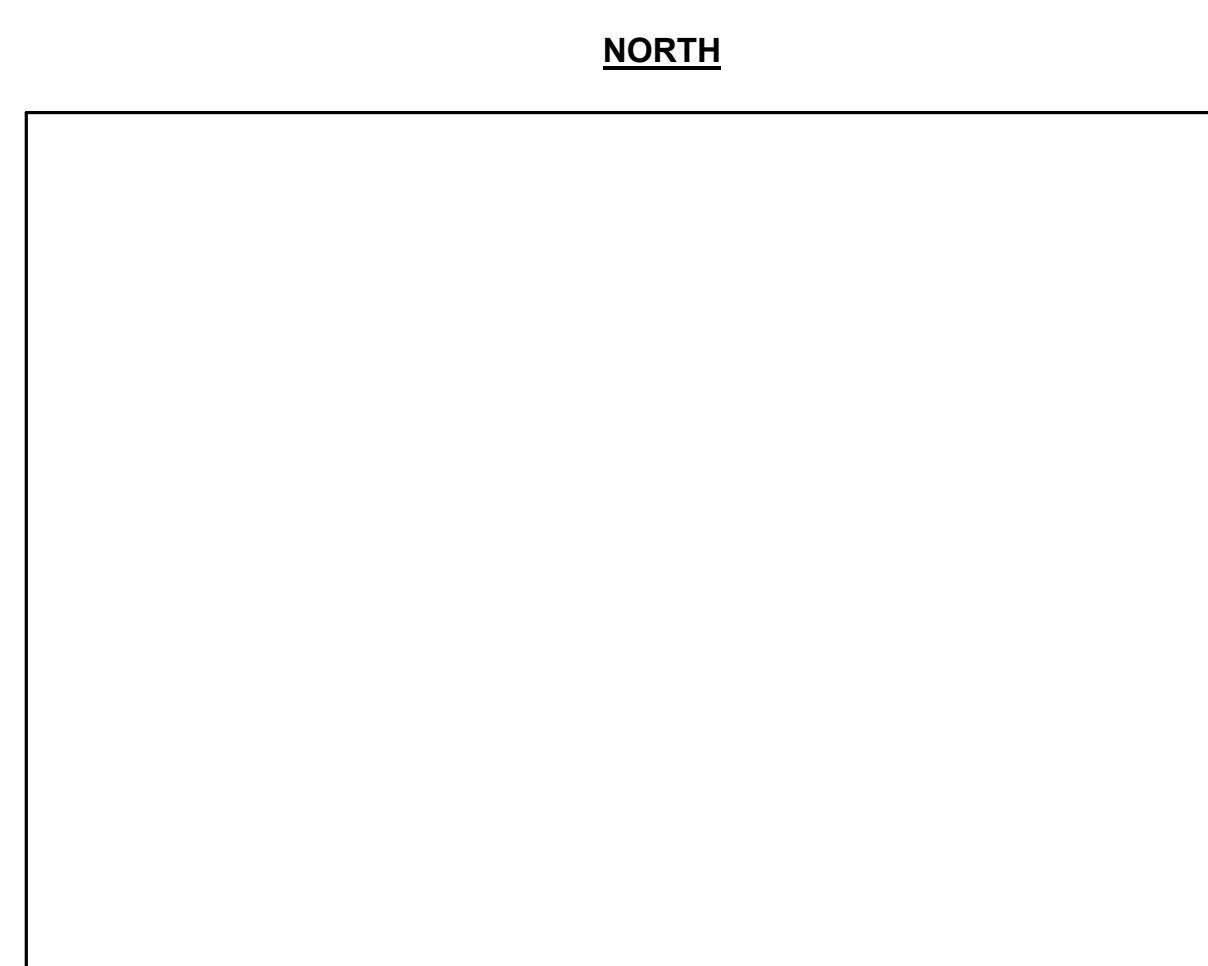
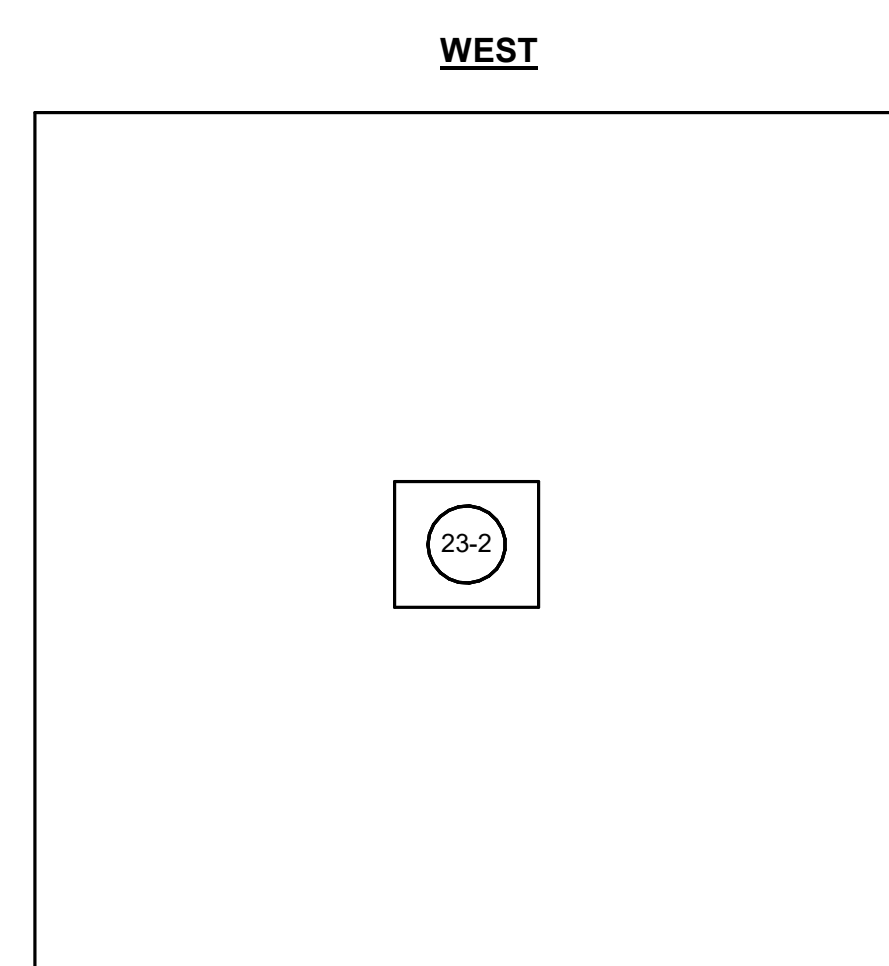
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CABLE LEGEND:

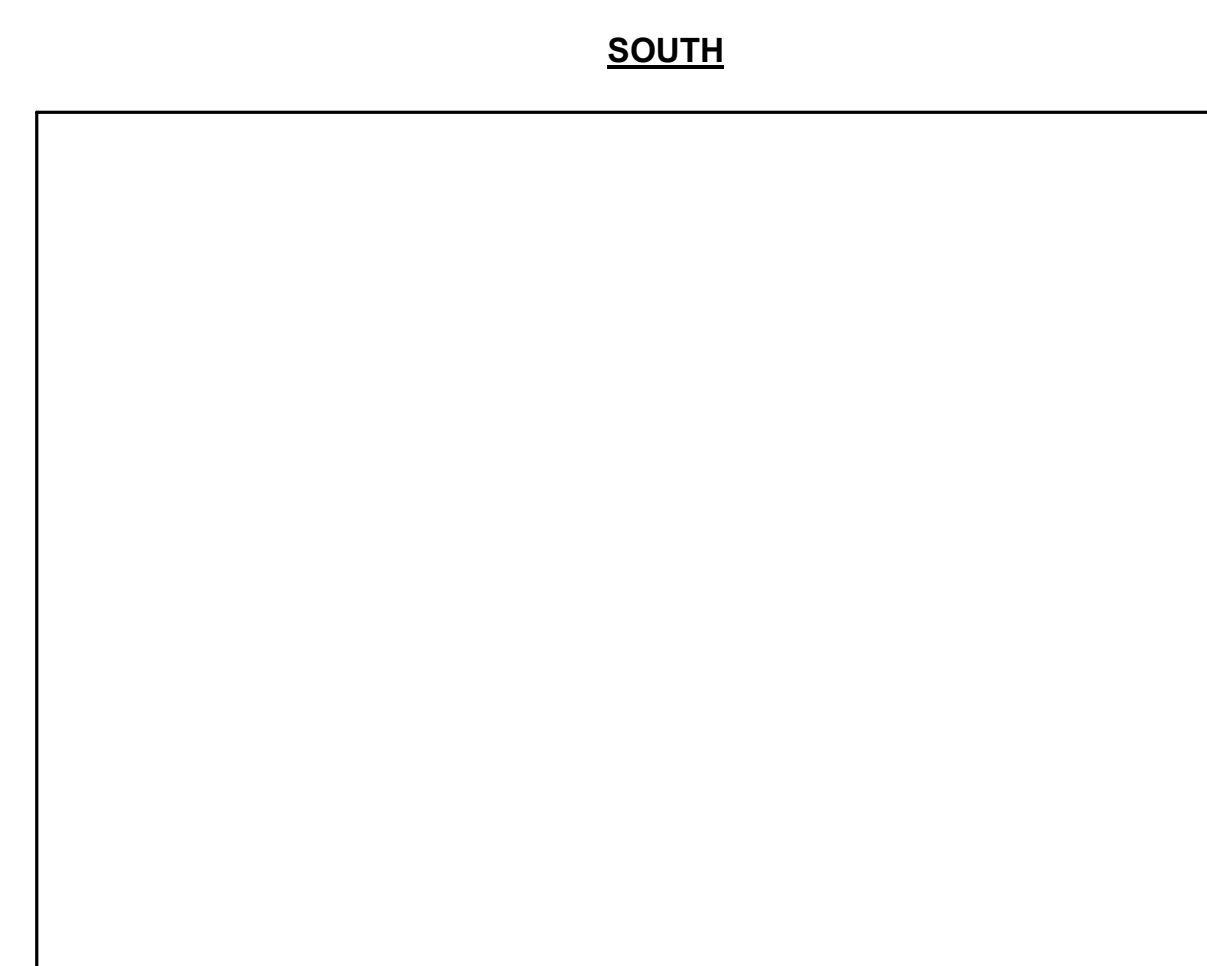
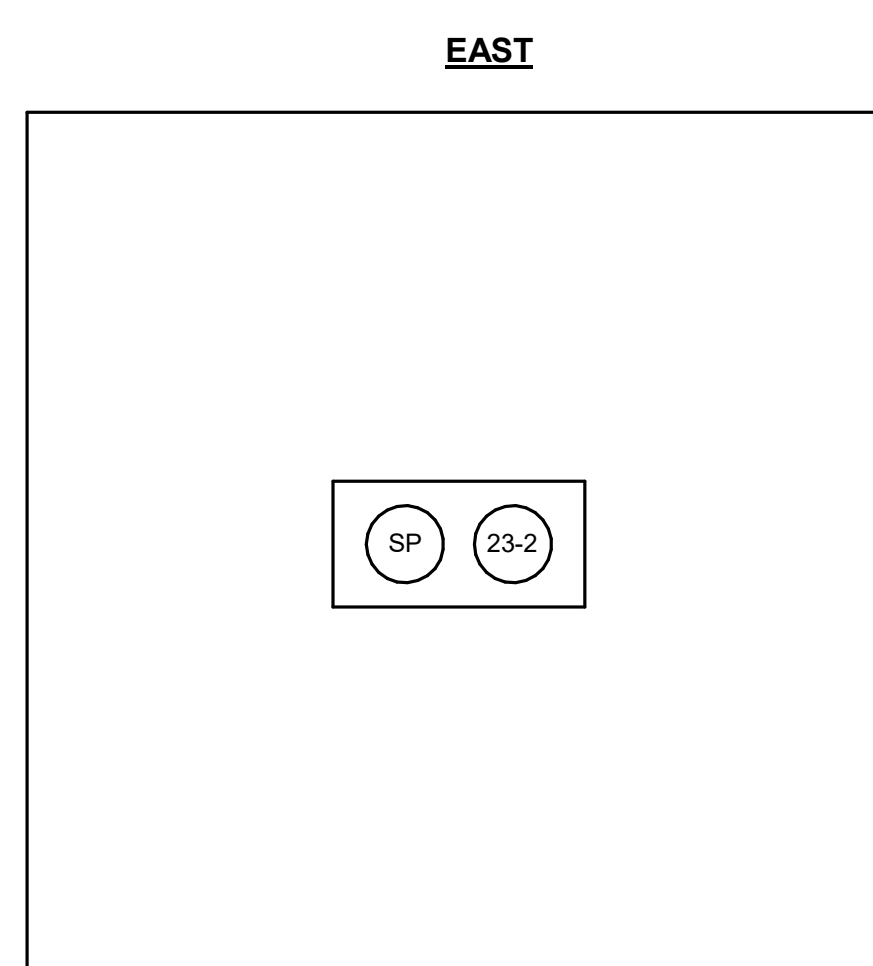
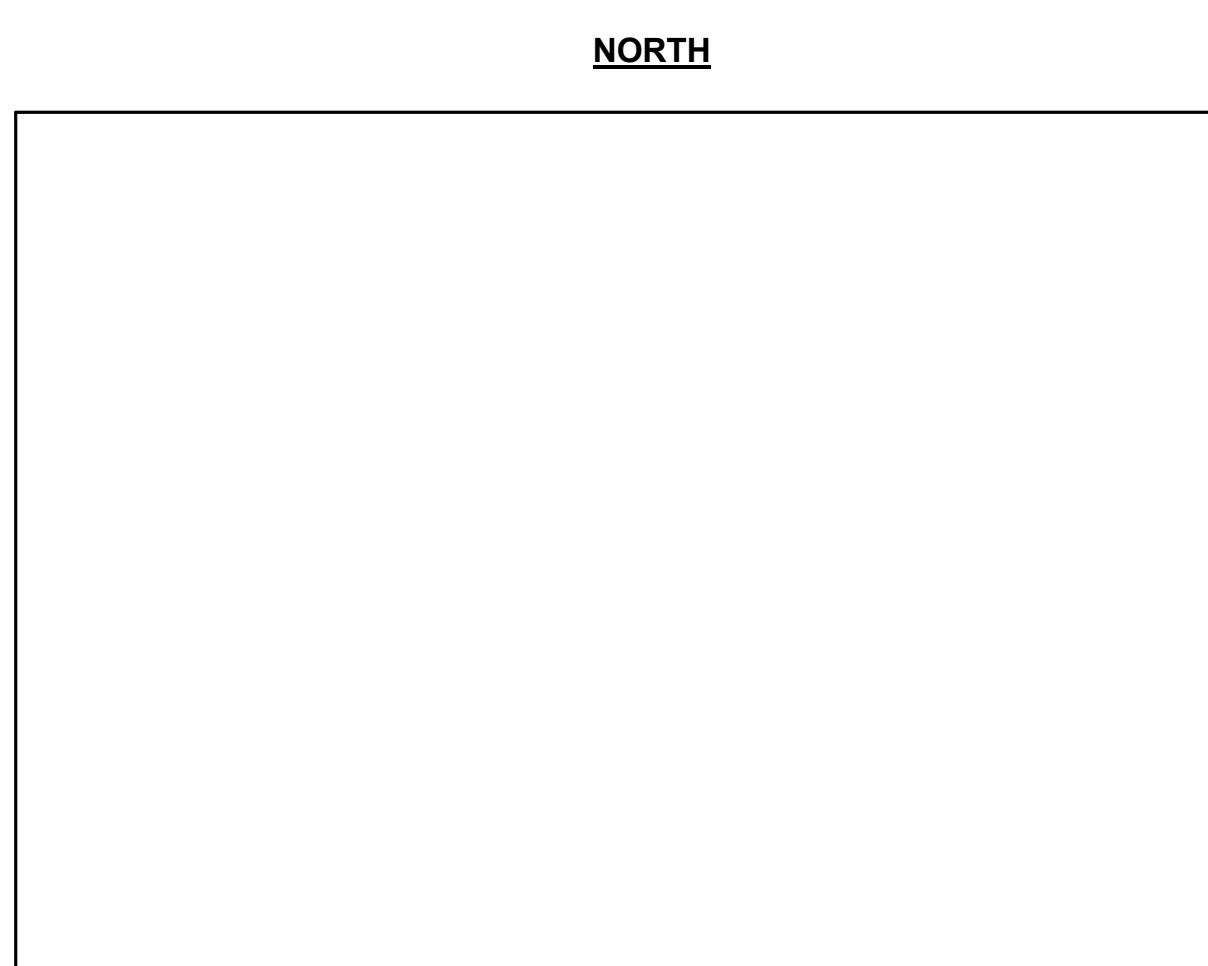
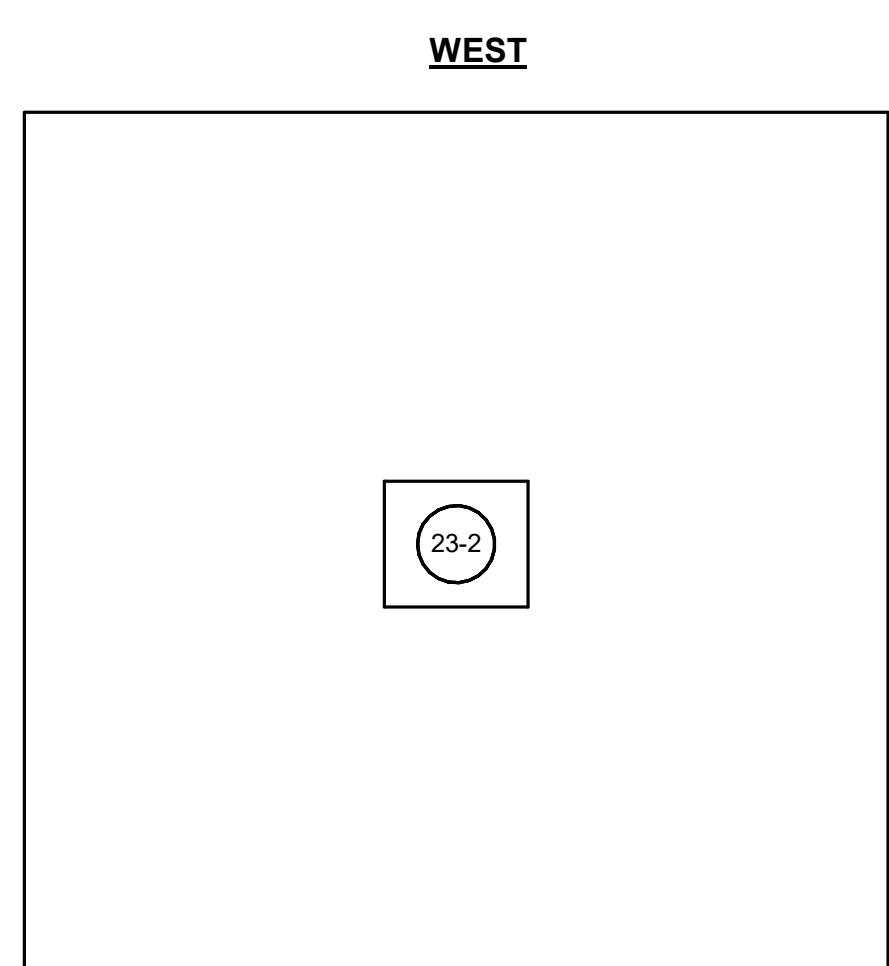
- FEEDER 23-1
- FEEDER 23-2
- FEEDER 23-3
- FEEDER 23-4
- SPARE SP
- FUTURE FEEDER 1B
- FUTURE FEEDER 2B
- FUTURE FEEDER 3B
- FUTURE FEEDER 4B



