CONSTRUCTION PLANS FOR

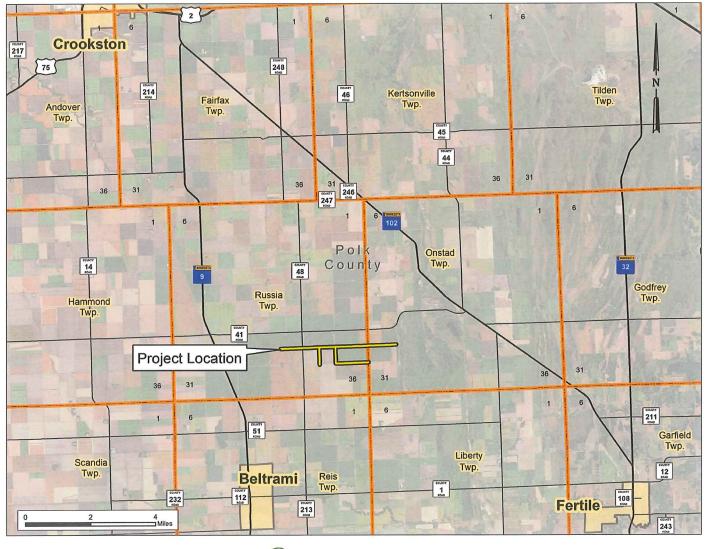
POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT

FERTILE, MINNESOTA SEPTEMBER, 2018

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, AS-BUILT MAPS AS PROVIDED BY MUNICIPALITIES OR UTILITY COMPANIES, AND/OR EXISTING DRAWINGS. THERE IS NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, NOR IS THERE A GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY RESULT FROM ITS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.

CONSTRUCTION NOTES:

- UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, THE GOVERNING CONSTRUCTION SPECIFICATIONS SHALL CONFORM TO THE MINNESOTA DEPARTMENT OF TRANSPORTATION 2018 STANDARD SPECIFICATIONS FOR CONSTRUCTION
- 2. THE CONTRACTOR SHALL VISIT THE SITE TO INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS.
- 3. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THE PLANS.
- 4. CONSTRUCTION LIMITS TO BE VERIFIED IN FIELD BY ENGINEER.
- 5. SPOIL ALIGNMENT SUBJECT TO CHANGE. VERIFY EXACT LOCATION IN FIELD WITH ENGINEER.
- ALL WATER CONTROL TO BE THE RESPONSIBILITY OF THE CONTRACTOR (NOT A PAY ITEM).
- 7. CONTRACTOR SHOULD BE AWARE OF EROSION CONTROL SPECIFICATIONS, AND WILL BE RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF SAID CONTROL MEASURES. IN ADDITION, THE CONTRACTOR WILL BE REQUIRED TO APPLY AS A CO-PERMITEE FOR A MPCA GENERAL STORM WATER PERMIT FOR CONSTRUCTION ACTIVITIES. AS A CO-PERMITEE THE CONTRACTOR WILL ACCEPT AND ENSURE ALL TERMS OF THE SAID PERMIT ARE IMPLEMETED AND MAINTAINED.



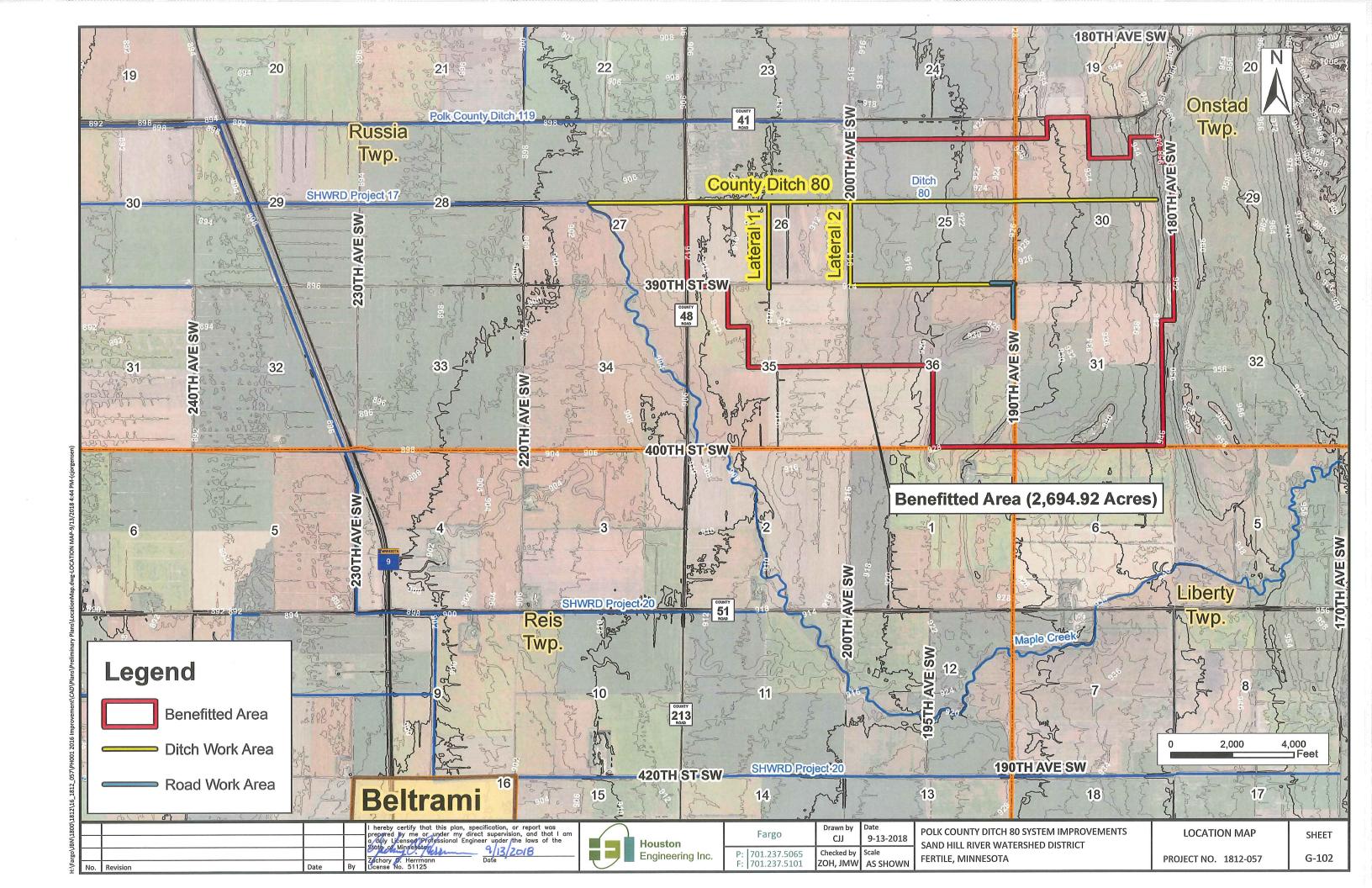


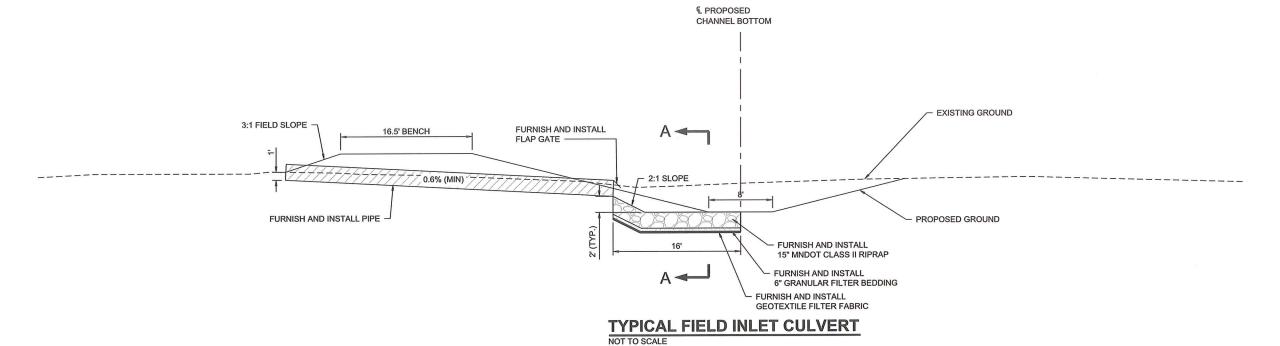
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tachary 0. Herrmann License No. 51125

Date: 9/13/2018

G-102 CIVIL C-101 C-102 C-103 C-104 C-105 C-106 C-107 C-108 C-109 C-110 C-111	COVER SHEET LOCATION MAP FIELD INLET CULVERT INSTALLATION DETAILS
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C-104 C-105 C-106 C-107 C-108 C-109 C-110 C-111	ROAD RIPRAP APRON DETAILS
C-105 C-106 C-107 C-108 C-109 C-110 C-111	FIELD APPROACH RIPRAP APRON DETAILS
C-106 C-107 C-108 C-109 C-110 C-111	TYPICAL CULVERT INSTALLATION DETAIL
C-107 C-108 C-109 C-110 C-111	ROCK DROP DETAILS
C-108 C-109 C-110 C-111	TYPICAL SECTIONS
C-109 C-110 C-111	TYPICAL SECTIONS
C-110 C-111	PLAN AND PROFILE COUNTY DITCH 80
C-111	PLAN AND PROFILE COUNTY DITCH 80
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C-112	PLAN AND PROFILE LATERAL 1
C-113	PLAN AND PROFILE LATERAL 2
C-114	PLAN AND PROFILE LATERAL 2
C-115	CROSS SECTIONS COUNTY DITCH 80
C-116	CROSS SECTIONS COUNTY DITCH 80
C-117	CROSS SECTIONS COUNTY DITCH 80
C-118	CROSS SECTIONS COUNTY DITCH 80
C-119	CROSS SECTIONS COUNTY DITCH 80
C-120	CROSS SECTIONS LATERAL 1
C-121	CROSS SECTIONS LATERAL 2
C-122	CROSS SECTIONS LATERAL 2
C-201	TYPICAL SECTIONS ROAD
C-202	PLAN AND PROFILE 390TH ST SW
C-203	CROSS SECTIONS 390TH ST SW
C-204	PLAN AND PROFILE 190TH AVE SW
C-205	CROSS SECTIONS 190TH AVE SW
C-301	5,1555 5E5710110 100111711/E 511
C-302	SWPPP NOTES





NOTE:

- RIPRAP SHALL BE MEASURED AND PAID BASED ON THE APPROPRIATE MNDOT RIPRAP GRADATION BID ITEM. MEASUREMENT WILL BE MADE BASED ON PLACED AREA TIMES PLAN DEPTH
- GEOTEXTILE FILTER FABRIC AND GRANULAR FILTER BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE APPROPRIATE MNDOT RIPRAP GRADATION BID ITEM.
- COMMON EXCAVATION AND AGGREGATE BEDDING MATERIAL REQUIRED FOR INSTALLATION OF FIELD INLET CULVERTS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT COST OF CMP BID ITEM.
- UNLESS OTHERWISE SPECIFIED, MATERIAL EXCAVATED TO INSTALL FIELD INLET CULVERTS MAY BE USED TO BACKFILL SIDE INLET CULVERTS.
- 5. FINISH GRADE OF THE INLET (FIELD) END OF PIPES SHALL GENERALLY BE BLENDED BACK TO EXISTING GRADE OVER 50 FEET HORIZONTALLY AND ENSURE THAT A 1' MINIMUM OF TOPSOIL IS IN-PLACE WITHIN THE 50' HORIZONTAL AREA. GRADING OF THE INLET (FIELD) END OF PIPES MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- PROPOSED GROUND MAY VARY FROM GEOMETRY PRESENTED IN THIS DETAIL. FINISH GRADE WILL BE COORDINATED WITH THE ENGINEER.
- 7. FIELD INLET LOCATIONS WILL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
- 8. CULVERTS SHALL HAVE A MINIMUM 2' OF COVER OVER THE TOP OF THE PIPE.

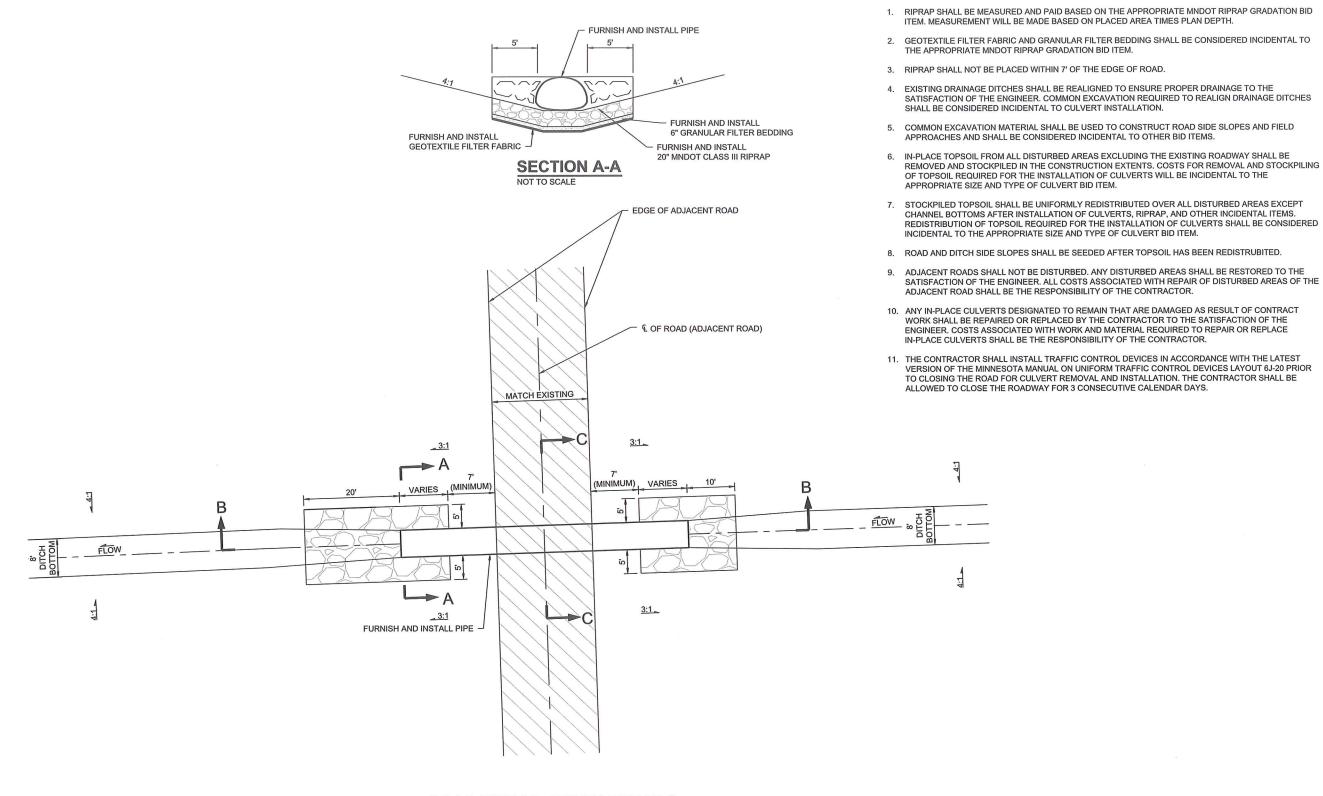
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No	Povision	Date	By	Tachary D. Herrmann Date

	Houston
	Engineering Inc.

Fargo	Drawn by CJJ	Date 9-13-2018	
	Checked by ZOH, JMW	Scale AS SHOWN	

OLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS	
SAND HILL RIVER WATERSHED DISTRICT	
ERTILE, MINNESOTA	

FIELD INLET CULVERT INSTALLATION DETAILS PROJECT NO. 1812-057



ROAD RIPRAP APRON DETAILS

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Zochary O. Herrmann Date

Houston Engineering Inc.

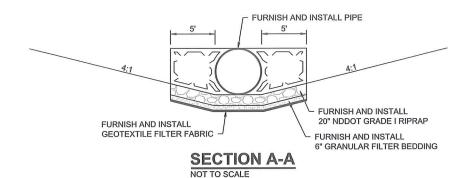
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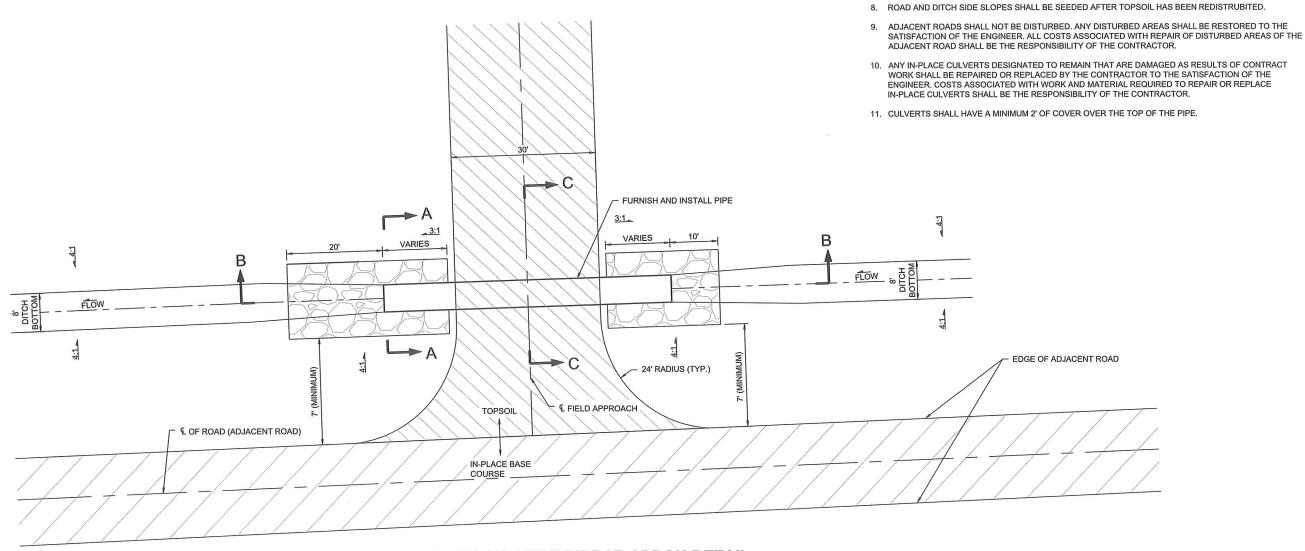
POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

ROAD RIPRAP APRON DETAILS ROJECT NO. 1812-057

SHEET C-102

PROJECT NO. 1812-057





FIELD APPROACH CULVERT RIPRAP APRON DETAIL

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				Zochary M. Herrmann Date
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_	Houston Engineering Inc.	P: F:

Drawn by 9-13-2018 701.237.5065 Checked by ZOH, JMW AS SHOWN 701.237.5101

Fargo

POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT FERTILE, MINNESOTA

RIPRAP SHALL BE MEASURED AND PAID BASED ON THE APPROPRIATE MNDOT RIPRAP GRADATION BID

SATISFACTION OF THE ENGINEER. COMMON EXCAVATION REQUIRED TO REALIGN DRAINAGE DITCHES

5. SUITABLE COMMON EXCAVATION MATERIAL SHALL BE USED TO CONSTRUCT ROAD SIDE SLOPES AND

6. IN-PLACE TOPSOIL FROM ALL DISTURBED AREAS EXCLUDING THE EXISTING ROADWAY SHALL BE REMOVED AND STOCKPILED IN THE CONSTRUCTION EXTENTS. COSTS FOR REMOVAL AND STOCKPILING OF TOPSOIL REQUIRED FOR THE INSTALLATION OF CULVERTS WILL BE INCIDENTAL TO THE

7. STOCKPILED TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED OVER ALL DISTURBED AREAS EXCEPT CHANNEL BOTTOMS AFTER INSTALLATION OF CULVERTS, RIPRAP, AND OTHER INCIDENTAL ITEMS. REDISTRIBUTION OF TOPSOIL REQUIRED FOR THE INSTALLATION OF CULVERTS SHALL BE CONSIDERED

2. GEOTEXTILE FILTER FABRIC AND GRANULAR FILTER BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE MNDOT RIPRAP GRADATION BID ITEM.

ITEM. MEASUREMENT WILL BE MADE BASED ON PLACED AREA TIMES PLAN DEPTH.

4. EXISTING DRAINAGE DITCHES SHALL BE REALIGNED TO ENSURE PROPER DRAINAGE TO THE

FIELD APPROACHES AND SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.

INCIDENTAL TO THE APPROPRIATE SIZE AND TYPE OF CULVERT BID ITEM.

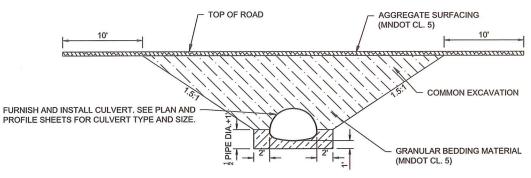
3. RIPRAP SHALL NOT BE PLACED WITHIN 7' OF THE EDGE OF ROAD.

APPROPRIATE SIZE AND TYPE OF CULVERT BID ITEM.

SHALL BE CONSIDERED INCIDENTAL TO CULVERT INSTALLATION.

FIELD APPROACH RIPRAP APRON DETAILS PROJECT NO. 1812-057

SECTION C-C EXCAVATION



SECTION C-C INSTALLATION

TOP OF ROAD FURNISH AND INSTALL CULVERT. SEE PLAN AND PROFILE SHEETS FOR CULVERT TYPE AND SIZE. AGGREGATE SURFACING (MNDOT CL. 5) MATCH EXISTING COMMON EXCAVATION **TOPSOIL** TOPSOIL MITER CMPA END MITER CMPA END 10' 10' FLOW FLOW CLAY PLUG - GRANULAR BEDDING MATERIAL CLAY PLUG

SECTION B-B INSTALLATION

TYPICAL CULVERT INSTALLATION AND EXCAVATION DETAILS

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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT FERTILE, MINNESOTA

COMMON EXCAVATION AND GRANULAR BEDDING
 MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE
 UNIT COST OF CORRESPONDING PIPE BID ITEM.

2. ALL JOINTS SHALL BE WRAPPED IN THEIR ENTIRETY WITH MNDOT TYPE 1 GEOTEXTILE FABRIC. OVERLAP OF JOINTS SHALL BE ONE WIDTH OF THE FABRIC ROLL AND FASTENED WITH STAPLES. THE GEOTEXTILE FABRIC AND

INSTALLATION COSTS SHALL BE CONSIDERED INCIDENTAL TO THE OTHER BID ITEMS REQUIRED FOR

REMOVAL AND SALVAGE OF AGGREGATE SURFACING AND ALL RELATED INCIDENTAL ITEMS SHALL BE INCIDENTAL TO THE INSTALLATION OF THE RELATED DRAINAGE STRUCTURE INVOLVED. THE SUITABILITY OF

REMOVED AGGREGATE SURFACING FOR REUSE SHALL BE AT THE DISCRETION OF THE ENGINEER. 4. TOP OF ROAD WIDTH SHALL GENERALLY CONFORM TO DIMENSION SPECIFIED IN THE PLANS AND GENERALLY MATCH THE EXISTING ROAD WIDTH.

5. CLAY PLUGS SHALL BE CONSTRUCTED WITH SUITABLE CLAY SPOIL MATERIAL FROM COMMON EXCAVATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION OF THE CLAY

6. WHEN TWO OR MORE CULVERTS ARE INSTALLED IN LOCATIONS SHOWN ON THE PLANS, THERE SHALL BE A

7. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH MNMUTCD LAYOUT 6J-20

TOPSOIL WILL BE USED IN LEU OF AGGREGATE SURFACING FOR FIELD APPROACHES. TOP WIDTH FOR ALL FIELD APPROACHES WILL BE EQUAL TO 30'.