2 MANHOLE - PMH-9B
NO SCALE



3 MANHOLE - PMH-10A
NO SCALE



4 MANHOLE - PMH-10B
NO SCALE

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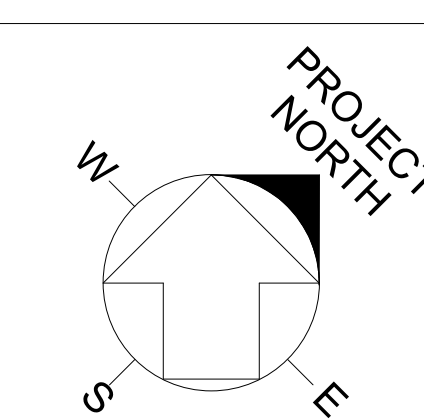
Tel: 312.492.6501
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Contractor
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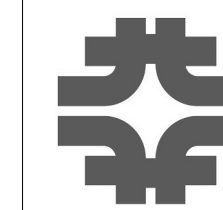
	NAME	DATE
DESIGNED	Designer	05/25/18
DRAWN	Author	05/25/18
CHECKED	Checker	05/25/18
APPROVED	Approver	05/25/18
SUBMITTED		



SCALE: 12" = 1'-0"

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UNITED STATES DEPARTMENT OF ENERGY

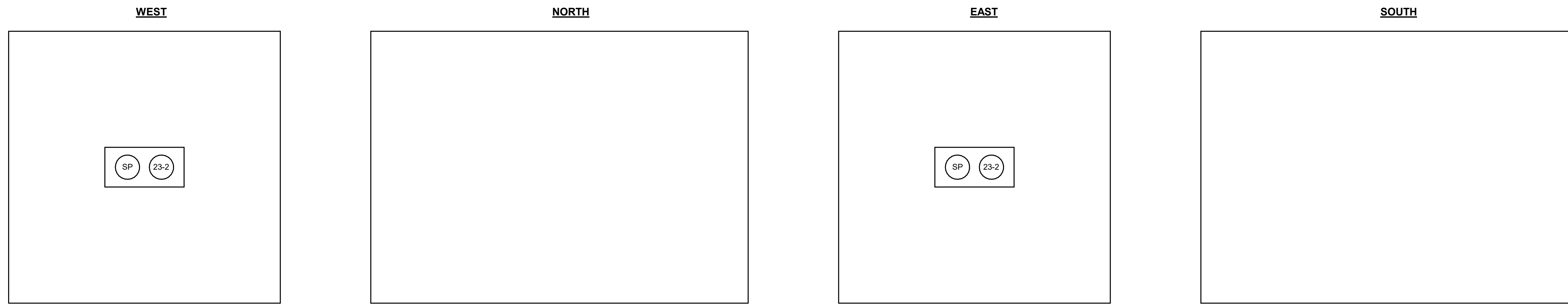


PIP-II SITE PREPARATION
MANHOLE DETAILS

DRAWING NO. **4-3-2**
GENSLER NUMBER: Project Number

E-16 REV.

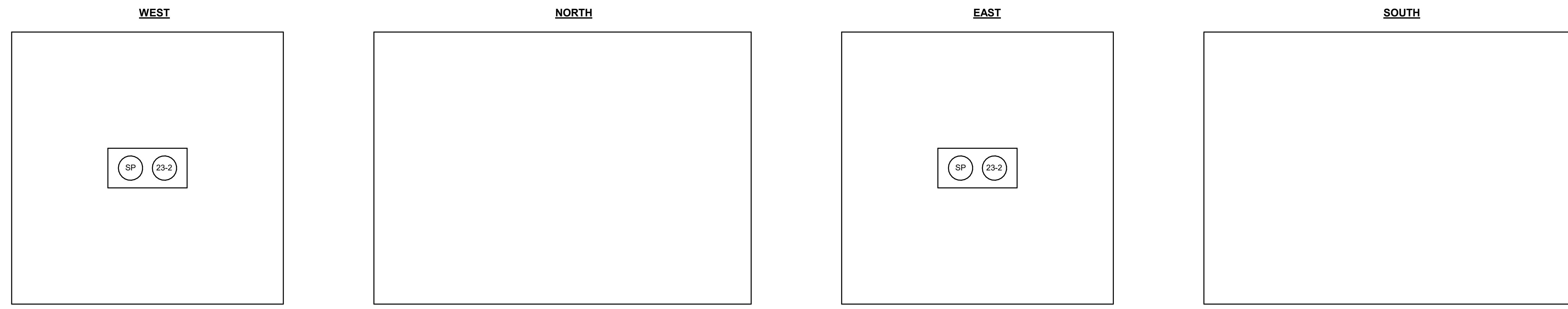
17 AUG 2018



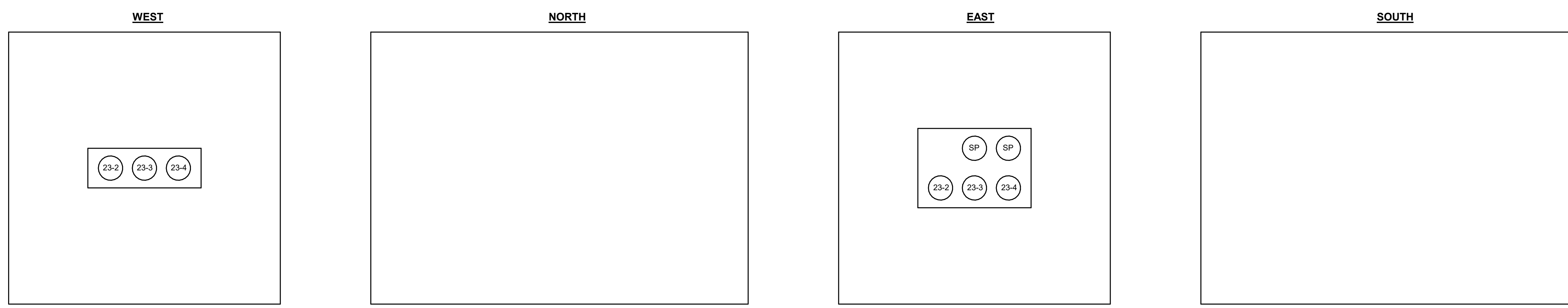
1 MANHOLE - PMH-11A
NO SCALE

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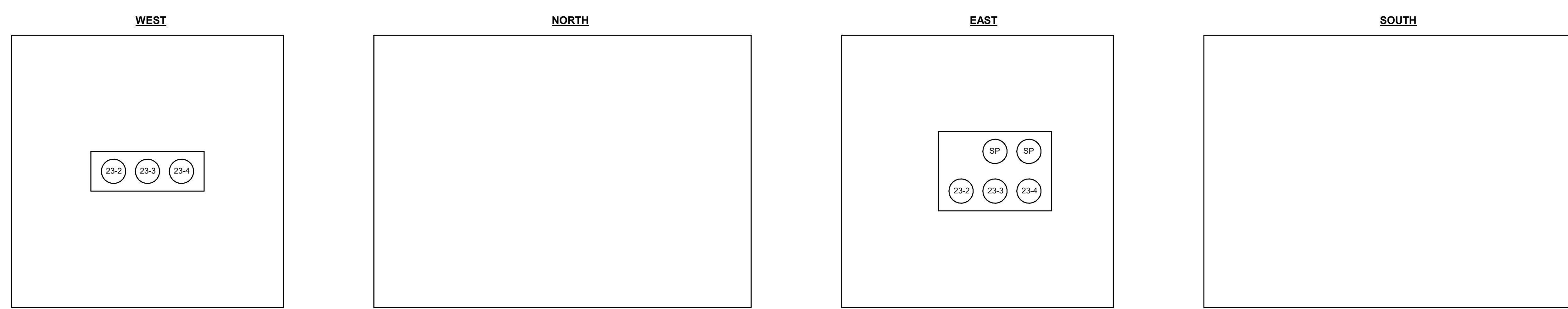
CABLE LEGEND:
 • FEEDER 23-1
 • FEEDER 23-2
 • FEEDER 23-3
 • FEEDER 23-4
 • SPARE SP
 • FUTURE FEEDER 1B
 • FUTURE FEEDER 2B
 • FUTURE FEEDER 3B
 • FUTURE FEEDER 4B



2 MANHOLE - PMH-11B
NO SCALE



3 MANHOLE - PMH-12A
NO SCALE



4 MANHOL - PMH-12B
NO SCALE

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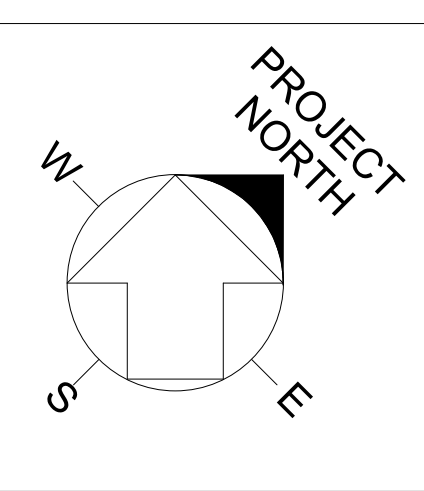
TGRWA
 TyR. Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60607
 Tel: 312.341.0055
 Fax: 312.341.9966

IMEG
 MEP Engineers
 1100 Wilmerville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

HOERR SCHAUDT
 Landscape Architects
 850 West Jackson Blvd.
 Suite 900
 Chicago, IL 60607
 Tel: 312.482.6501
 Fax: 312.482.7101

Turner
 Contractor
 55 East Marquette Street
 Suite 1450
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.482.7101

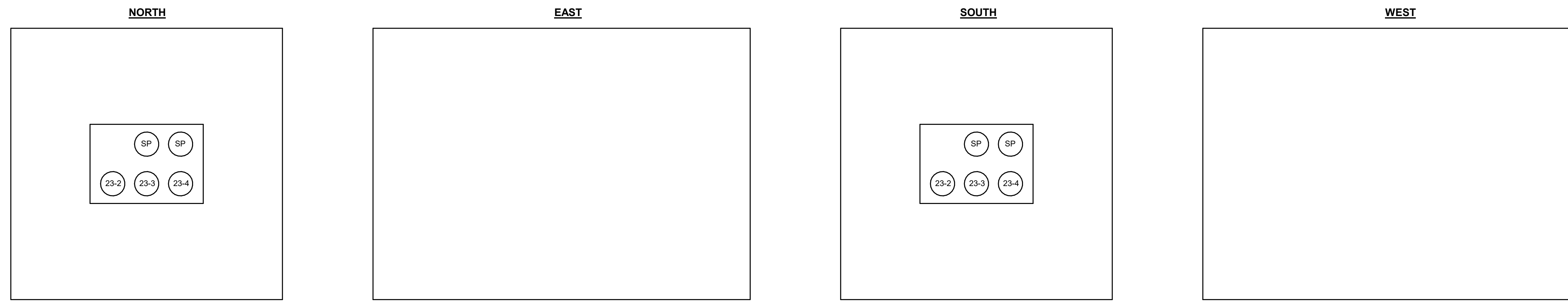
	NAME	DATE
DESIGNED	Designer	08/14/18
DRAWN	Author	08/14/18
CHECKED	Checker	08/14/18
APPROVED	Approver	08/14/18
SUBMITTED		



SCALE: 12" = 1'-0"

FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY

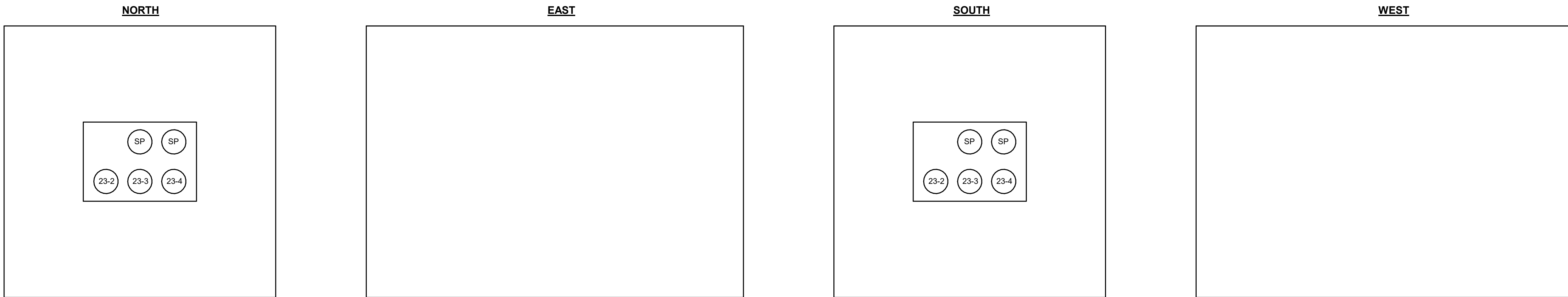
PIP-II SITE PREPARATION
MANHOLE DETAILS
 DRAWING NO. **4-3-2** REV. **E-17**
 GENSLER NUMBER: Project Number



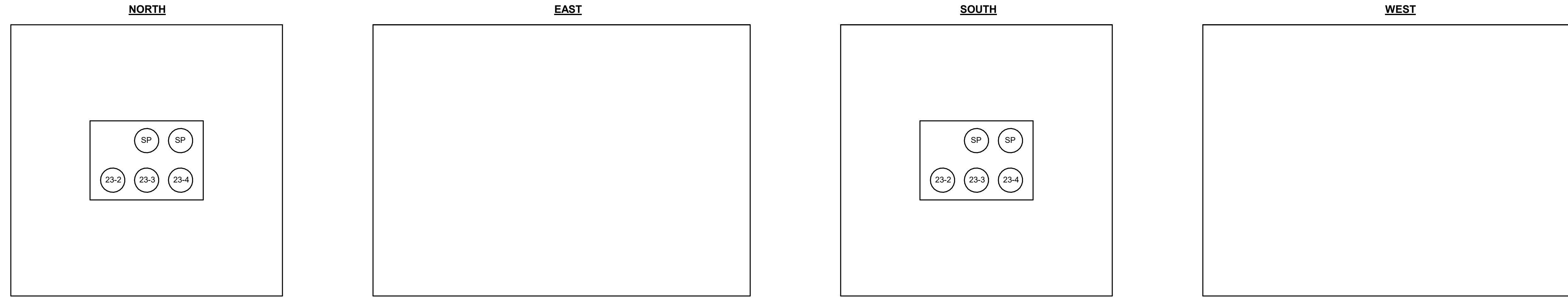
1 MANHOLE - PMH-13A
NO SCALE

GENERAL SHEET NOTES:
 1. REFER TO ELECTRICAL MANHOLE DETAIL ON E-11 FOR TYPICAL CABLE SUPPORT DETAIL.
 2. PROVIDE CABLE IDENTIFICATION. CABLE IDENTIFICATION SHALL BE REVIEWED AND APPROVED BY FERMLAB.