PRIOR TO CLOSING THE ROAD FOR CULVERT REMOVAL AND INSTALLATION. THE CONTRACTOR SHALL BE ALLOWED TO CLOSE THE ROADWAY FOR 3 CONSECUTIVE

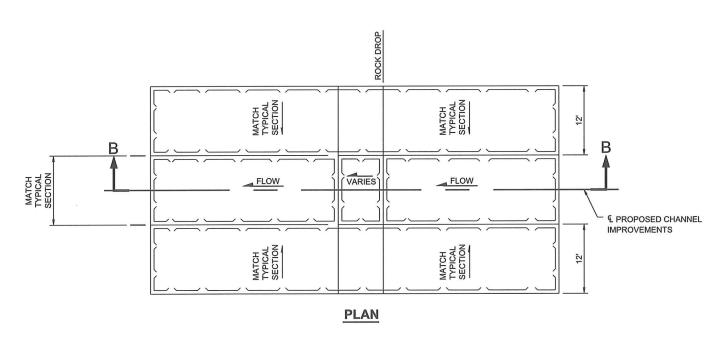
MINIMUM OF 3' BETWEEN CULVERTS.

CALENDAR DAYS.

PLUG SHALL BE INCIDENTAL TO THE INSTALLATION OF THE CORRESPONDING METAL PIPE BID ITEM. SUITABLE COMMON EXCAVATION MATERIAL SHALL BE PLACED AROUND THE CULVERT IN LIEU OF GRANULAR BEDDING

THE PIPE INSTALLATION.

TYPICAL CULVERT **INSTALLATION DETAIL** PROJECT NO. 1812-057



RIPRAP DROP STRUCTURE NOT TO SCALE

NOTES:

- RIPRAP SHALL BE MEASURED AND PAID BASED ON THE APPROPRIATE MNDOT RIPRAP GRADATION BID ITEM. MEASUREMENT WILL BE MADE BASED ON PLACED AREA TIMES PLAN DEPTH.
- COMMON EXCAVATION, GEOTEXTILE FILTER FABRIC, AND GRANULAR FILTER BEDDING MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE UNIT COST OF RIPRAP BID ITEM.

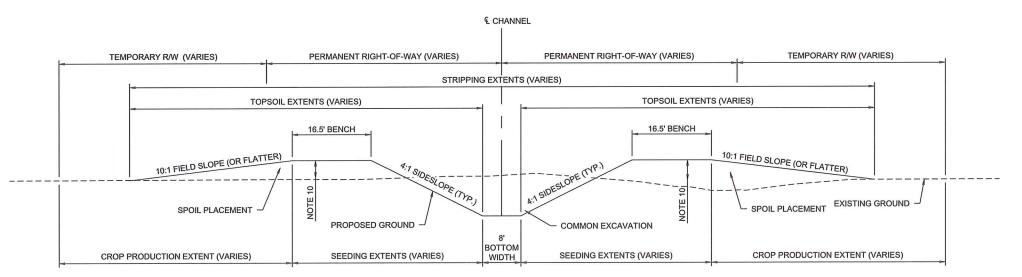
			I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a daily Licensed Professional Engineer under the laws of the State of Minnesota 4/13/2018	
Revision	Date	Ву	License No. 51125	



Fargo	Drawn by CJJ	Date 9-13-2018	
P: 701.237.5065 F: 701.237.5101	Checked by ZOH, JMW	Scale AS SHOWN	

COUNTY DITCH 80 TYPICAL SECTION (COUNTY DITCH 80 OUTLET TO STA. 186+52)

WEST



LATERAL 1 TYPICAL SECTION (STA. 1000+45 TO STA. 1025+98)

NOTES:

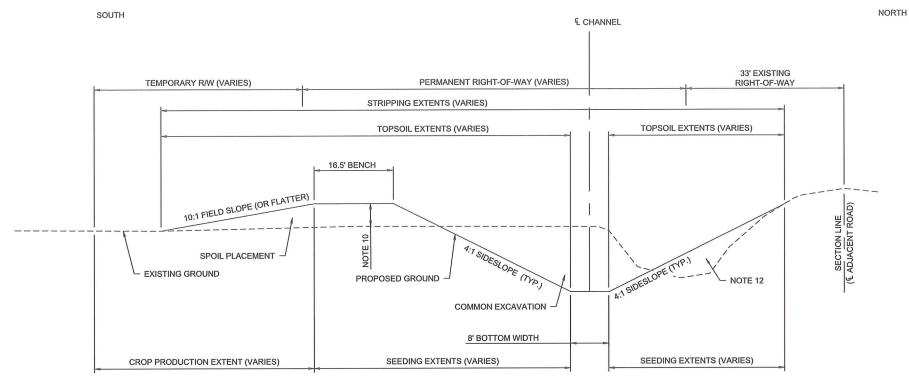
- 1. STRIPPING SHALL REMOVE ALL TOPSOIL AS REQUIRED BY THE ENGINEER.
- 2. TOPSOIL STRIPPING MATERIAL SHALL BE STOCKPILED WITHIN THE TEMPORARY R/W. TOPSOIL SHALL BE PLACED IN THE DESIGNATED TOPSOIL EXTENTS AFTER EXCAVATION AND PLACEMENT OF SPOIL MATERIAL IS COMPLETE.
- 3. TOPSOILING IN AREAS OUTSIDE OF DESIGNATED CROP PRODUCTION EXTENTS SHALL BE PLACE AT A UNIFORM DEPTH OF 4". THE REMAINING TOPSOIL SHALL BE PLACED UNIFORMLY IN THE DESIGNATED CROP PRODUCTION EXTENTS AS INDICATED IN THE TYPICAL SECTIONS.
- 4. ALL DISTURBED AREAS WITHIN THE PERMANENT AND EXISTING RIGHT-OF-WAY SHALL BE SEEDED EXCEPT CHANNEL BOTTOM (UNLESS OTHERWISE NOTED).
- 5. COMMON EXCAVATION SHALL BE PAID FOR BASED ON PLAN QUANTITY AND WILL NOT BE MEASURED FOR PAYMENT.
- 6. SPOIL PLACEMENT SHALL BE CONSIDERED INCIDENTAL TO THE "COMMON EXCAVATION" BID ITEM.
- SEEDING AND MULCHING WILL BE PAID FOR BASED ON PLAN QUANTITY AND WILL NOT BE MEASURED FOR PAYMENT.
- 8. STRIPPING AND TOPSOILING SHALL BE CONSIDERED INCIDENTAL TO THE "COMMON EXCAVATION" BID ITEM.
- 9. THE CONTRACTOR SHALL MAKE THE ENGINEER AWARE OF ANY CROP DAMAGES A MINIMUM OF ONE WEEK BEFORE SUCH DAMAGES WILL OCCUR. ANY CROP DAMAGES ARE SUBJECT TO ENGINEER APPROVAL.
- 10. WHERE SPOIL IS PLACE ON BOTH SIDES OF THE CHANNEL, SPOIL HEIGHTS SHALL BE WITHIN 0.2 FEET OF THE OTHER SIDE OF THE CHANNEL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF DIRECTED BY THE ENGINEER, SPOIL WILL BE REQUIRED TO BE MOVED LATERALLY ALONG THE CHANNEL TO MINIMIZE CREST AND SAG POINTS IN THE PLACED SPOIL
- 11. ADJACENT ROADS SHALL NOT BE DISTURBED. ANY DISTURBED AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH REPAIR OF DISTURBED AREAS OF THE ADJACENT ROAD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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No.	Revision	Date	Ву	License No. 51125

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-	Engineering Inc.	

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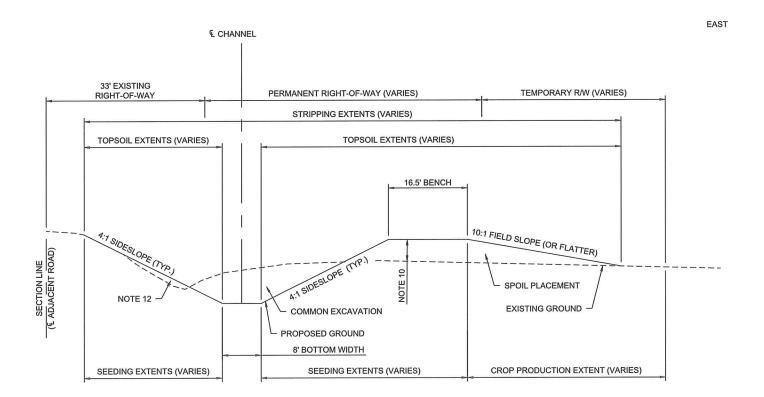
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LATERAL 2 TYPICAL SECTION (STA. 2000+85 TO STA. 2053+12)

NOTIOS

WEST



LATERAL 2 TYPICAL SECTION (STA. 2053+72 TO STA. 2079+14)

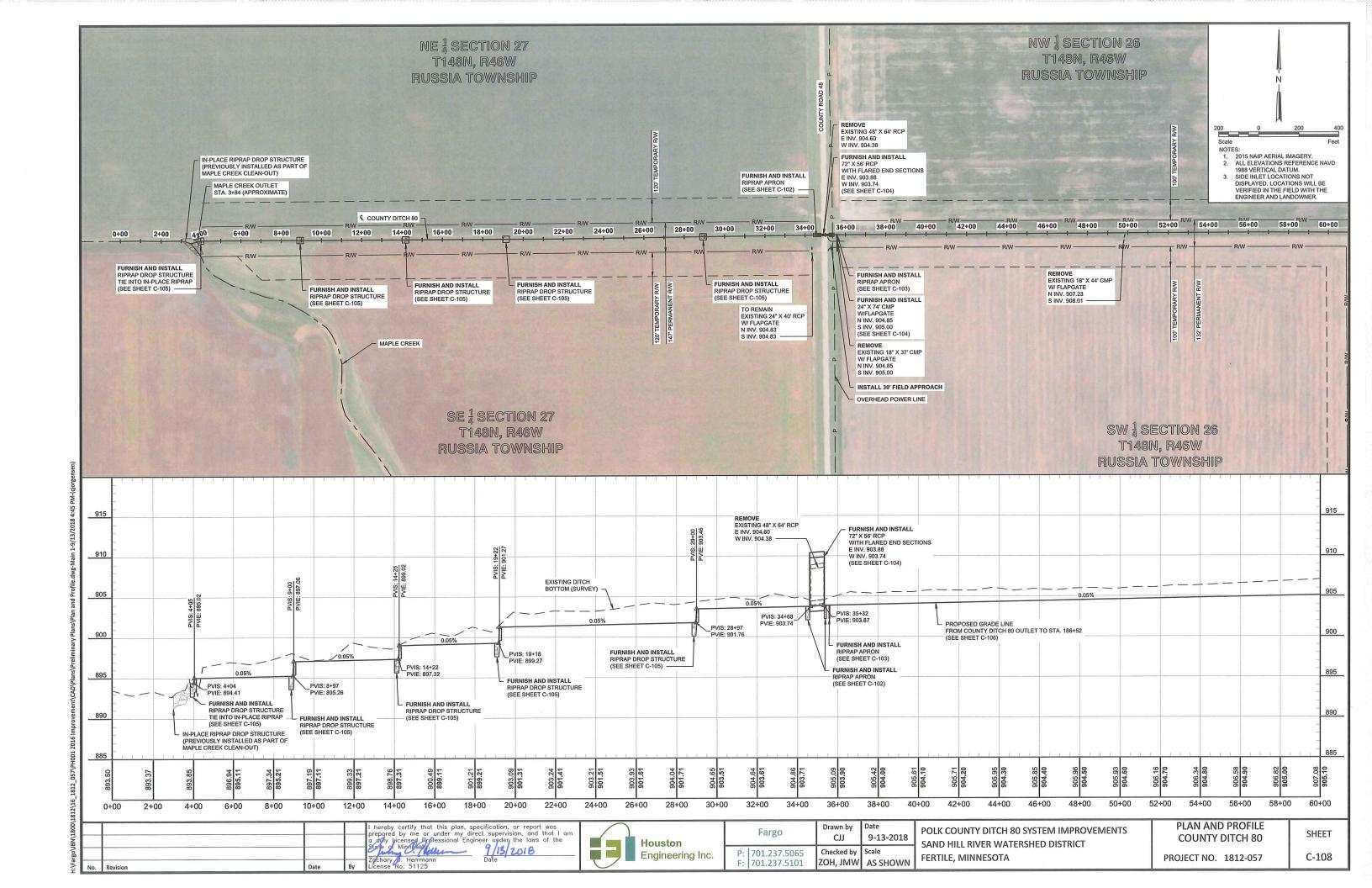
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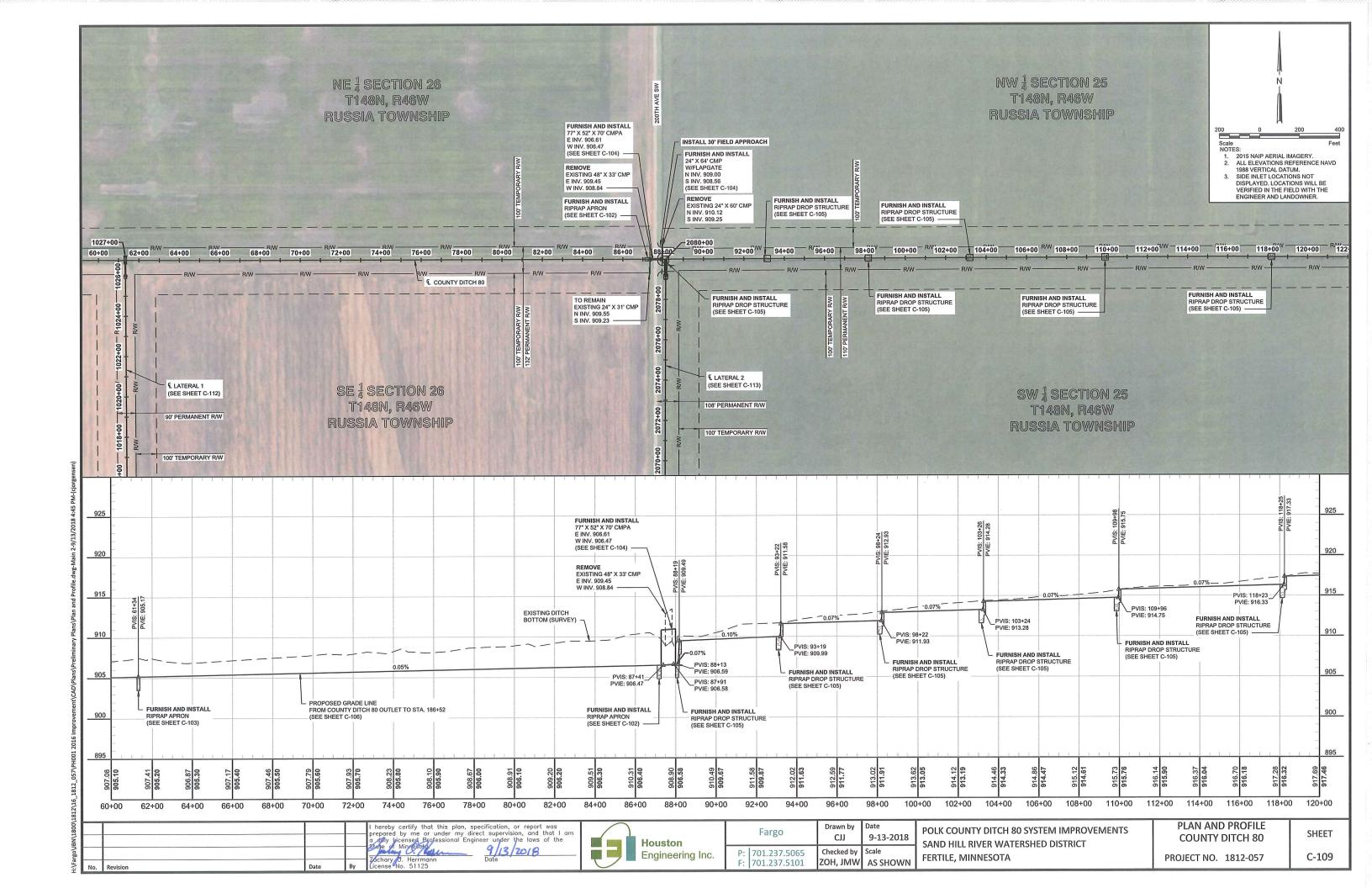
- 1. STRIPPING SHALL REMOVE ALL TOPSOIL AS REQUIRED BY THE ENGINEER.
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 TOPSOIL SHALL BE PLACED IN THE DESIGNATED TOPSOIL EXTENTS AFTER EXCAVATION AND
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- 3. TOPSOILING IN AREAS OUTSIDE OF DESIGNATED CROP PRODUCTION EXTENTS SHALL BE PLACE AT A UNIFORM DEPTH OF 4". THE REMAINING TOPSOIL SHALL BE PLACED UNIFORMLY IN THE DESIGNATED CROP PRODUCTION EXTENTS AS INDICATED IN THE TYPICAL SECTIONS.
- 4. ALL DISTURBED AREAS WITHIN THE PERMANENT AND EXISTING RIGHT-OF-WAY SHALL BE SEEDED EXCEPT CHANNEL BOTTOM (UNLESS OTHERWISE NOTED).
- COMMON EXCAVATION SHALL BE PAID FOR BASED ON PLAN QUANTITY AND WILL NOT BE MEASURED FOR PAYMENT.
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- 10. PROPOSED GROUND HEIGHTS SHALL NOT EXCEED THE ADJACENT TOWNSHIP ROAD ELEVATION MINUS 6" UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF DIRECTED BY THE ENGINEER, SPOIL WILL BE REQUIRED TO BE MOVED LATERALLY ALONG THE CHANNEL TO MINIMIZE CREST AND SAG POINTS IN THE PLACED SPOIL.
- 11. ADJACENT ROADS SHALL NOT BE DISTURBED. ANY DISTURBED AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH REPAIR OF DISTURBED AREAS OF THE ADJACENT ROAD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 12. ROAD SLOPES WILL BE CONSTRUCTED OF SUITABLE COMMON EXCAVATION MATERIAL. ALL SUITABLE MATERIAL WILL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

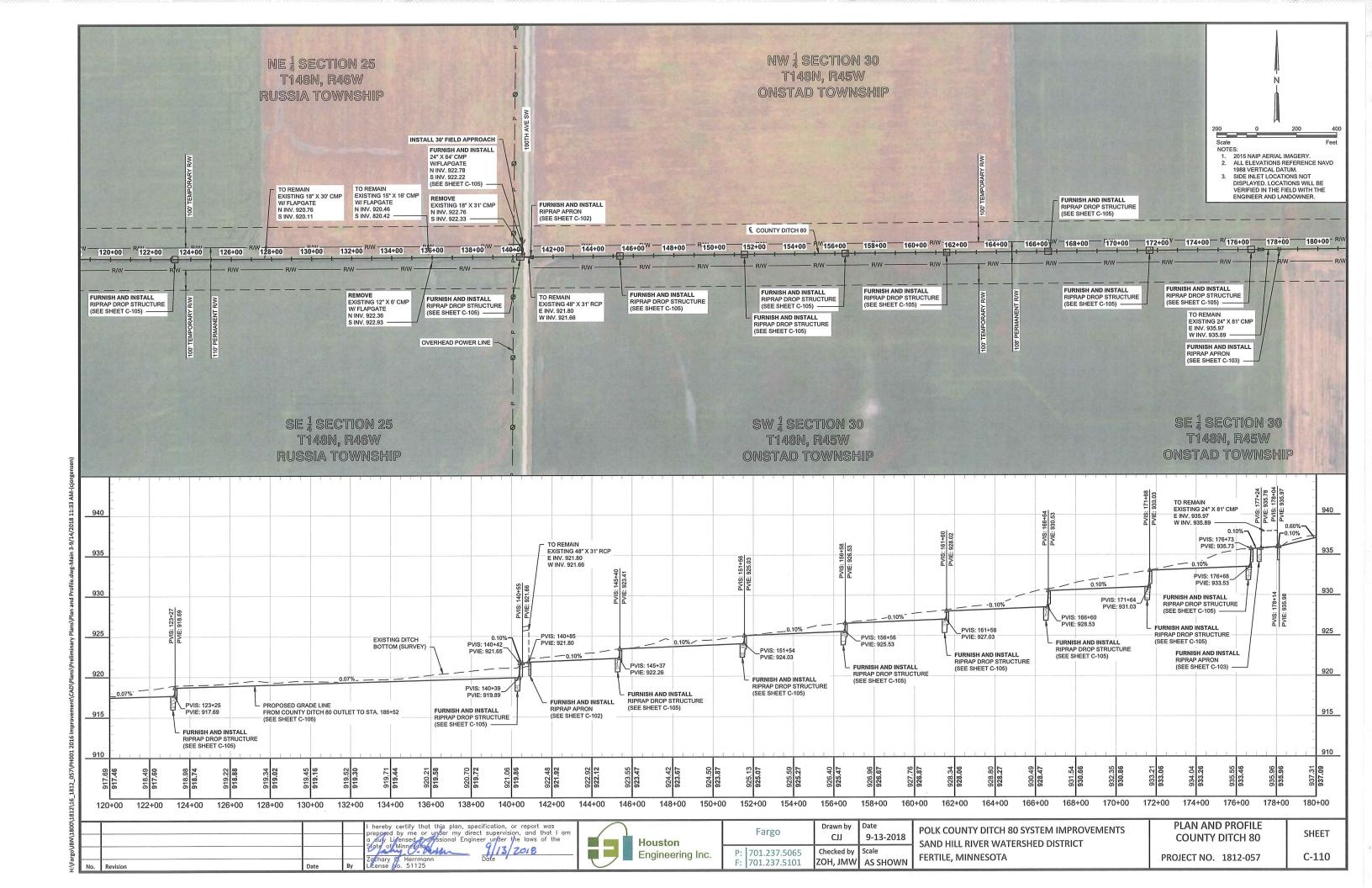
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				Zichary O. Herrmann Date
0.	Revision	Date	Ву	License No. 51125