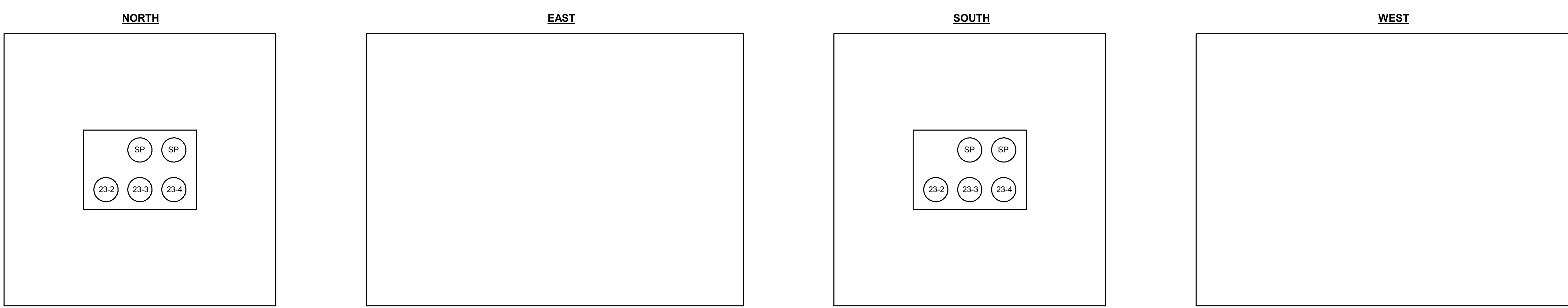
CABLE LEGEND:
 • FEEDER 23-1
 • FEEDER 23-2
 • FEEDER 23-3
 • FEEDER 23-4
 • SPARE SP
 • FUTURE FEEDER 1B
 • FUTURE FEEDER 2B
 • FUTURE FEEDER 3B
 • FUTURE FEEDER 4B



2 MANHOLE - PMH-13B
NO SCALE



3 MANHOLE - PMH-14A
NO SCALE



4 MANHOLE - PMH-14B
NO SCALE

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1	08/17/2018	60% DESIGN DOCUMENTS	

Gensler
 Architects
 11 East Madison Street
 Suite 300
 Chicago IL 60602
 Tel: 312.456.0123
 Fax: 312.456.0124

CMT
 Consulting Engineers
 550 North Commons Drive
 Suite 116
 Aurora, IL 60504
 Tel: 630.820.1022
 Fax: 630.820.0350

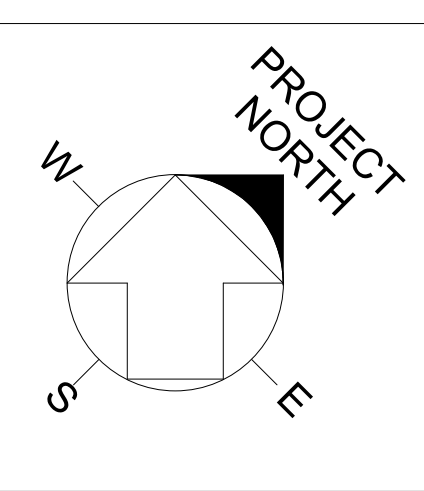
TGRWA
 TyR. Gustafson Reckers Wilson Andrews, LLC
 Structural Engineers
 600 West Van Buren
 Suite 500
 Chicago, IL 60663
 Tel: 312.341.0055
 Fax: 312.341.9966

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 MEP Engineers
 1100 Wilmerville Rd.
 Suite 400W
 Naperville, IL 60563
 Tel: 630.527.2320
 Fax: 630.527.2321

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 Suite 900
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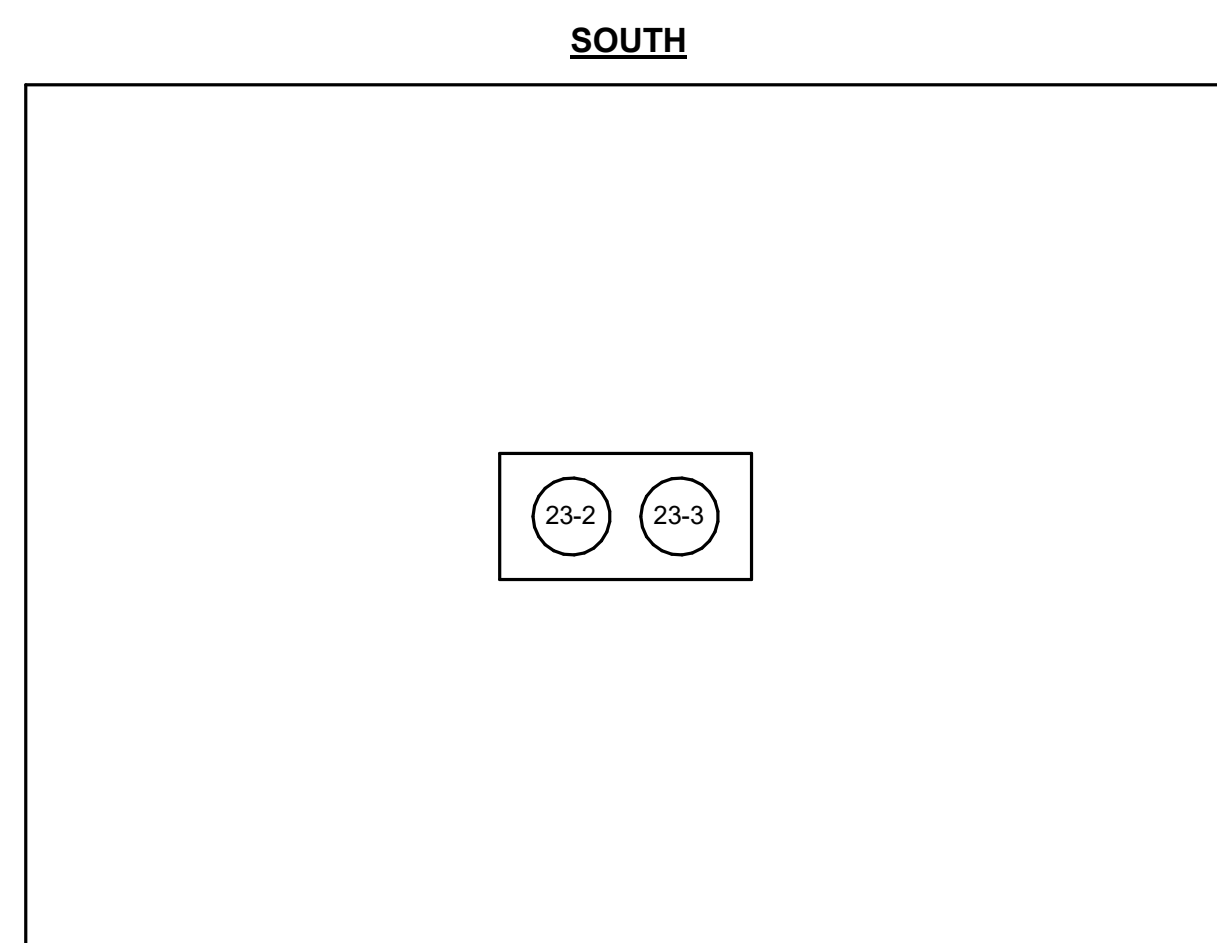
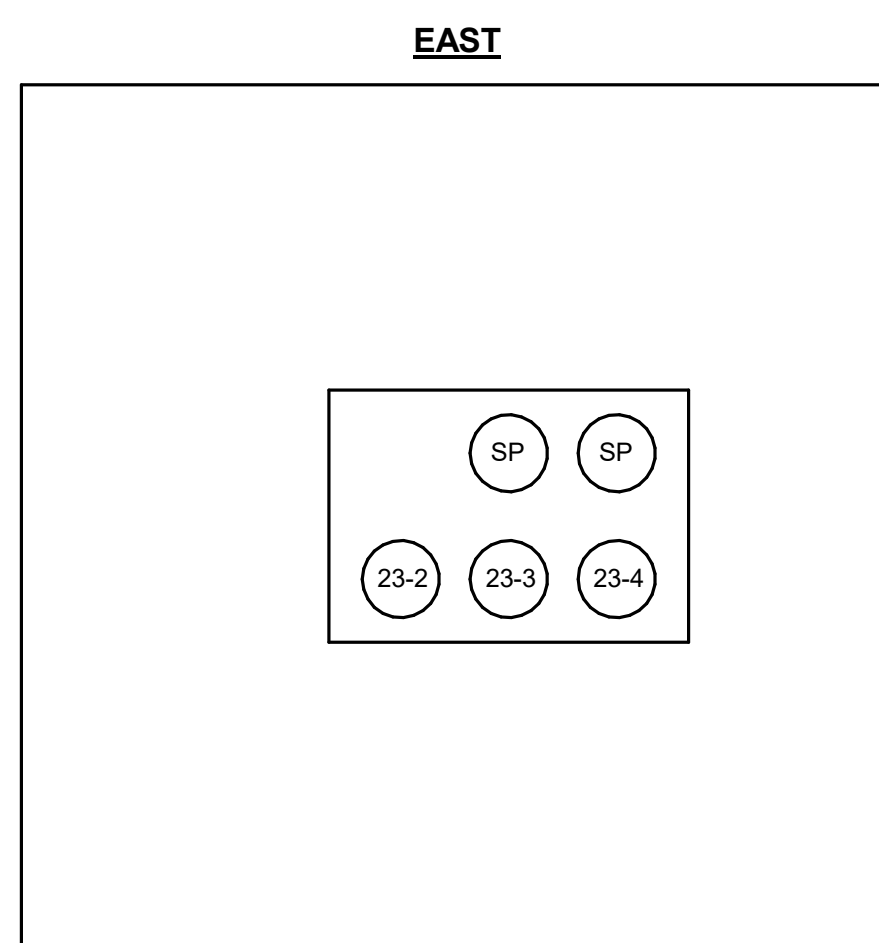
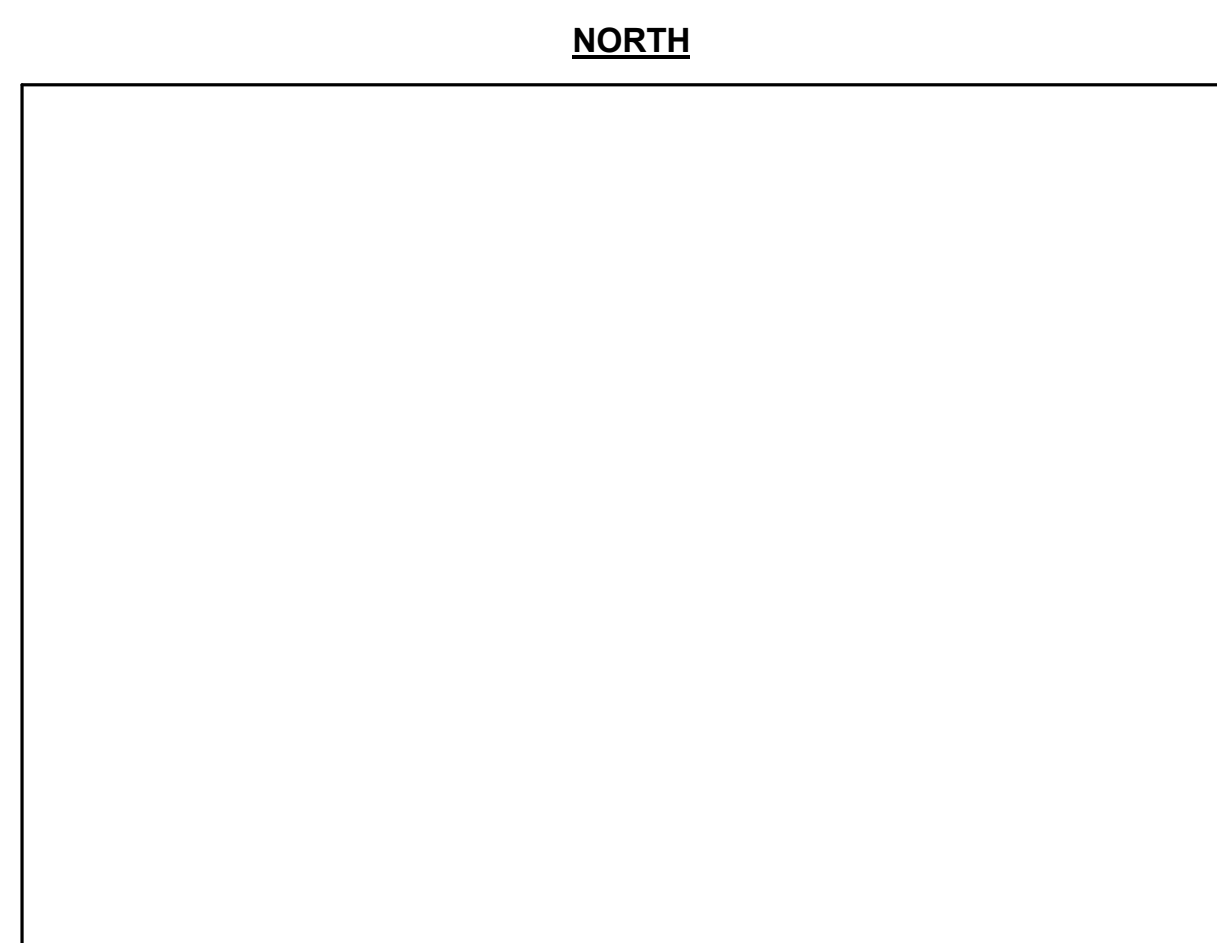
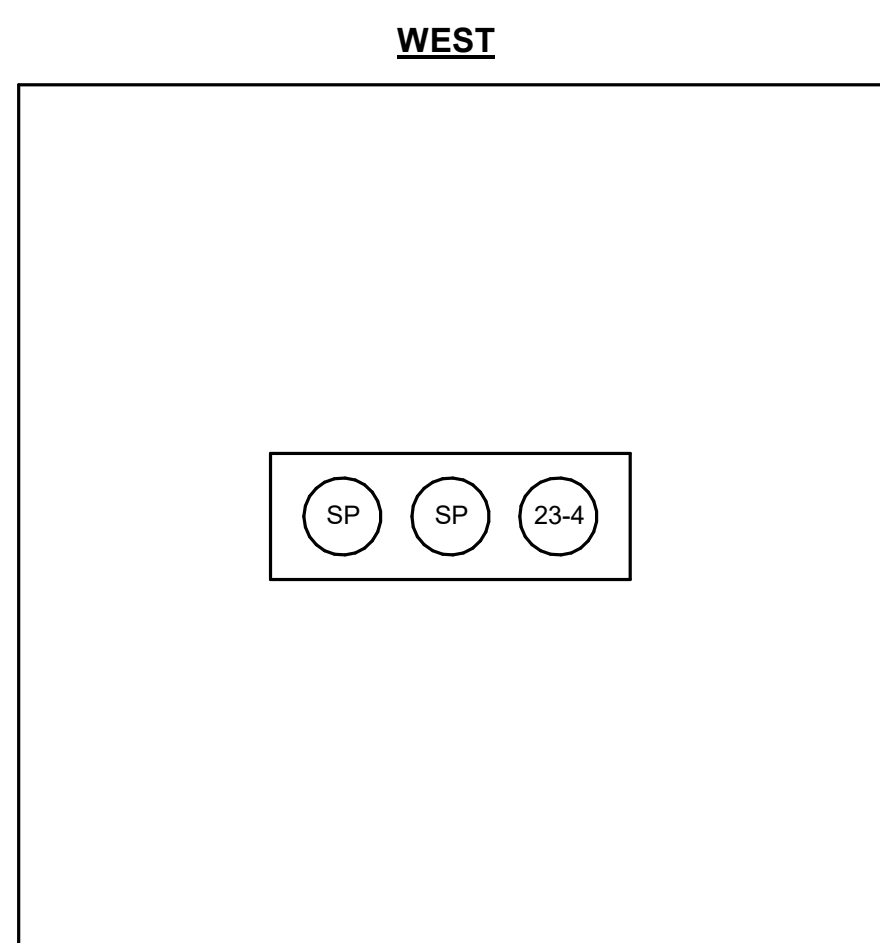
Turner
 Contractor
 55 East Monroe Street
 Suite 1450
 Chicago, IL 60603
 Tel: 312.327.2770
 Fax: 312.482.7101