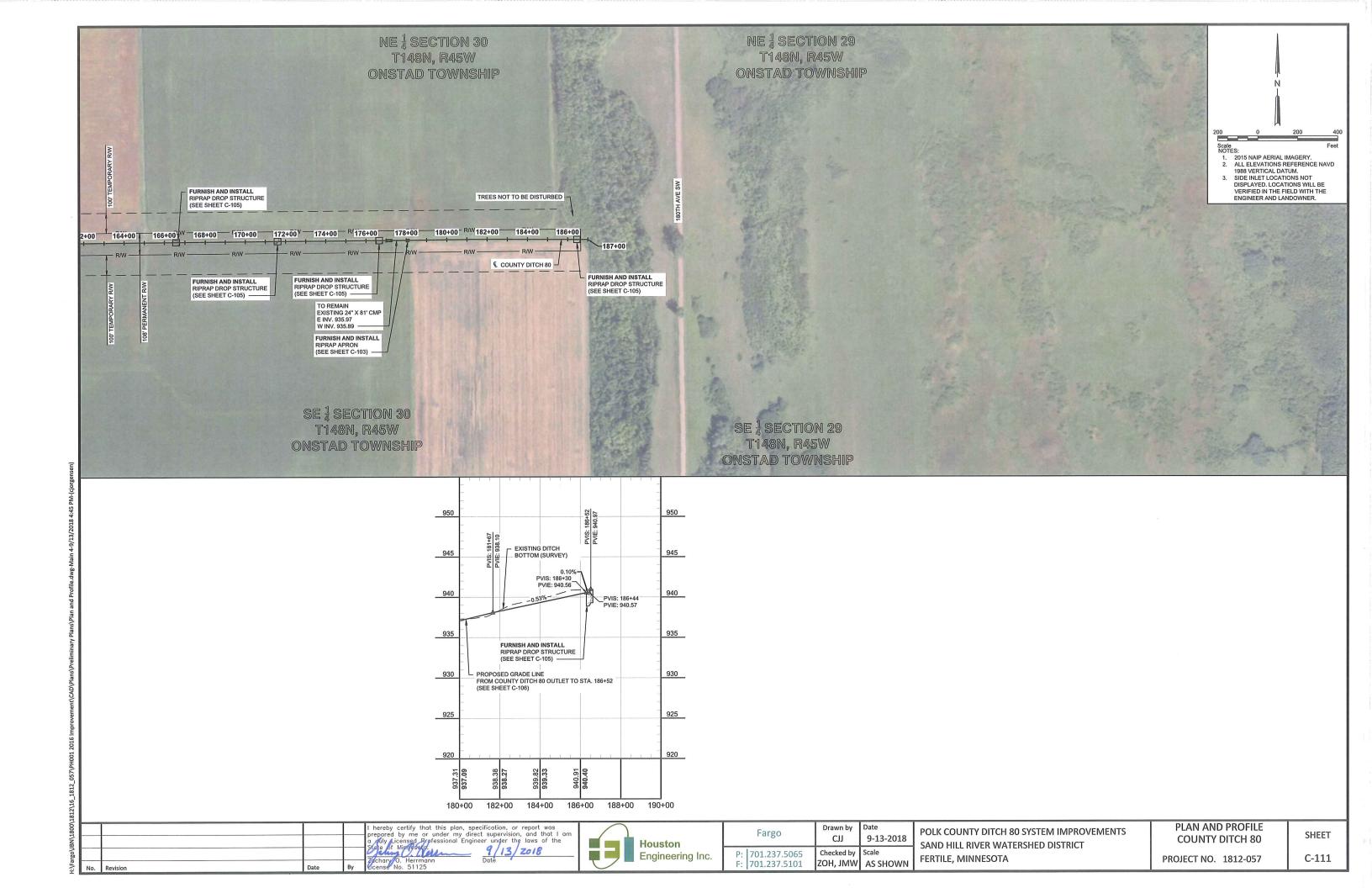
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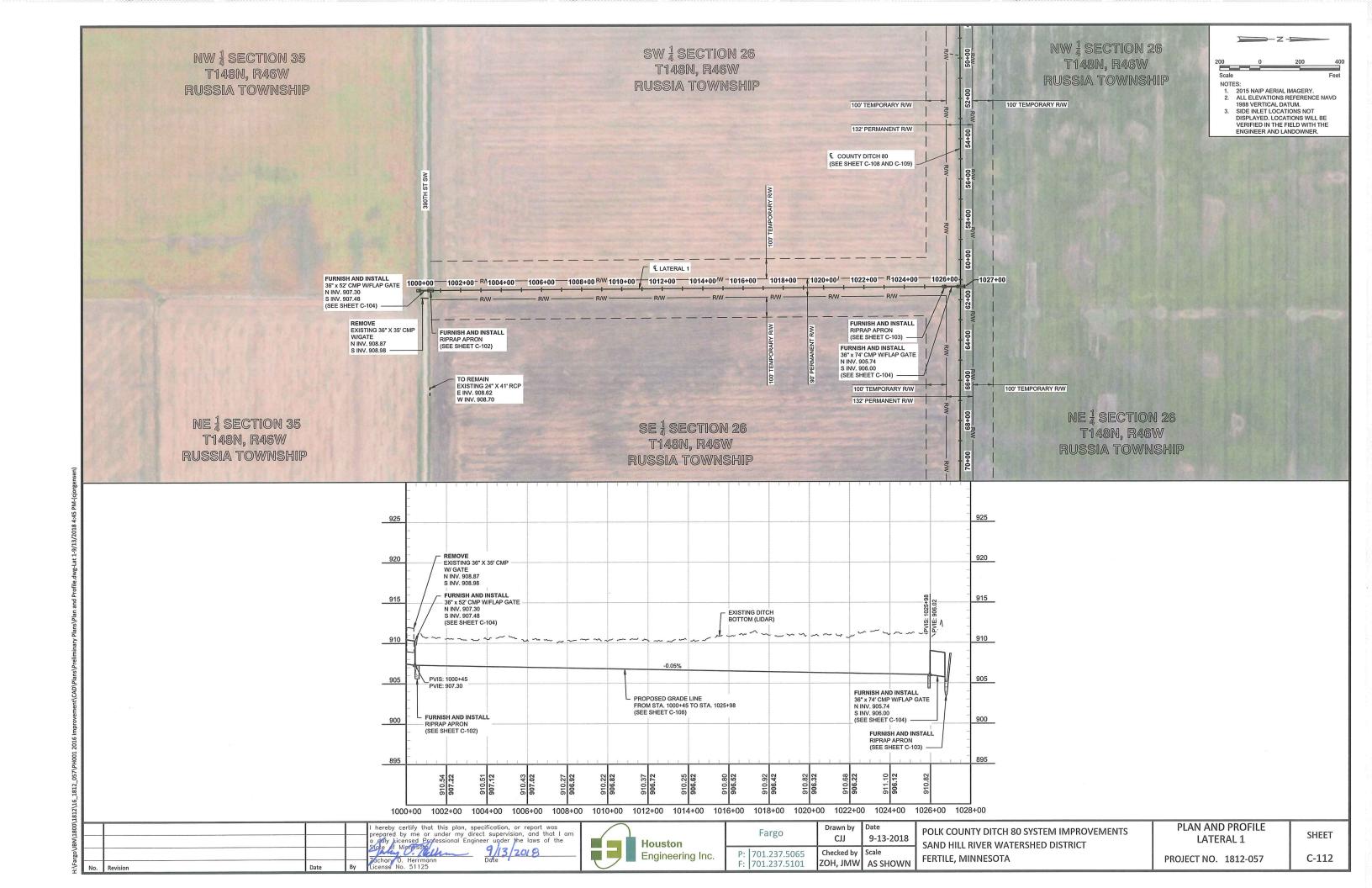
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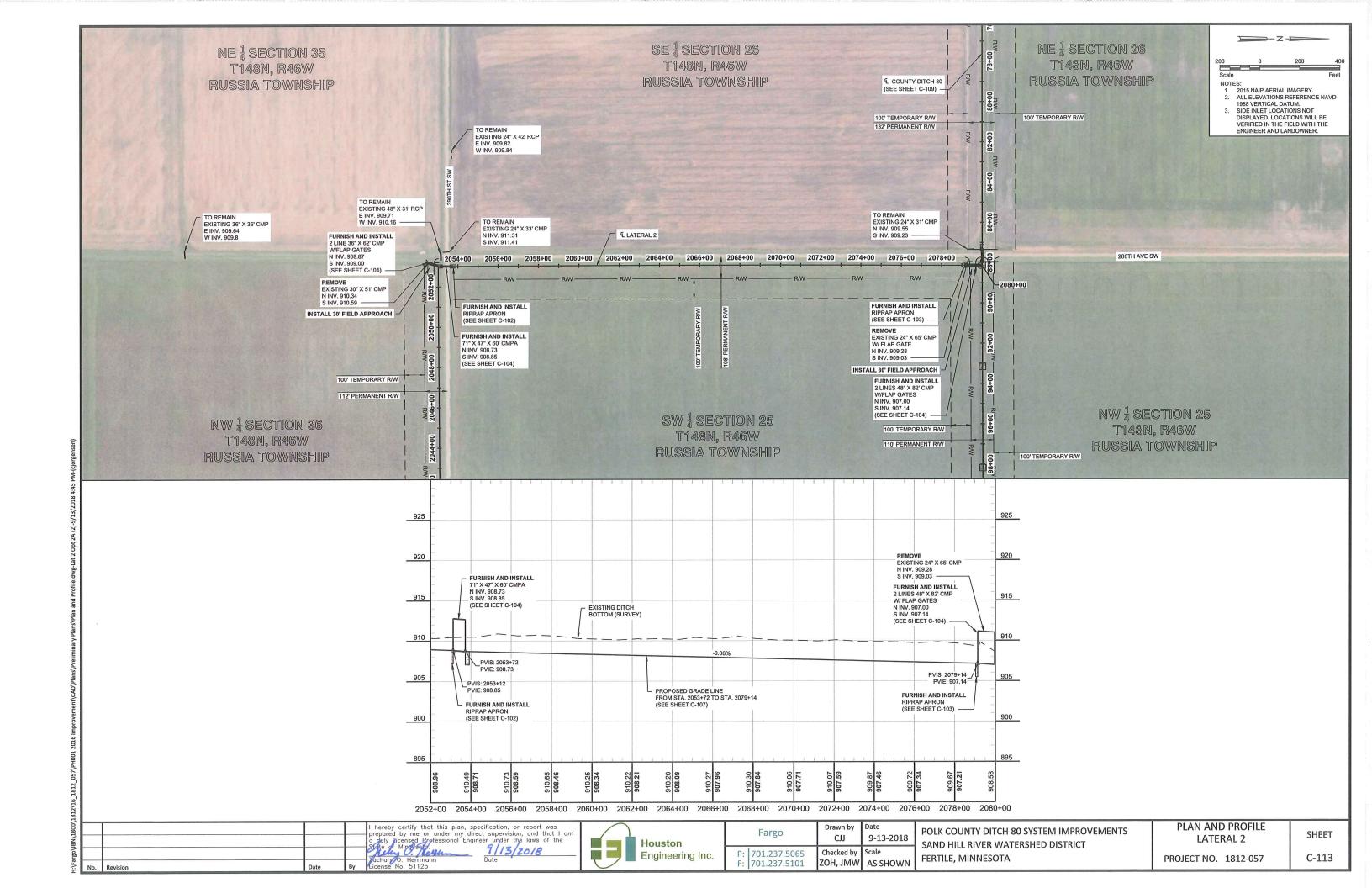


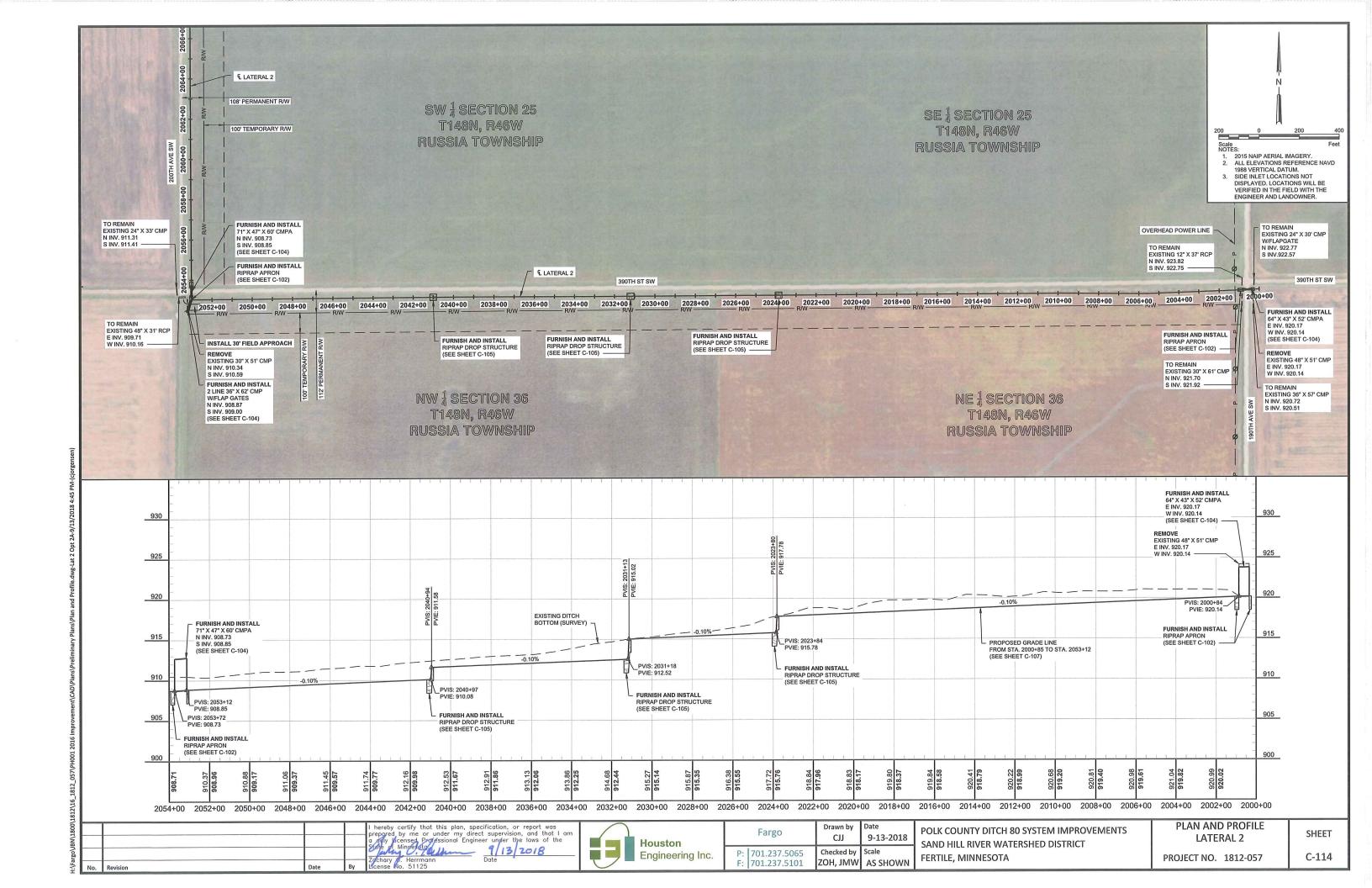


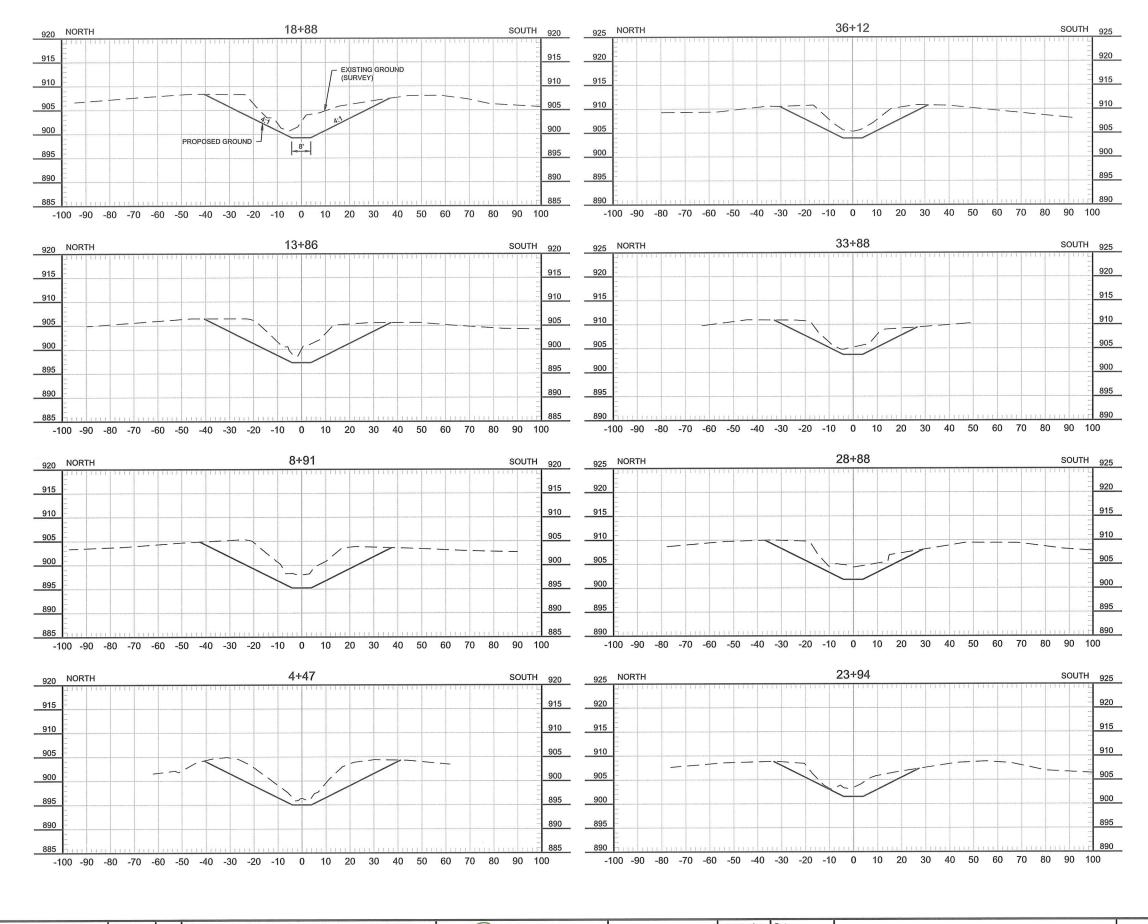












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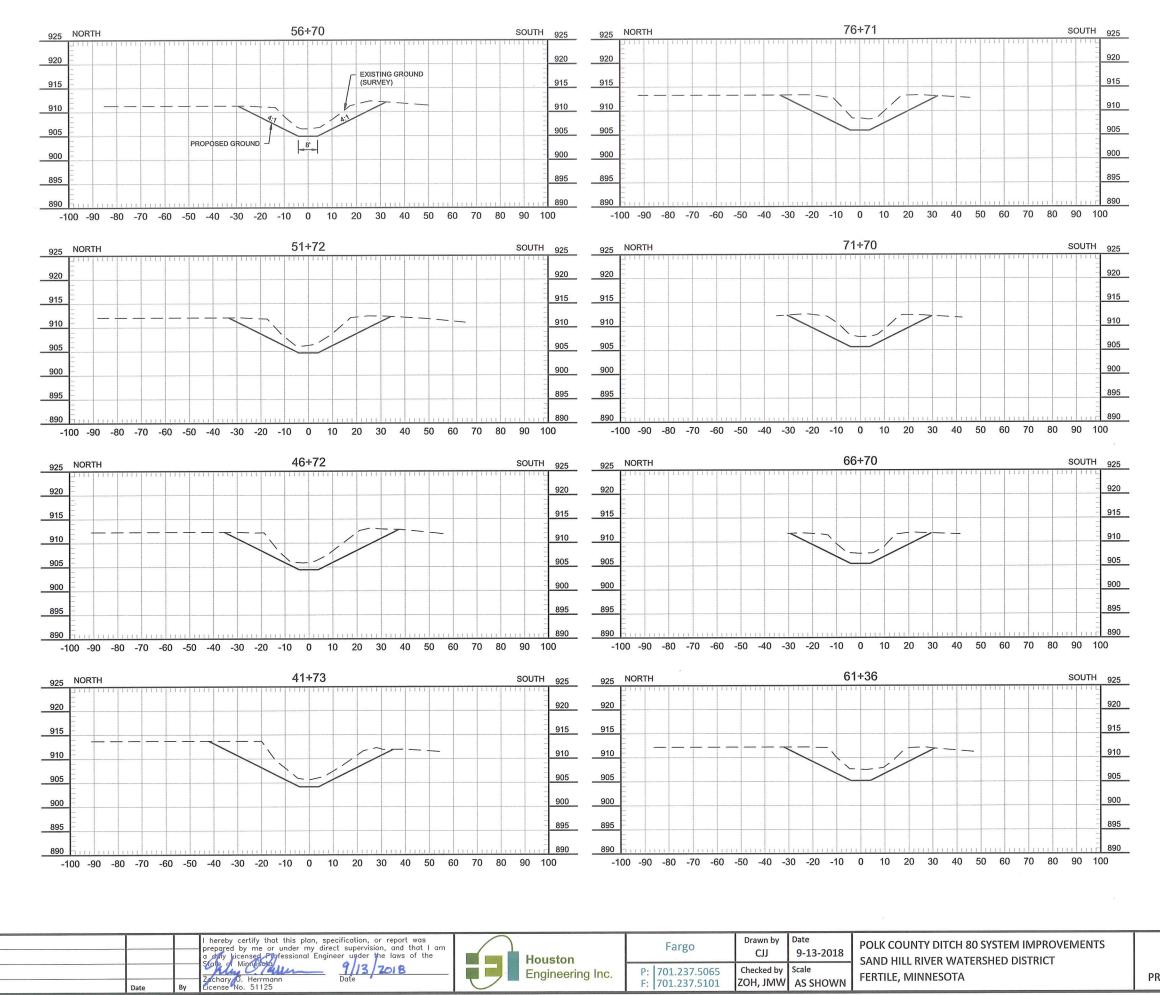
Houston Engineering Inc. Fargo

P: 701.237.5065

701.237.5101

POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

CROSS SECTIONS
COUNTY DITCH 80
PROJECT NO. 1812-057

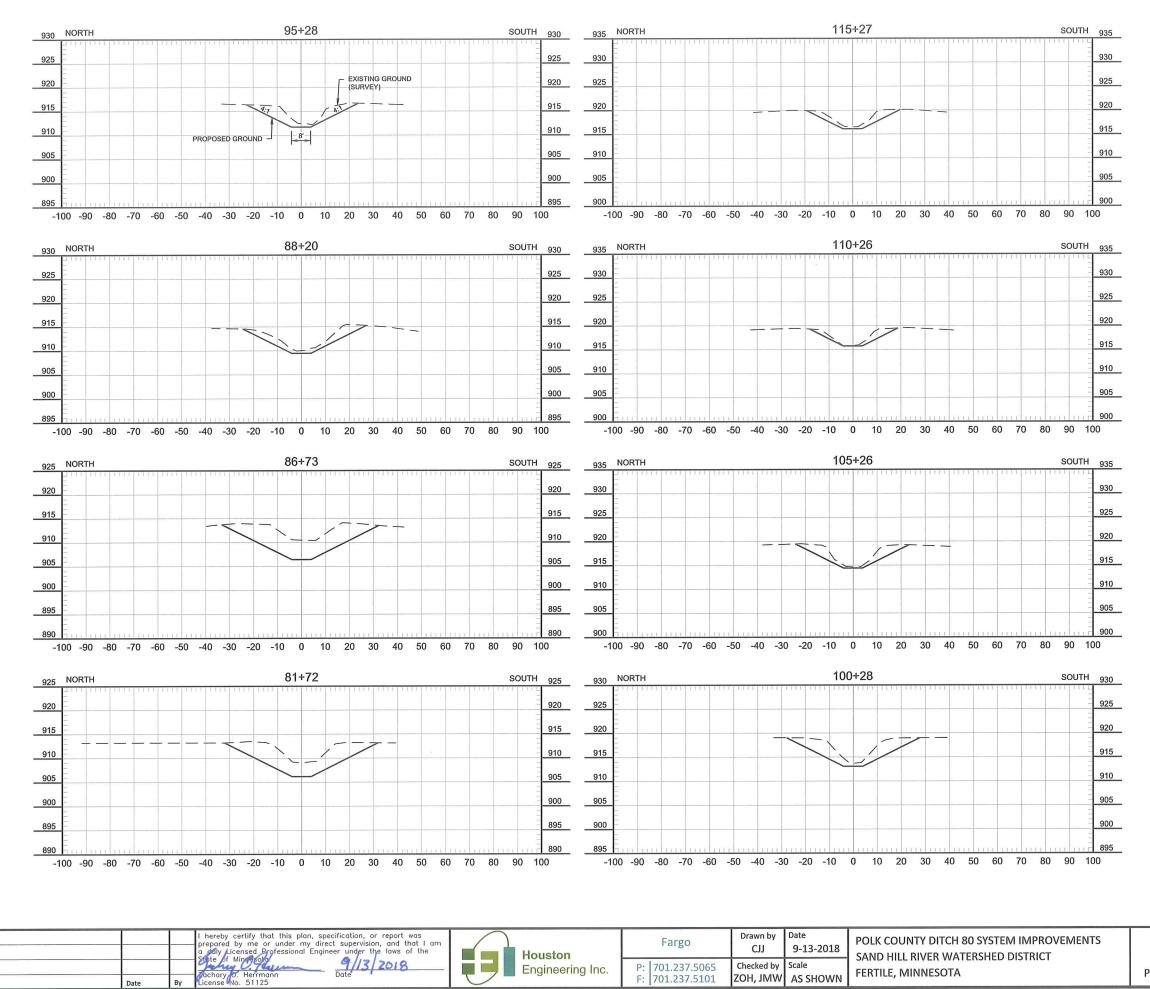


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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT FERTILE, MINNESOTA