	NAME	DATE
DESIGNED	Designer	08/14/18
DRAWN	Author	08/14/18
CHECKED	Checker	08/14/18
APPROVED	Approver	08/14/18
SUBMITTED		



SCALE: 12" = 1'-0"

FERMI NATIONAL ACCELERATOR LABORATORY
 UNITED STATES DEPARTMENT OF ENERGY
PIP-II SITE PREPARATION
MANHOLE DETAILS
 DRAWING NO. **4-3-2** REV. **E-18**
 GENSLER NUMBER: Project Number



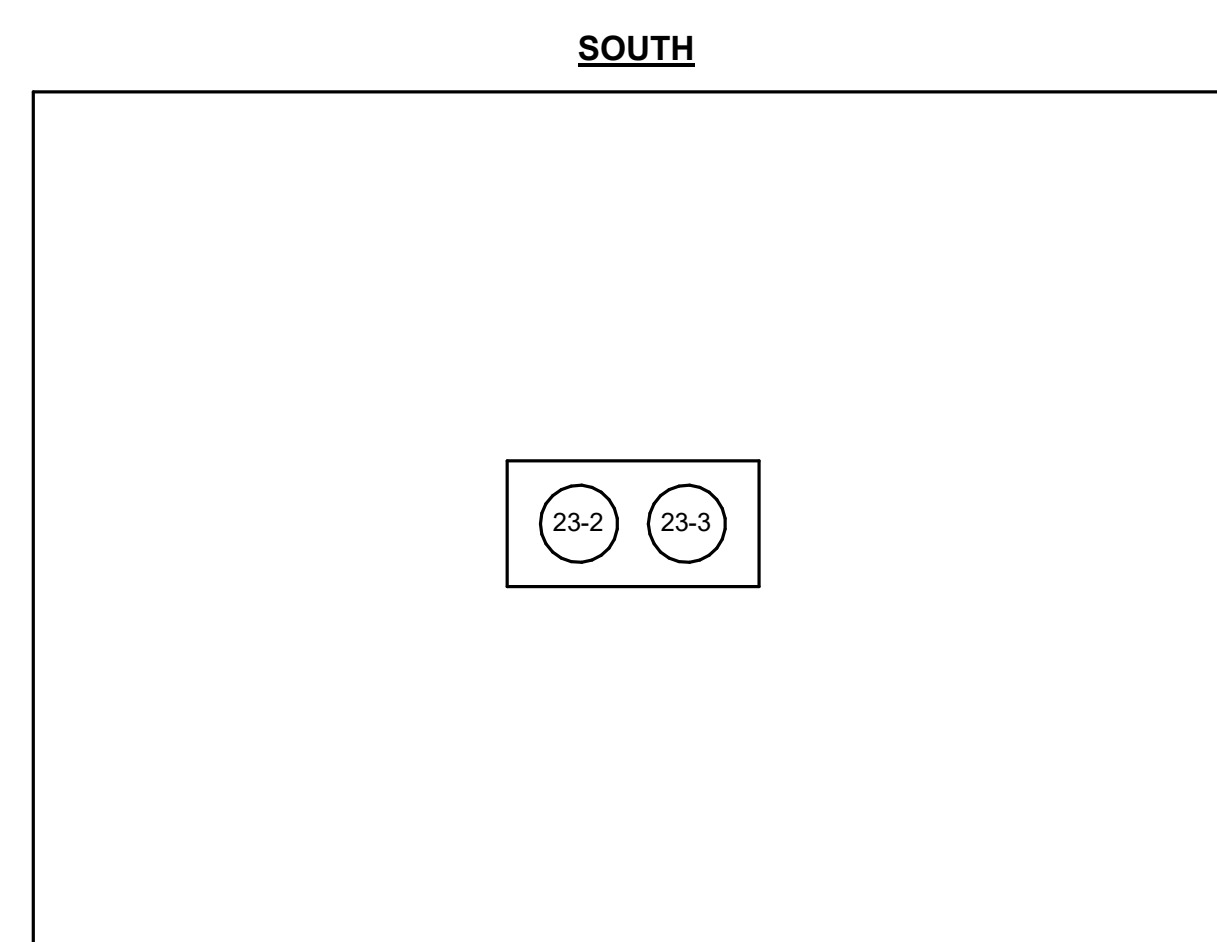
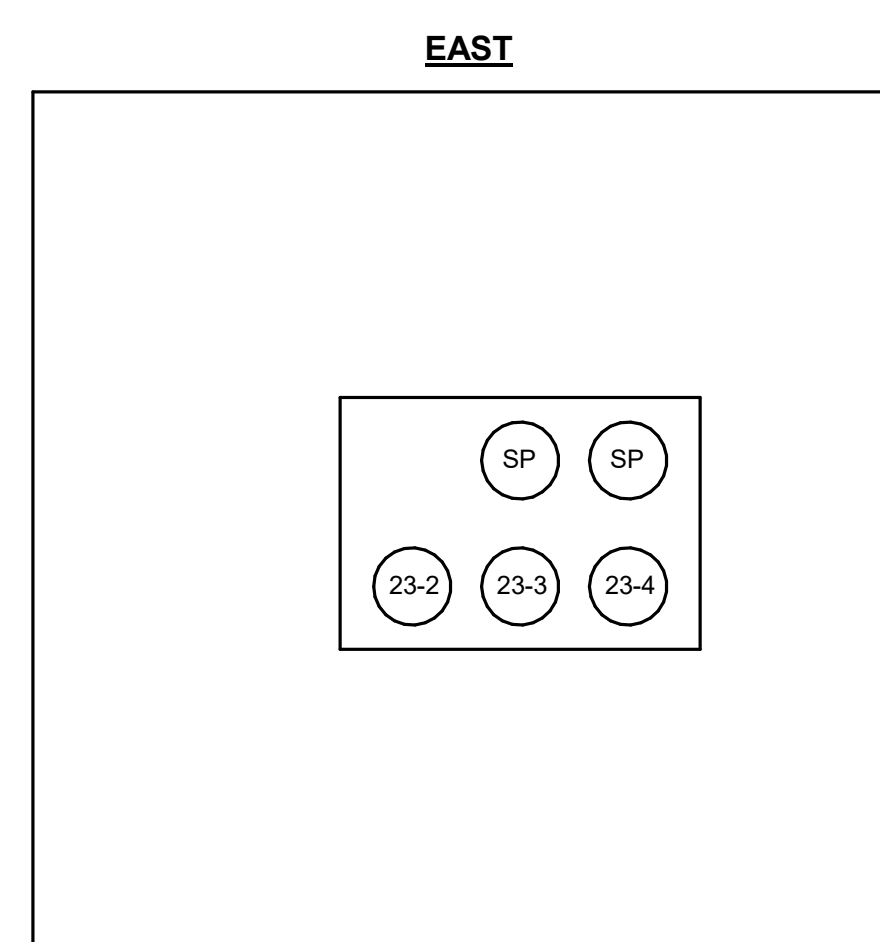
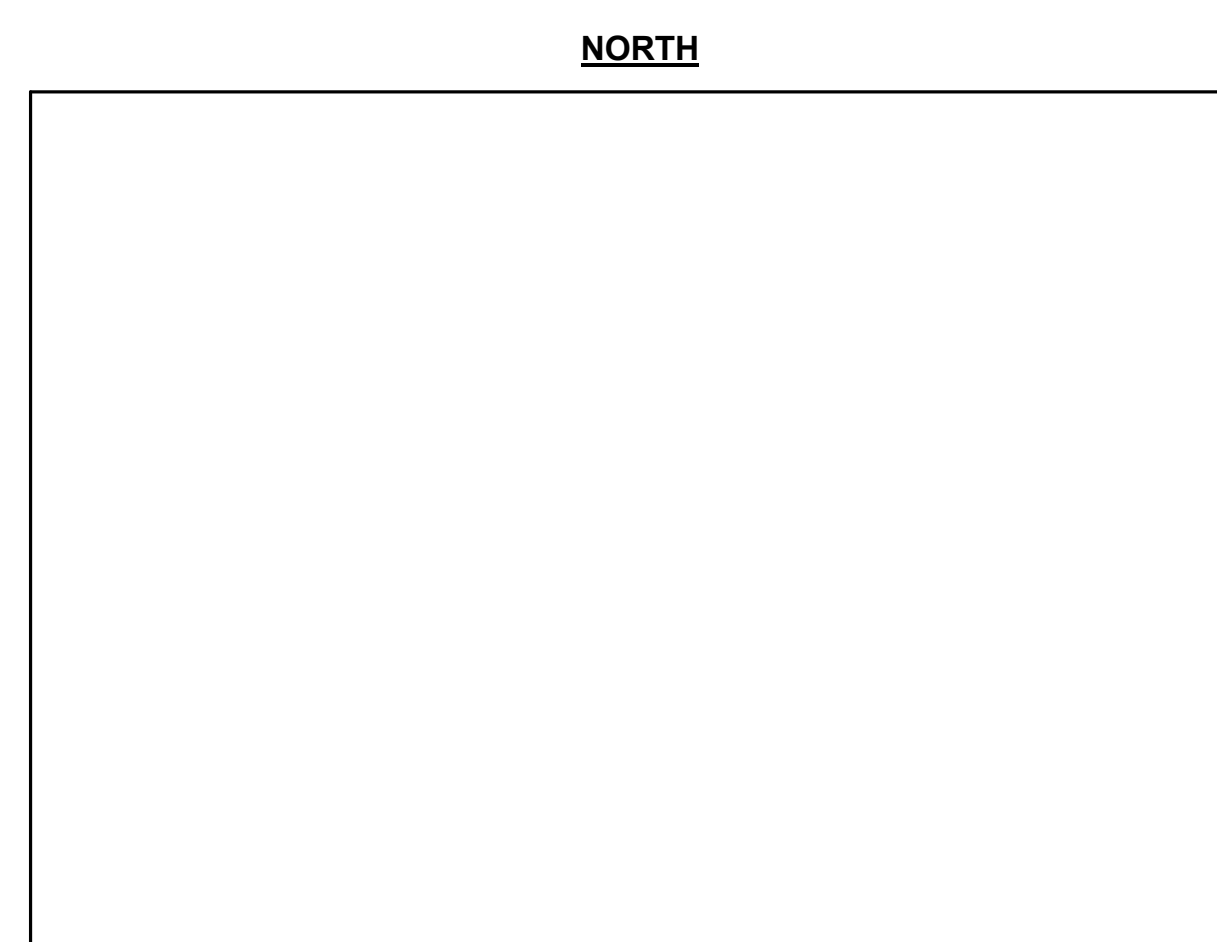
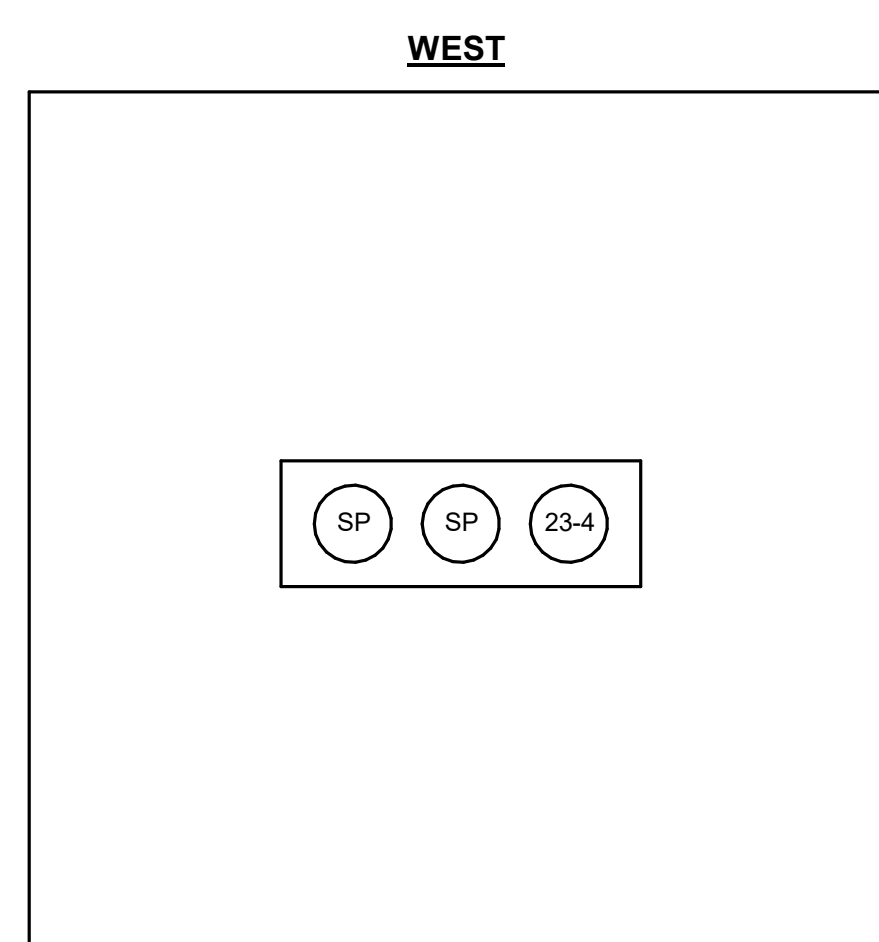
1 MANHOLE - PMH-15A
NO SCALE

GENERAL SHEET NOTES:

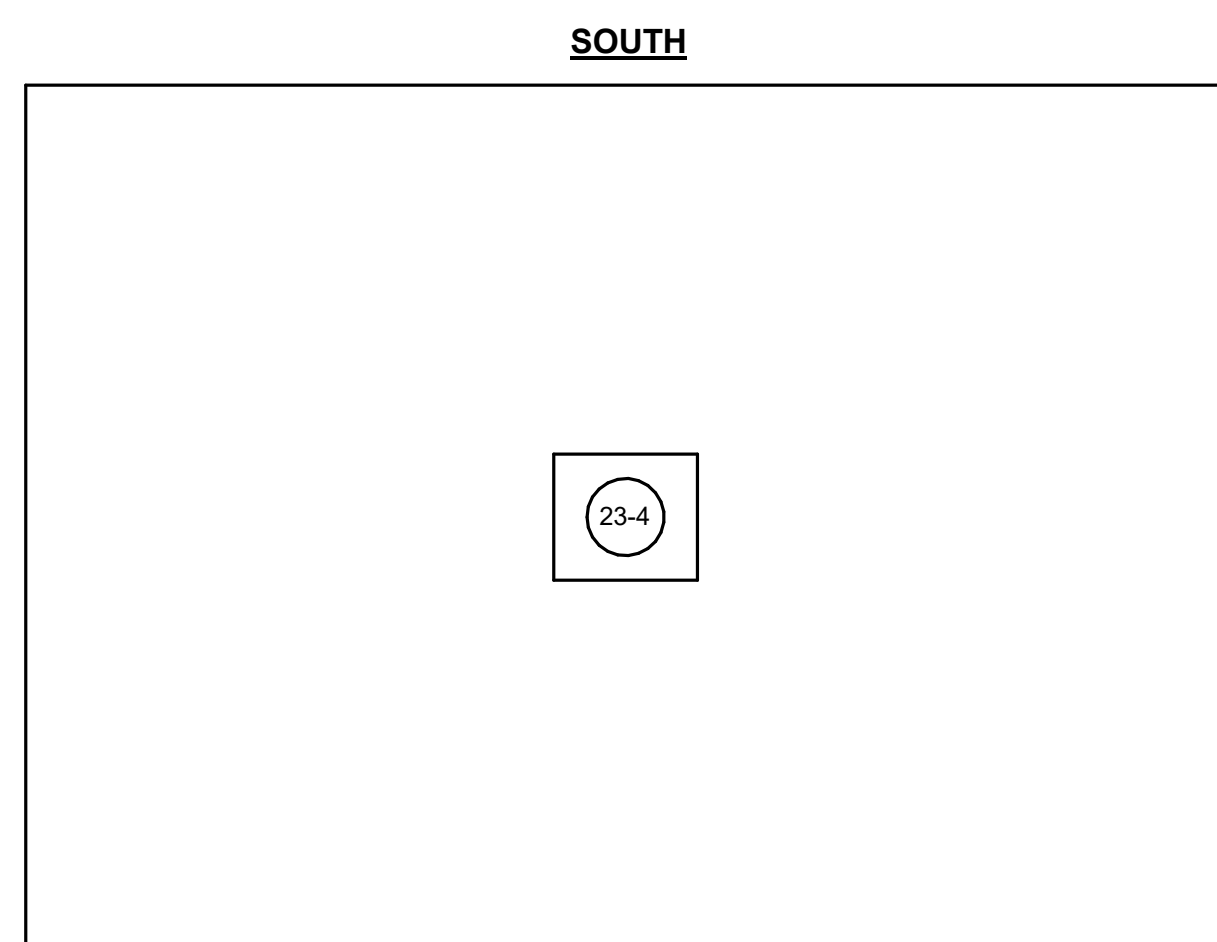
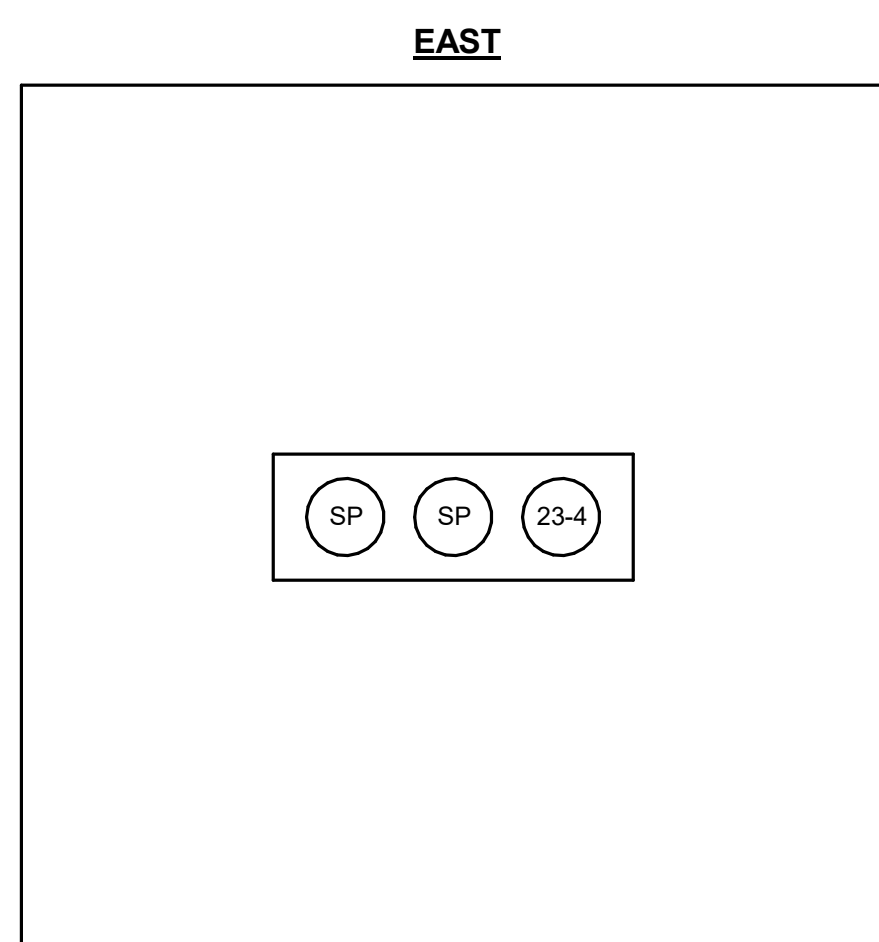
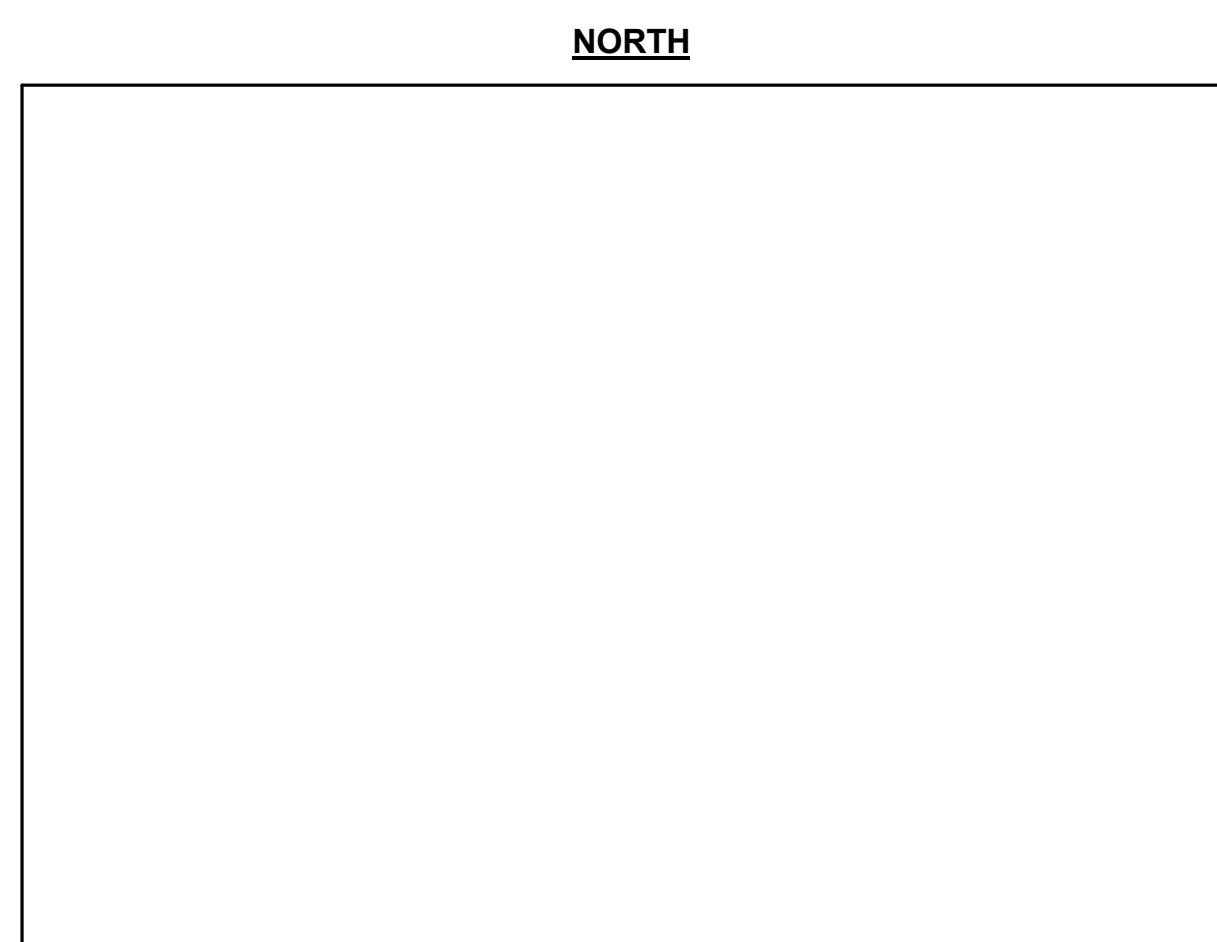
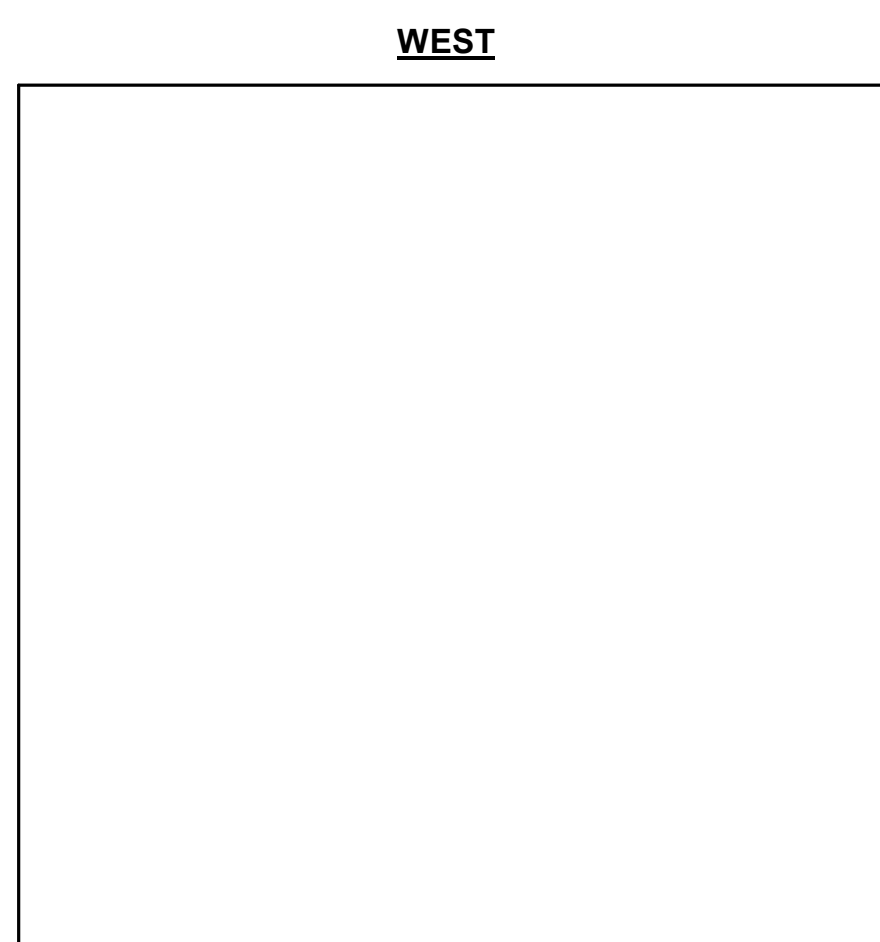
- REFER TO ELECTRICAL MANHOLE DETAIL ON E-11 FOR TYPICAL CABLE SUPPORT DETAIL.
- PROVIDE CABLE IDENTIFICATION. CABLE IDENTIFICATION SHALL BE REVIEWED AND APPROVED BY FERMLAB.

CABLE LEGEND:

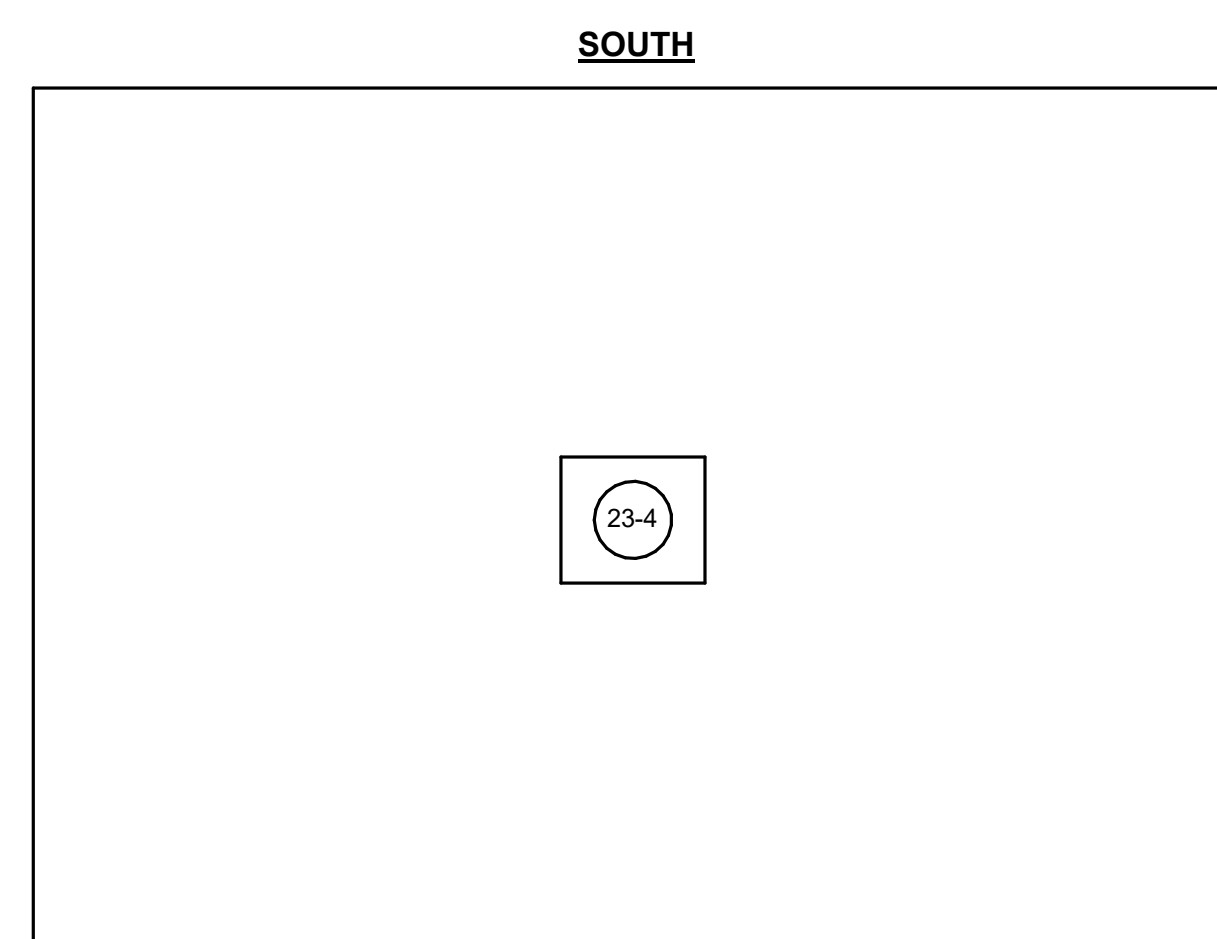
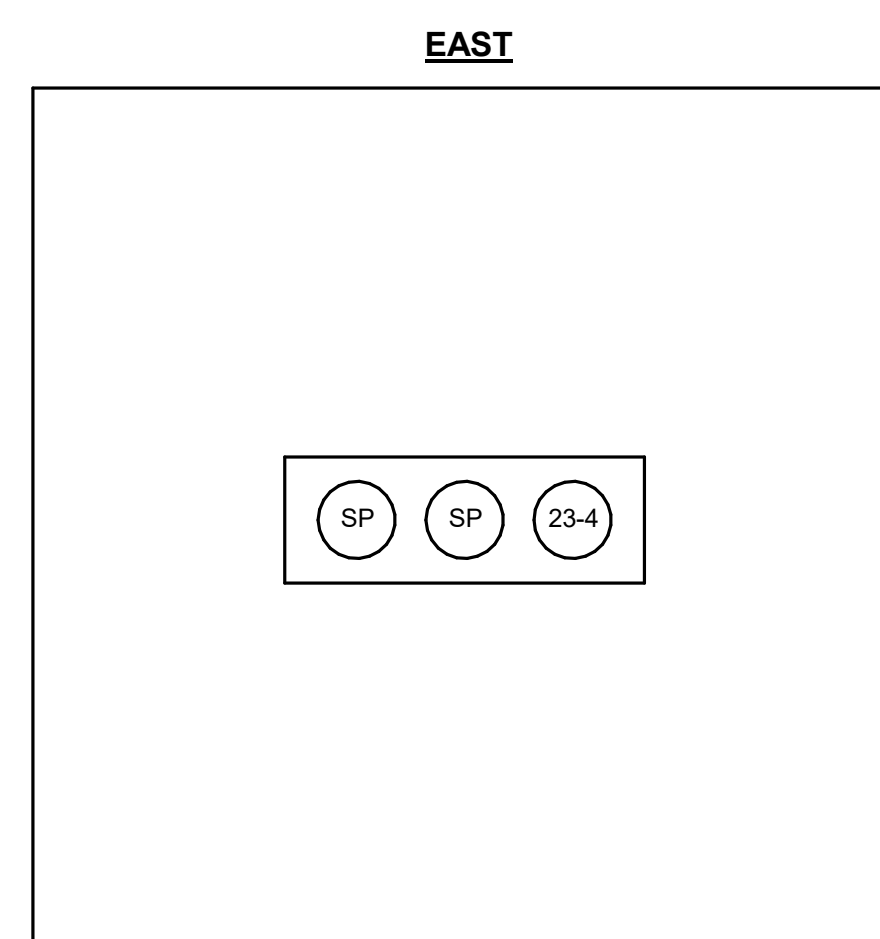
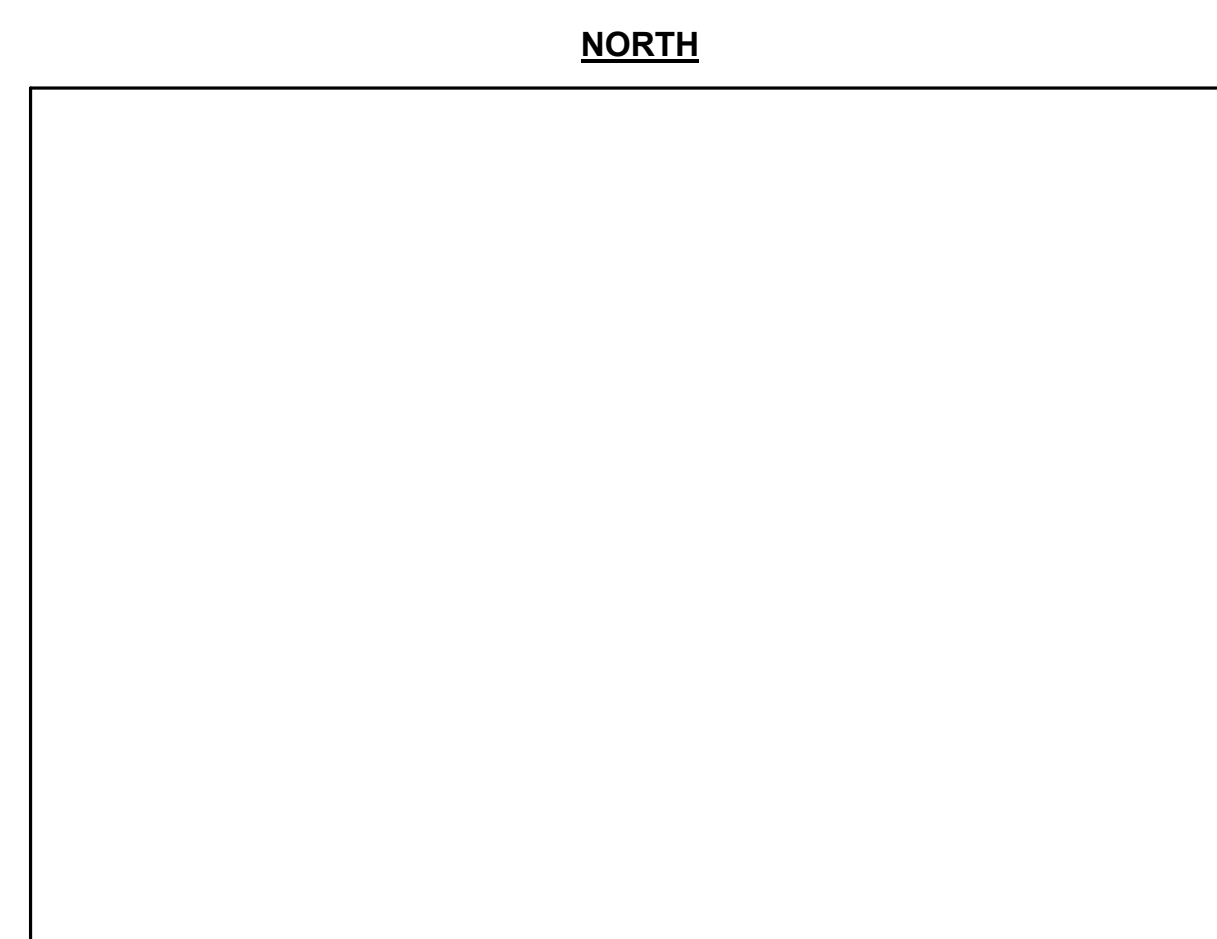
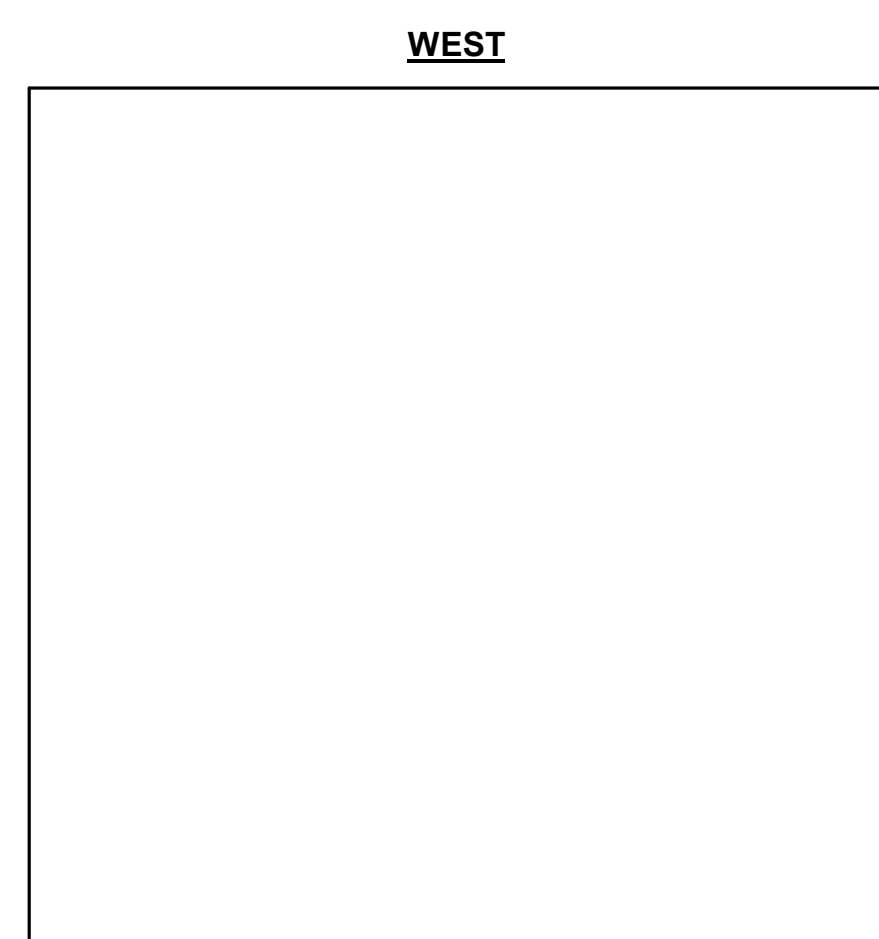
- FEEDER 23-1
- FEEDER 23-2
- FEEDER 23-3
- FEEDER 23-4
- SPARE SP
- FUTURE FEEDER 1B
- FUTURE FEEDER 2B
- FUTURE FEEDER 3B
- FUTURE FEEDER 4B



3 MANHOLE - PMH-15B
NO SCALE



6 MANHOLE - PMH-16A
NO SCALE



4 MANHOLE - PMH-16B
NO SCALE

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1	08/17/2018	60% DESIGN DOCUMENTS	

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Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

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550 North Commons Drive
Suite 116
Aurora, IL 60504
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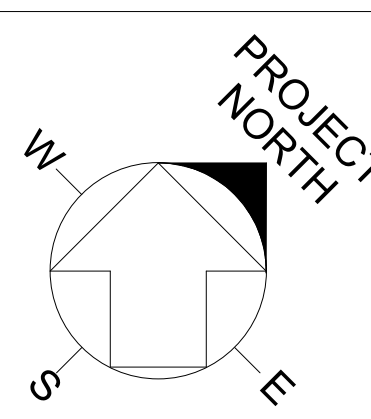
TGRWA
TyR. Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 900
Chicago, IL 60607
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

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850 West Jackson Blvd.
Suite 900
Chicago, IL 60607
Tel: 312.492.6501
Fax: 312.492.7101

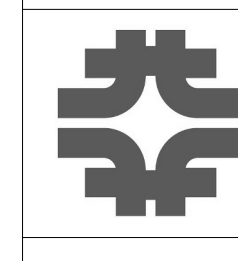
Turner
Contractor
55 East Monroe Street
Suite 1450
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.492.7101

	NAME	DATE
DESIGNED	Designer	08/14/18
DRAWN	Author	08/14/18
CHECKED	Checker	08/14/18
APPROVED	Approver	08/14/18
SUBMITTED		



SCALE: 12" = 1'-0"

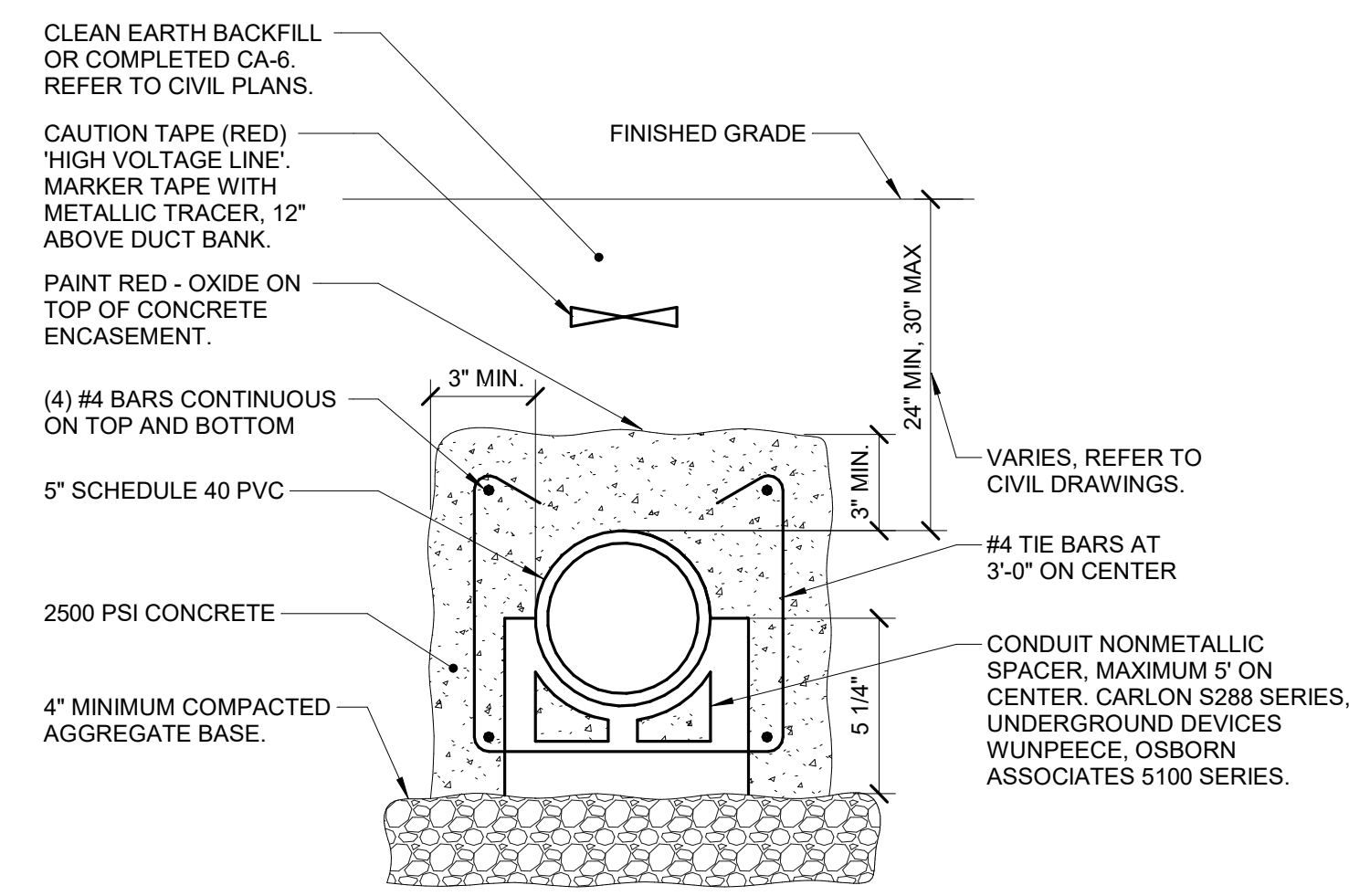
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UNITED STATES DEPARTMENT OF ENERGY