CROSS SECTIONS COUNTY DITCH 80 PROJECT NO. 1812-057

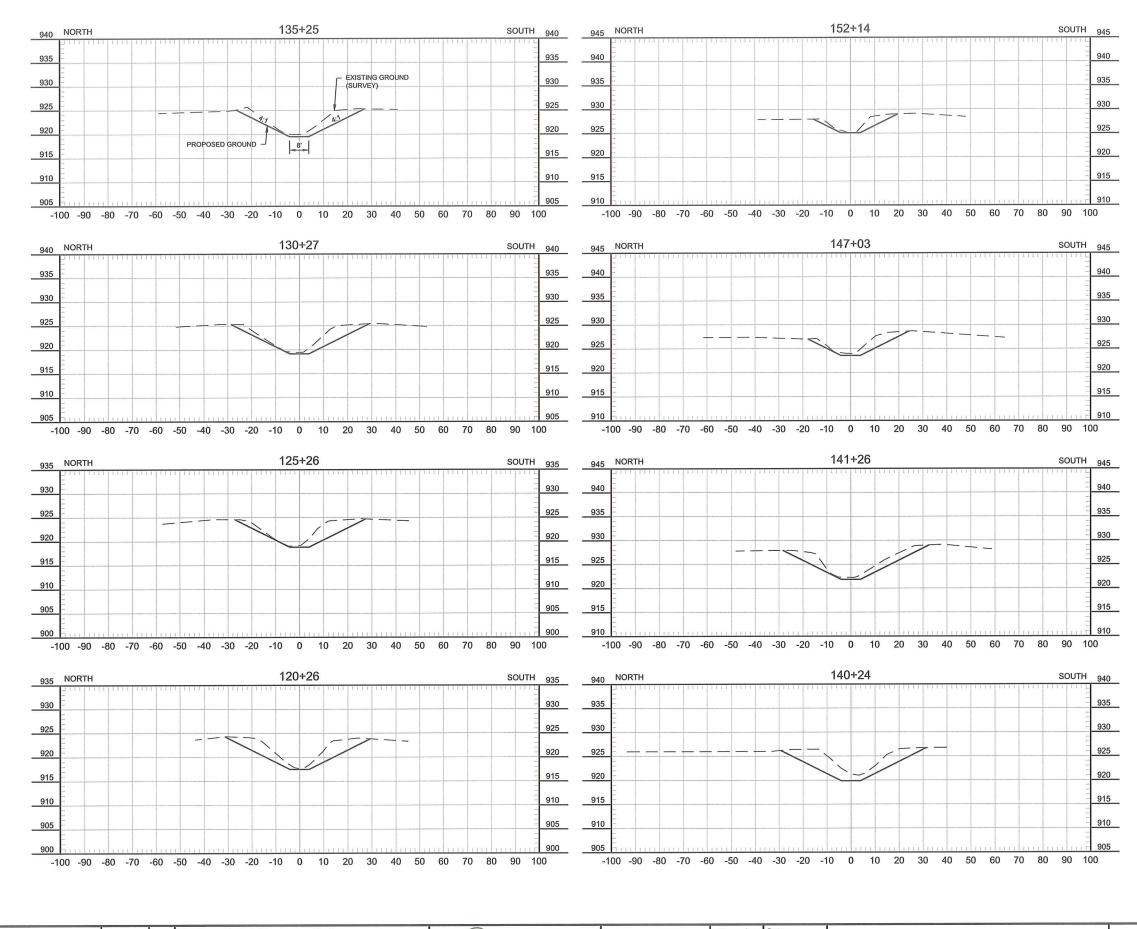


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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT FERTILE, MINNESOTA

CROSS SECTIONS COUNTY DITCH 80 PROJECT NO. 1812-057



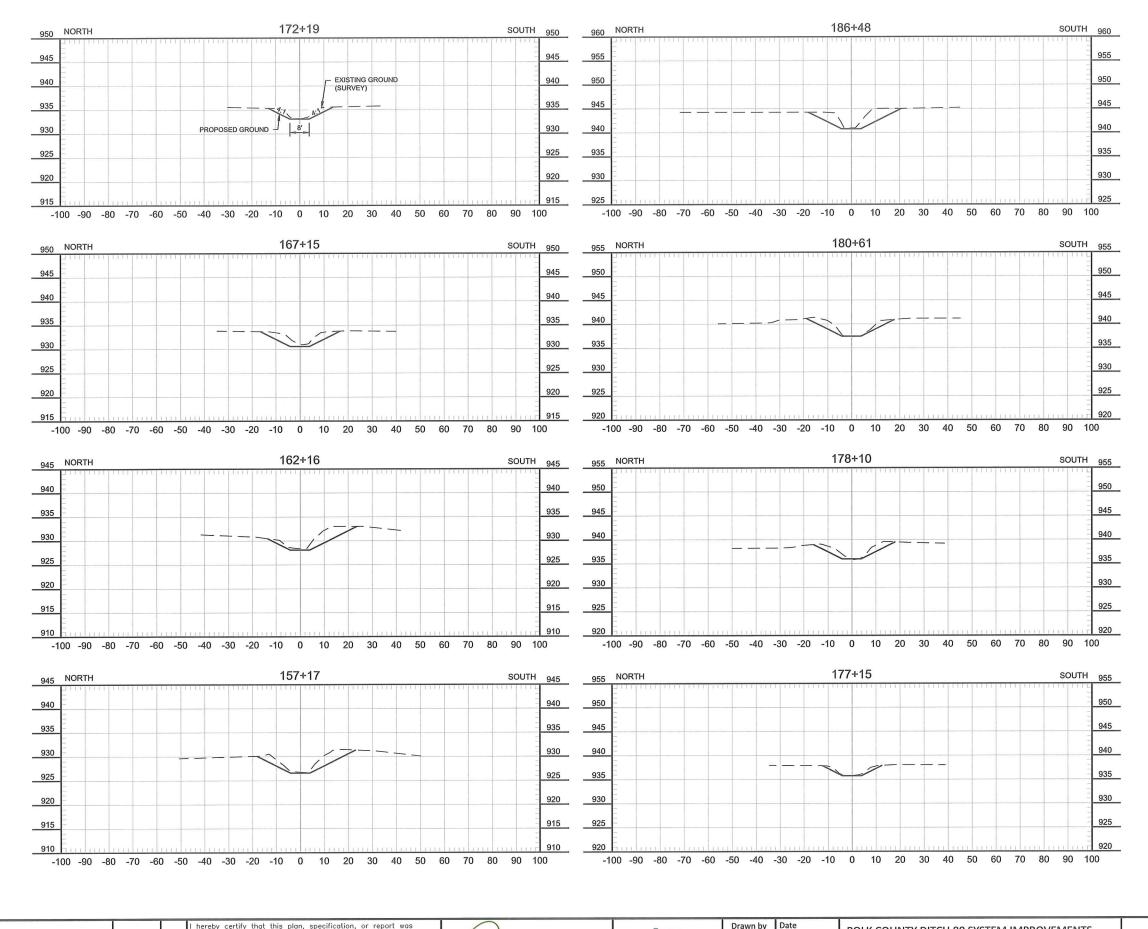
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 POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

CROSS SECTIONS COUNTY DITCH 80 PROJECT NO. 1812-057



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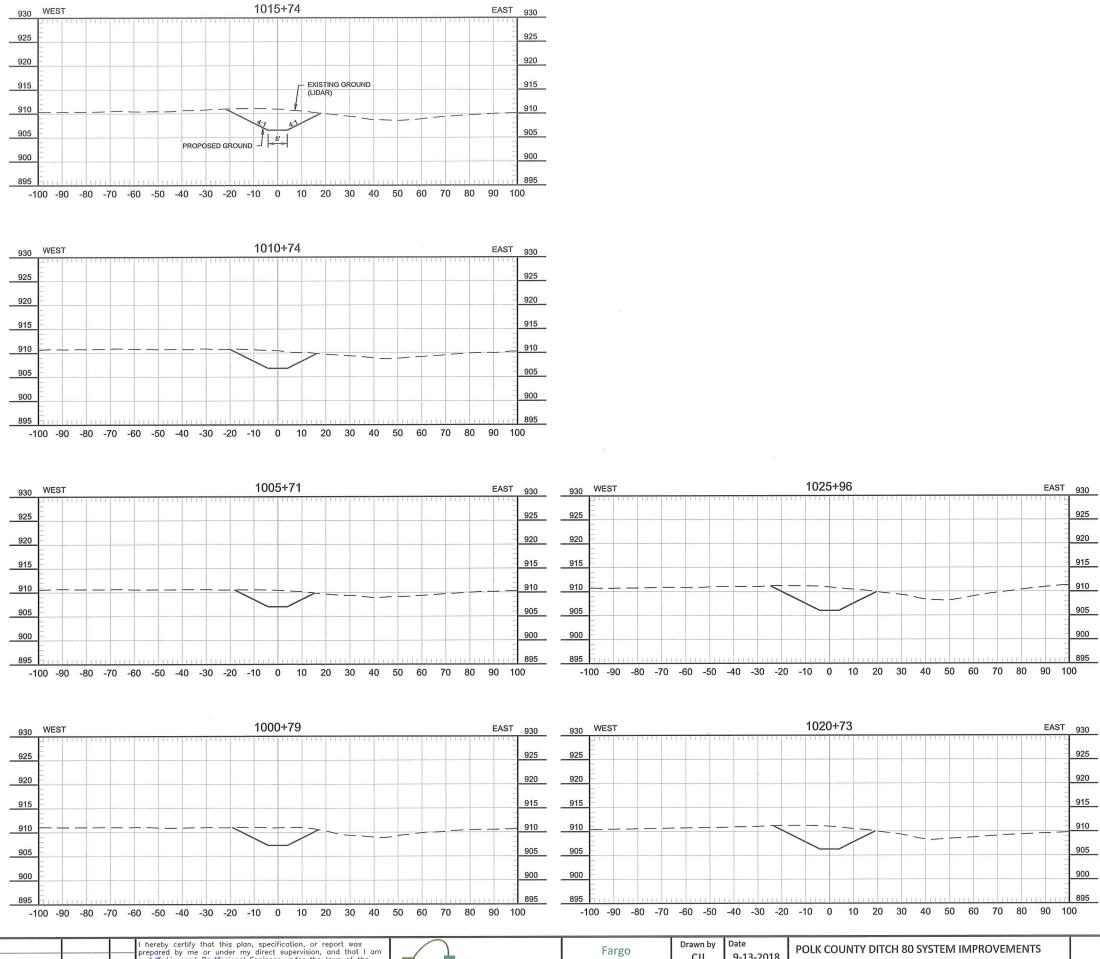
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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

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Zachary D. Herrmann Date
License No. 51125



POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

CROSS SECTIONS LATERAL 1 PROJECT NO. 1812-057

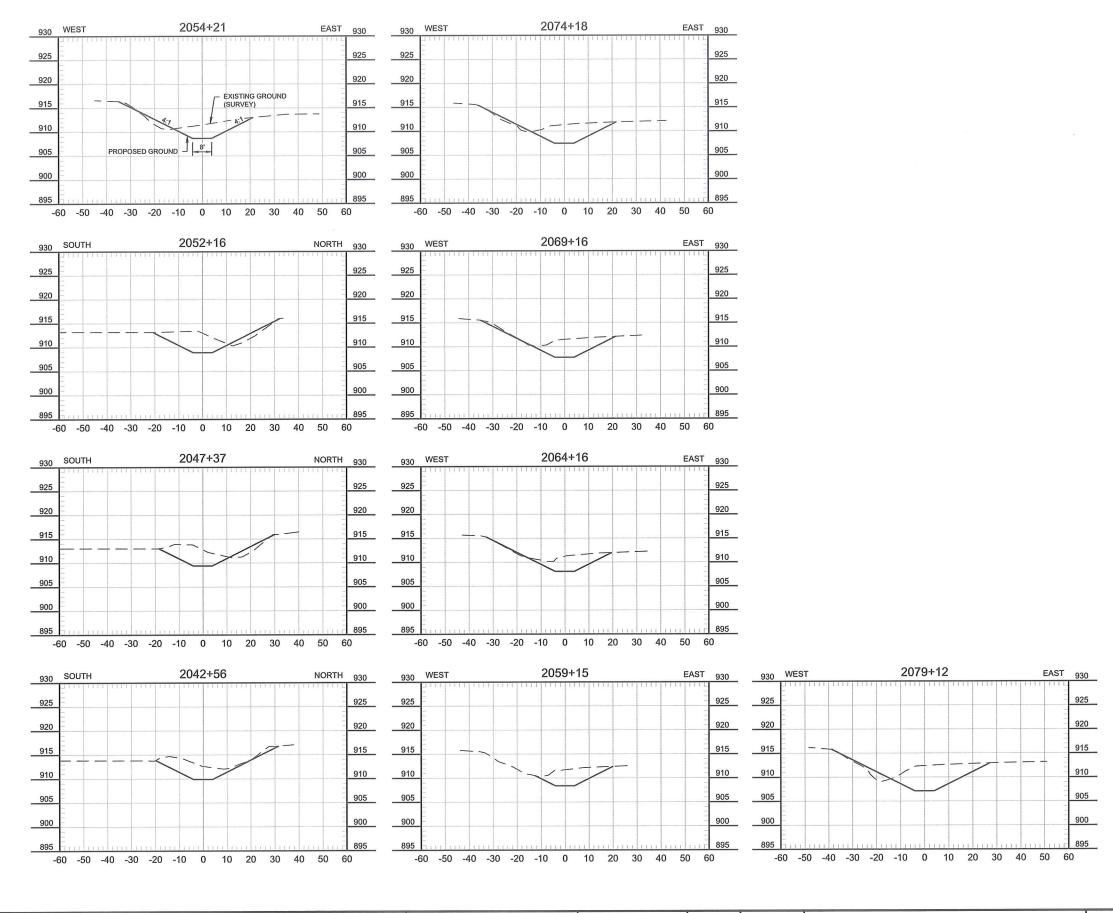
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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS SAND HILL RIVER WATERSHED DISTRICT FERTILE, MINNESOTA CROSS SECTIONS LATERAL 2 PROJECT NO. 1812-057