PIP-II SITE PREPARATION
MANHOLE DETAILS

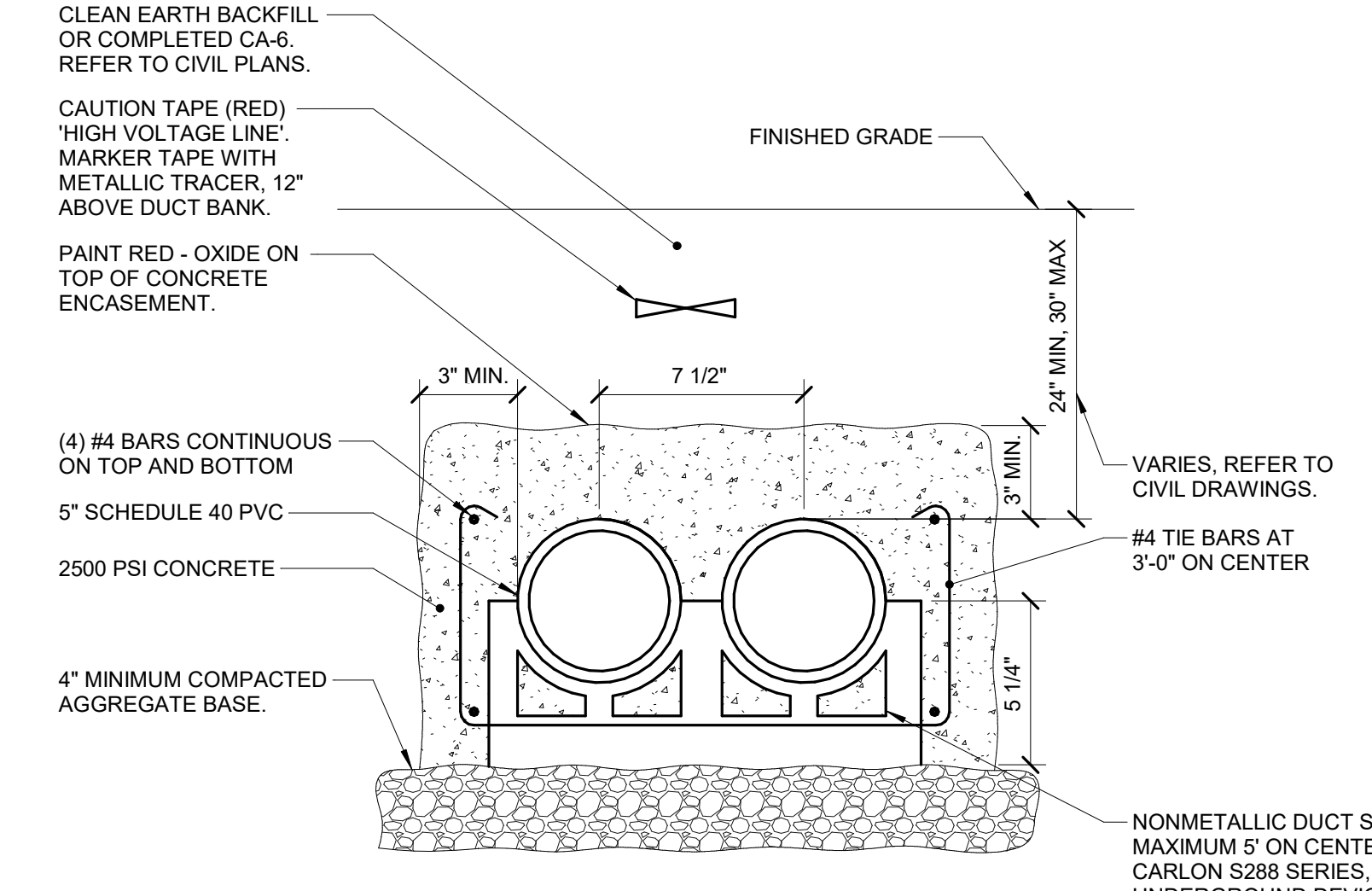
DRAWING NO. **4-3-2** REV. **E-19**
GENSLER NUMBER: Project Number

17 AUG 2018



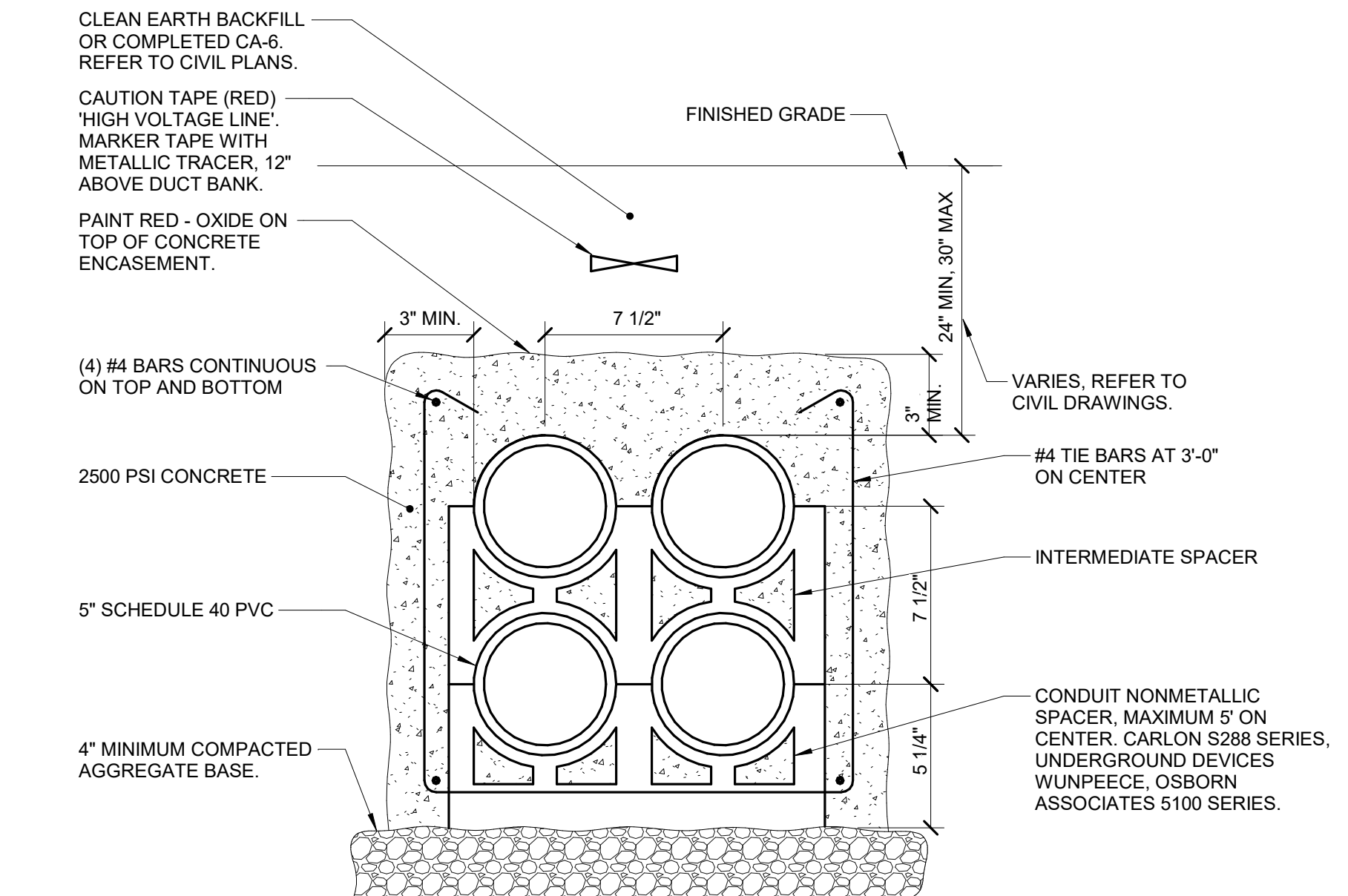
1 DUCT BANK DETAIL (1x)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



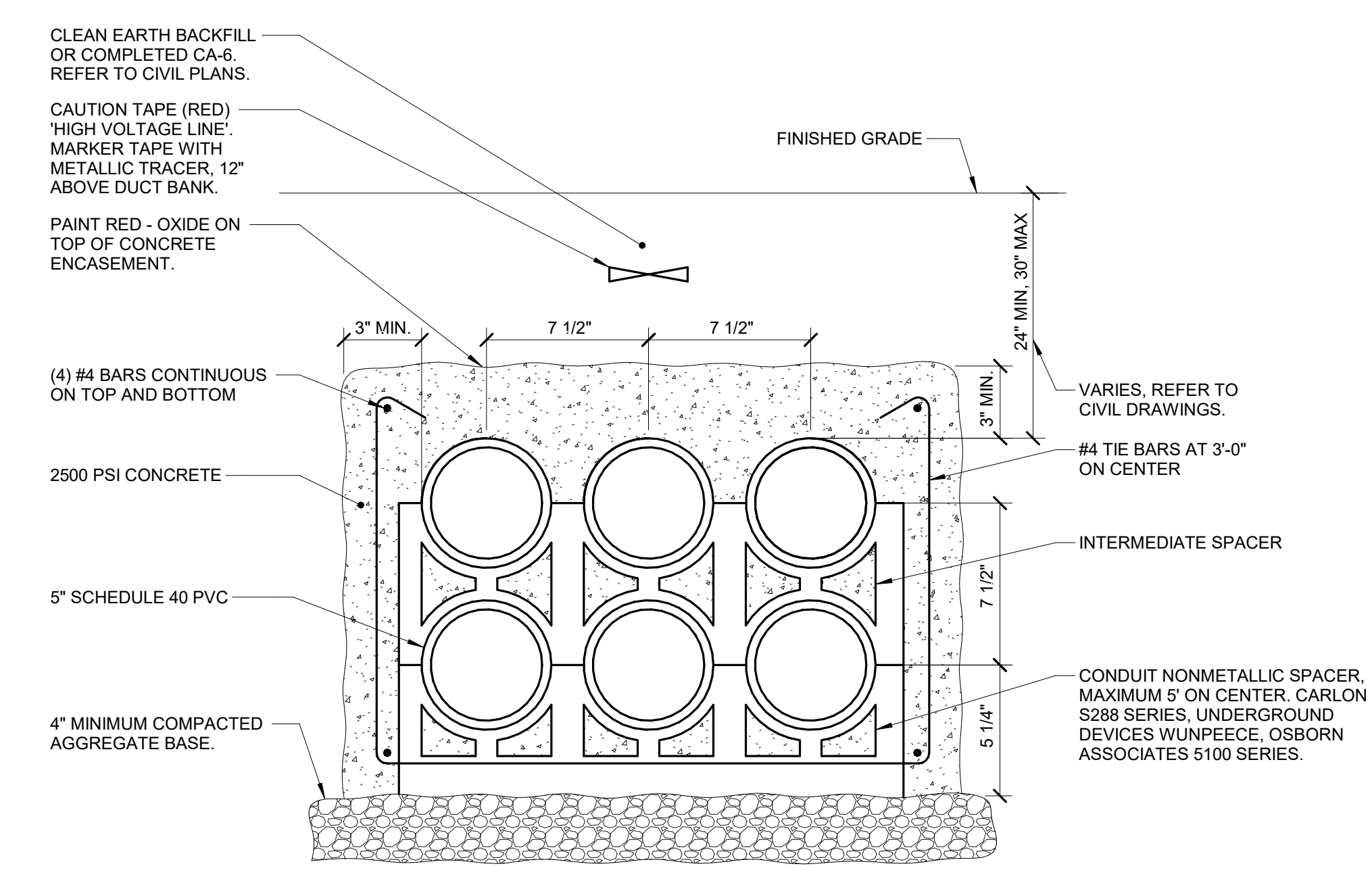
2 DUCT BANK DETAIL (2x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



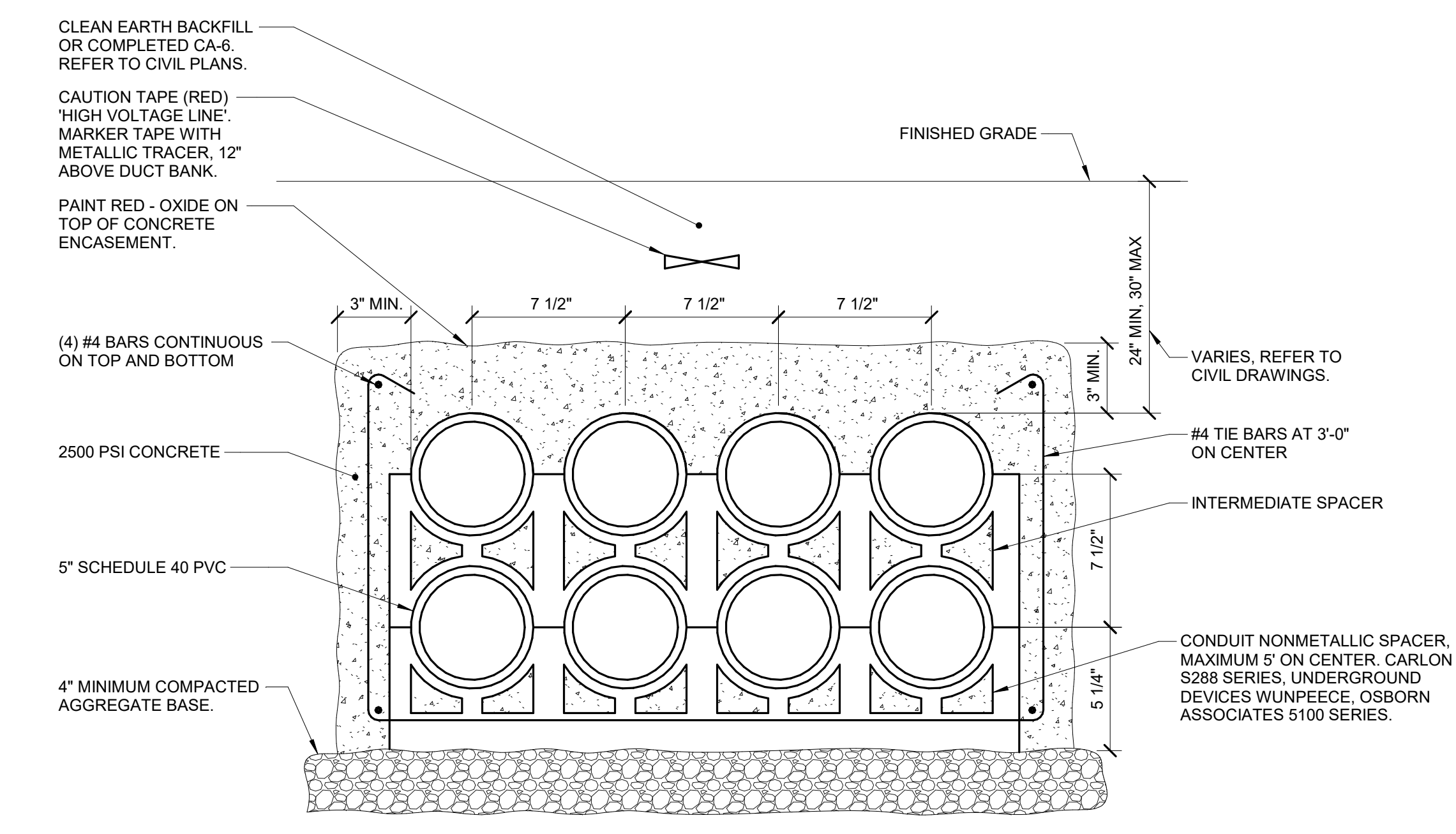
3 DUCT BANK DETAIL (2x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



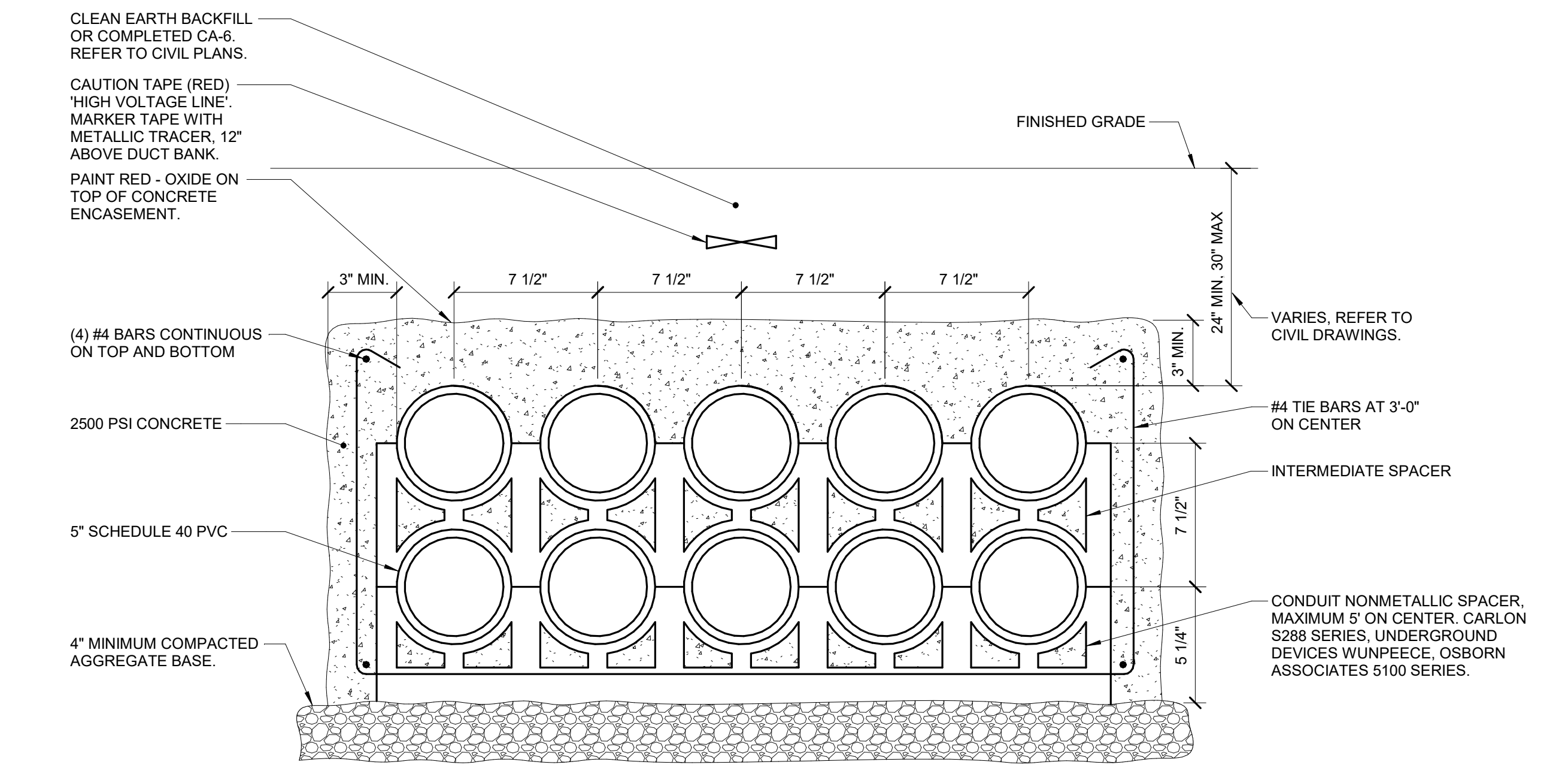
4 DUCT BANK DETAIL (3x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



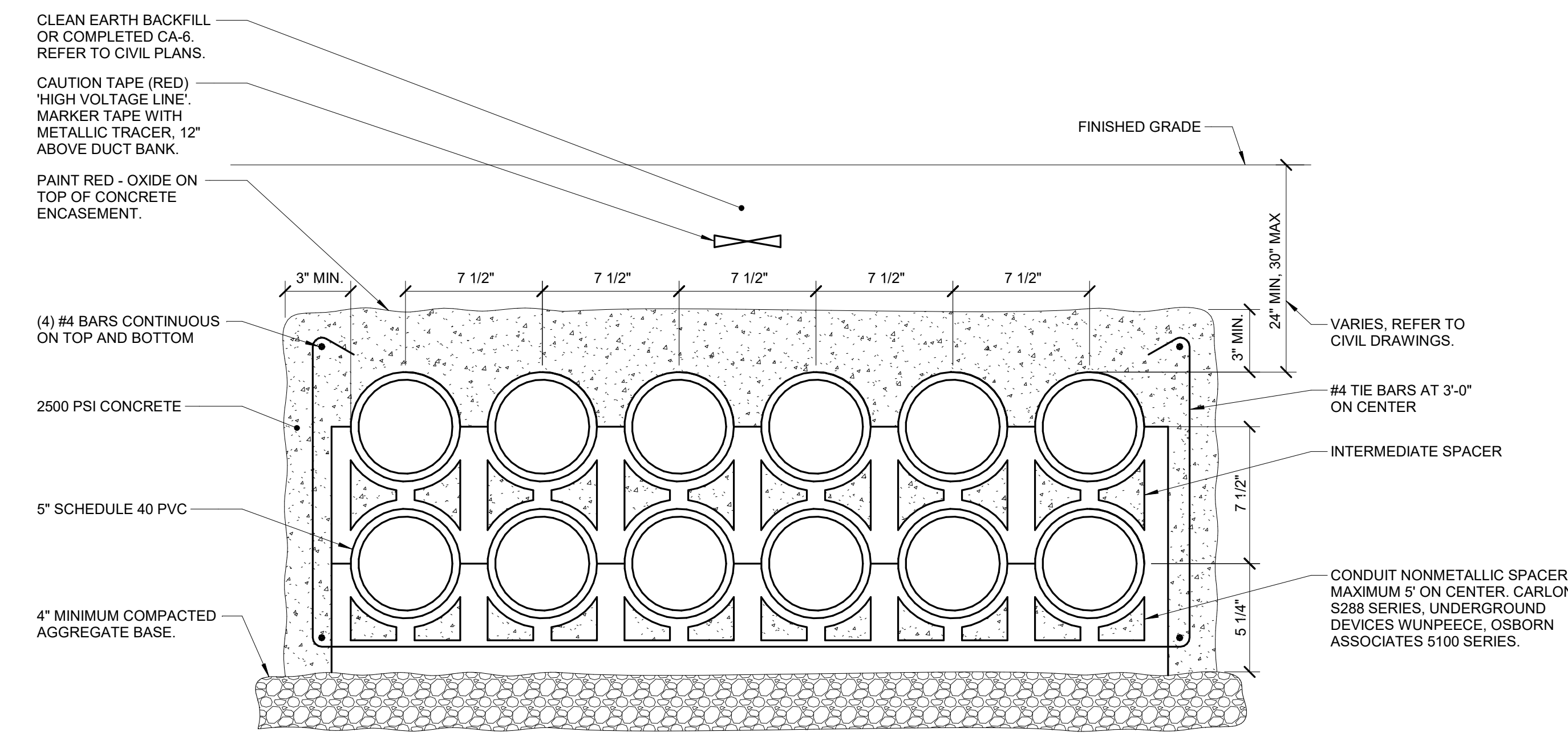
5 DUCT BANK DETAIL (4x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



6 DUCT BANK DETAIL (5x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.



7 DUCT BANK DETAIL (6x2)
NO SCALE

- NOTES:
1. INSTALL 2000 lb TENSILE STRENGTH BRAIDED POLYPROPYLENE PULL CORD IN ALL CONDUITS.
 2. TRENCHING AND BACKFILL ACCORDING TO SPECIFICATIONS.
 3. DOWEL ENDS OF DUCTBANK TO FOUNDATION OR MANHOLE WITH A MINIMUM OF (4) #4 DOWELS.

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CONSTRUCTION

REV.	DATE	DESCRIPTIONS
1	08/17/2018	60% DESIGN DOCUMENTS

Gensler
Architects
11 East Madison Street
Suite 300
Chicago IL 60602
Tel: 312.456.0123
Fax: 312.456.0124

CMT
Consulting Engineers
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Suite 116
Aurora, IL 60504
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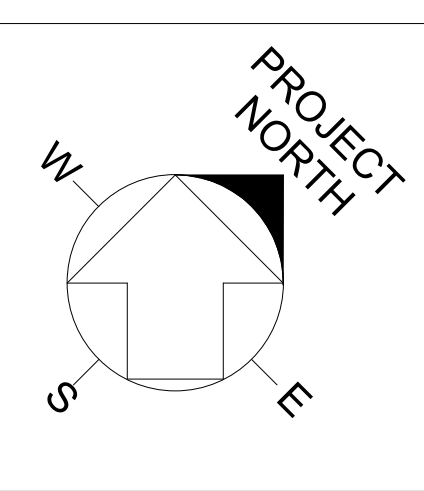
TGRWA
TyR. Gustafson Rockers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 116
Aurora, IL 60507
Tel: 312.341.0055
Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmette Rd.
Suite 400W
Naperville, IL 60563
Tel: 630.527.2320
Fax: 630.527.2321

HOERR SCHAUDT
Landscape Architects
850 West Jackson Blvd.
Suite 800
Chicago, IL 60603
Tel: 312.482.6501
Fax: 312.482.7101

Turner
Contractor
55 East Mennoe Street
Suite 1450
Chicago, IL 60603
Tel: 312.327.2770
Fax: 312.482.7101

	NAME	DATE
DESIGNED	TB	08/17/18
DRAWN	HP	08/17/18
CHECKED	JML	08/17/18
APPROVED	JML	08/17/18
SUBMITTED		



SCALE: NOT TO SCALE

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UNITED STATES DEPARTMENT OF ENERGY

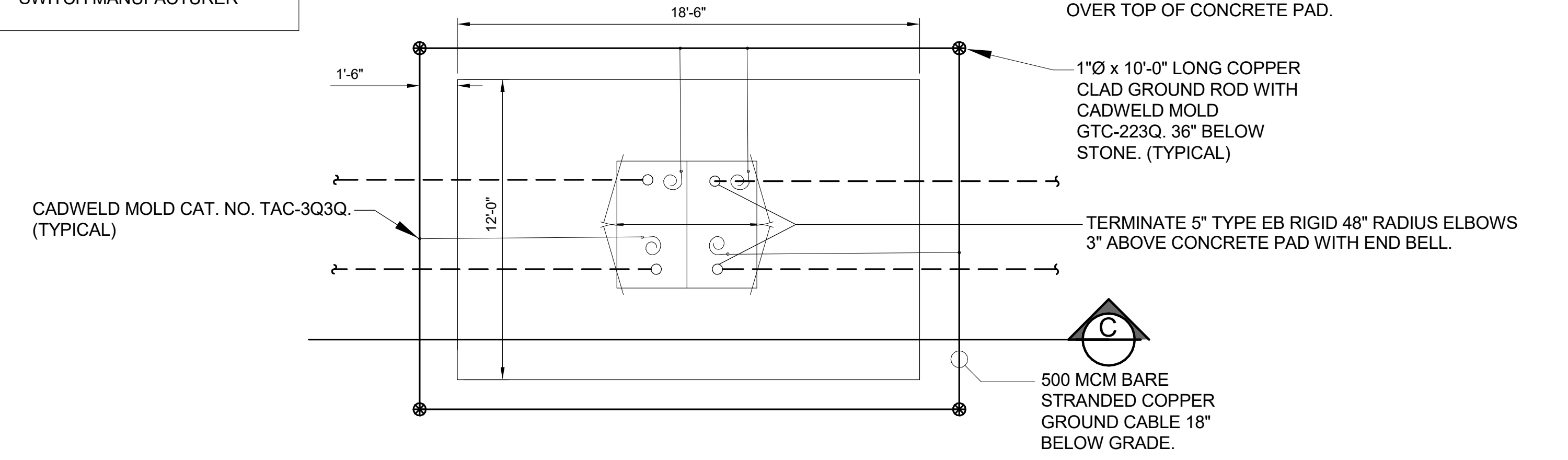
PIP-II SITE PREPARATION
DUCT BANK DETAILS

DRAWING NO. **4-3-2** E-20 REV. GENSLER NUMBER: Project Number

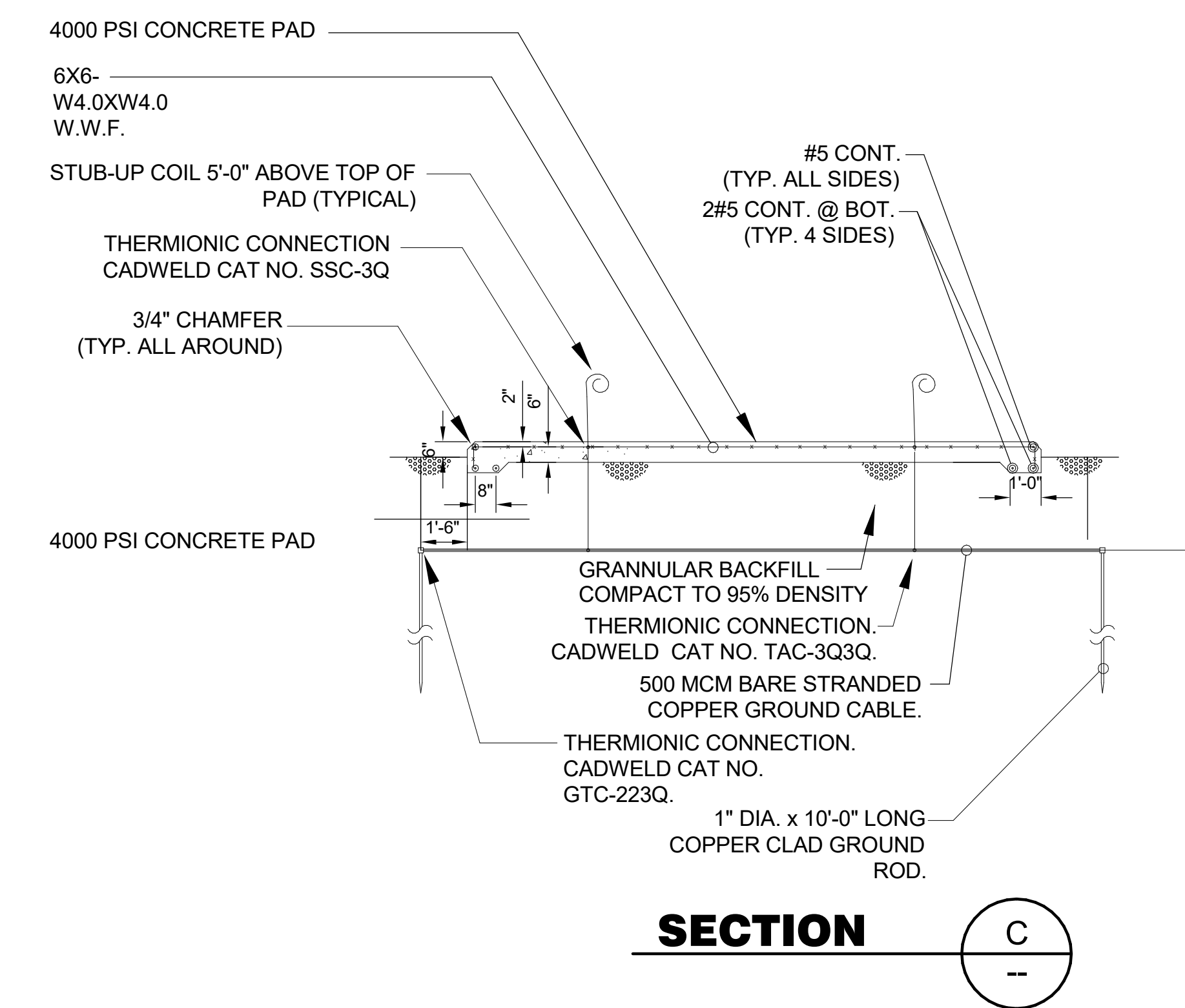
17 AUG 2018

NOTE:
SUB CONTRACTOR SHALL
COORDINATE AND VERIFY
EXACT LOCATION OF
CONDUIT STUBS WITH
SWITCH MANUFACTURER

INSTALLATION NOTE: ALL 5" CONDUITS
FOR 13.8KV FEEDERS TO TERMINATE
WITH 5" 90°, 48" RADIUS ELBOWS 3"
OVER TOP OF CONCRETE PAD.



**MV SWITCH CONCRETE PAD,
& GROUNDING TYPICAL DETAIL** 1
NO SCALE E-21



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Architects
11 East Madison Street
Suite 300
Chicago IL 60602
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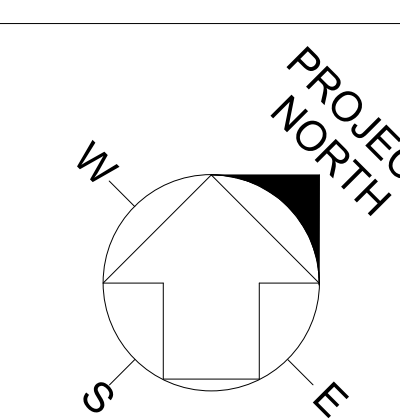
TGRWA
TyR. Gustafson Reckers Wilson Andrews, LLC
Structural Engineers
600 West Van Buren
Suite 500
Chicago, IL 60607
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Fax: 312.341.9966

IMEG
MEP Engineers
1100 Wilmerville Rd.
Suite 400W
Naperville, IL 60563
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850 West Jackson Blvd.
Suite 800
Chicago, IL 60607
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DRAWN	HP	08/17/18
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APPROVED	JML	08/17/18
SUBMITTED		



SCALE: NOT TO SCALE

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UNITED STATES DEPARTMENT OF ENERGY
PIP-II SITE PREPARATION
ELECTRICAL DETAILS
DRAWING NO. **4-3-2** REV. **E-21**
GENSLER NUMBER: Project Number

17 AUG 2018