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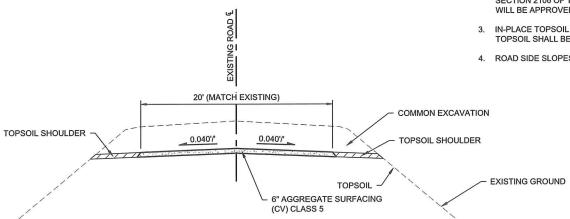
P: 701.237.5065 F: 701.237.5101 POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

CROSS SECTIONS
LATERAL 2
PROJECT NO. 1812-057

PROPOSED TYPICAL 190TH AVE SW ROAD SECTION NOT TO SCALE

NOTES:

- 1. EXISTING ROAD AGGREGATE SURFACING MATERIAL SHALL BE SALVAGED, STOCKPILED, AND REINSTALLED ON
- 2. THE ROAD RAISE SHALL BE CONSTRUCTED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF SECTION 2106 OF THE 2018 MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL SUITABLE MATERIAL WILL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
- 3. IN-PLACE TOPSOIL SHALL BE REMOVED AND STOCKPILED IN THE CONSTRUCTION EXTENTS. STOCKPILED TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED IN THE TOPSOIL AREAS.
- 4. ROAD SIDE SLOPES SHALL BE SEEDED AFTER TOPSOIL HAS BEEN DISTRIBUTED.



PROPOSED TYPICAL 390TH ST SW ROAD SECTION NOT TO SCALE

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No.	Revision	Date	Ву	License No. 51125	L

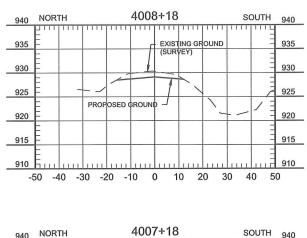
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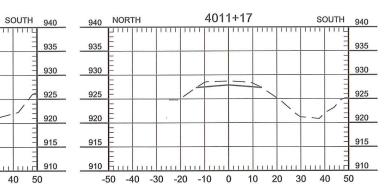
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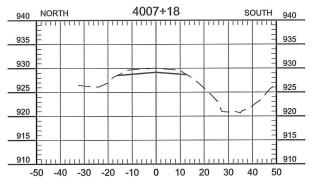
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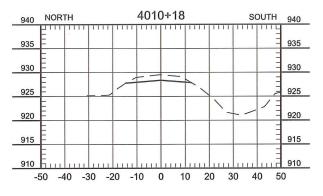
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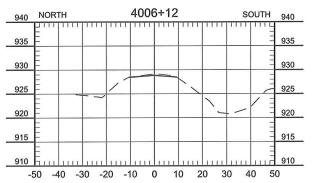


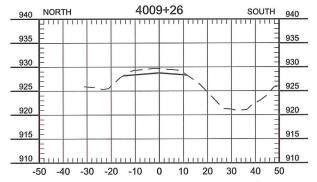












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Revision

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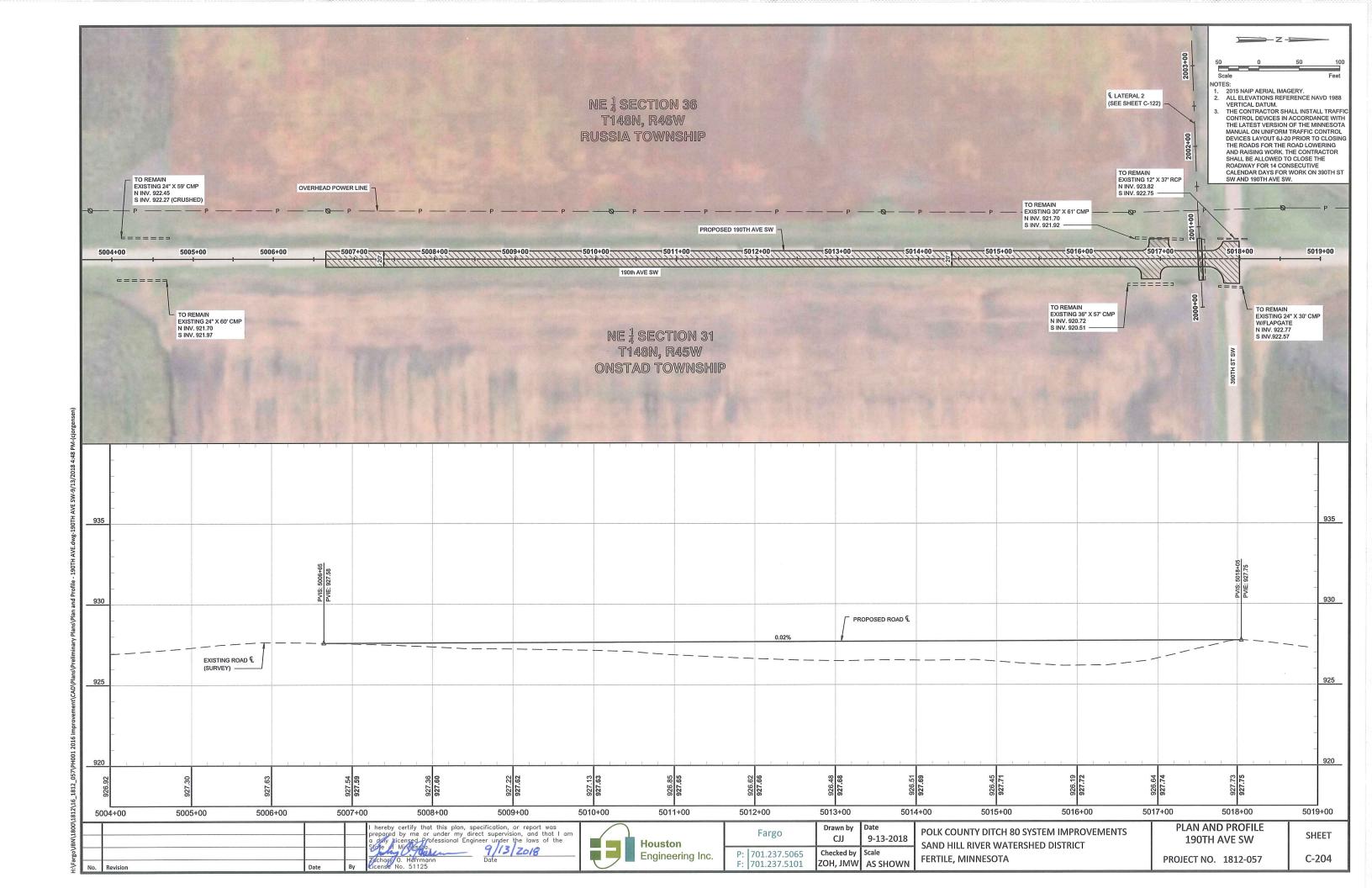
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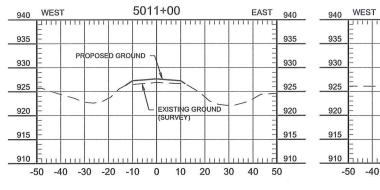
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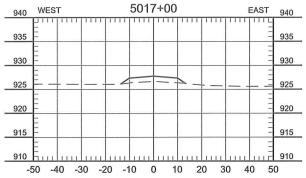


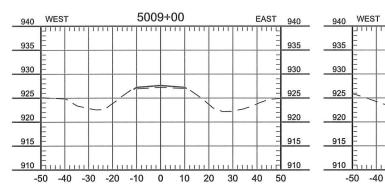
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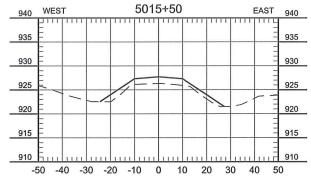
POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
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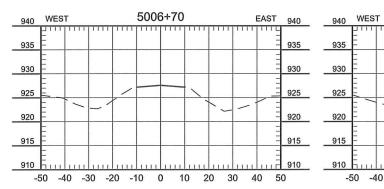


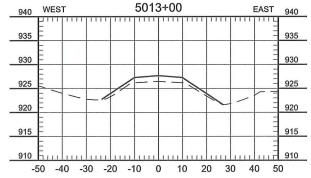












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Revision Date By Creamy No. 51125



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POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS	
SAND HILL RIVER WATERSHED DISTRICT	
ERTILE, MINNESOTA	

SHEET

C-205

PROJECT DESCRIPTION

THE POLK COUNTY DITCH 80 PROJECT CONSISTS OF CHANNEL EXCAVATION AND INSTALLATION OF SIDE INLET CULVERTS, FLAP GATES, AND ROCK DROP STRUCTURES. THE PROJECT IS LOCATED WITHIN ONSTAD AND RUSSIA TOWNSHIP, POLK COUNTY, MINNESOTA.

THE EXISTING SITE IS PERVIOUS CONSISTING OF THE COUNTY DITCH, ADJACENT EXISTING SPOIL BANK, AND UNDEVELOPED AGRICULTURAL LAND. THE SITE GENERALLY DRAINS TO THE NORTH AND WEST. THE PROPOSED SITE WILL BE PERVIOUS CONSISTING OF THE COUNTY DITCH, SPOIL BANKS, AND VEGETATED BUFFER STRIP. THE PROJECT WILL NOT RESULT IN ANY INCREASE IN IMPERVIOUS AFFAS

THE ON-SITE SOILS ARE ANTICIPATED TO BE CLAY LOAM OR SILTY CLAY LOAM TYPICAL FOR THE AREA AND SHOULD BE ONLY MODERATELY SUSCEPTIBLE TO WIND EROSION IF KEPT MOIST. POLK COUNTY DITCH 80 PROJECT HAS A DRAINAGE AREA OF 4.2 SQUARE MILES. THE DISCHARGE POINT FOR THE PROJECT IS THE SHRWD DITCH PROJECT 17 AND IS NOT AN IMPAIRED WATER FOR ANY CONSTRUCTION-RELATED ACTIVITIES. THE PROJECT WILL DISTURB APPROXIMATELY 75.8 ACRES OF LAND. THERE WILL BE NO OSE-SITE BORDOW AREAS THERE ARE NO WET AND AREAS WITHIN THE PROJECT LIMITS

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL SPECIFICATIONS

THE CONTRACTOR SHALL SUBMIT A NOTICE OF INTENT AND EROSION CONTROL PLAN TO THE OWNER FOR REVIEW 5 DAYS PRIOR TO THE START OF CONSTRUCTION

THE CONTRACTOR AND THE OWNER ARE JOINTLY REQUIRED TO SUBMIT TO THE MPCA A NOTICE OF INTENT (NOI) AT LEAST 7 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION AT THE SITE. THE APPLICATION SHALL BE SUBMITTED ONLINE AT WWW.PCA.STATE.MN.US.

THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE SWPPP AS REQUIRED BY THE MPCA. THE PLAN PROVIDES STRUCTURAL CONTROLS AND/OR STABILIZATION PRACTICES DESIGNED TO MINIMIZE POLLUTANTS IN THE STORMWATER DISCHARGE (INCLUDING SOIL SEDIMENT), TO MINIMIZE EROSION ON THE SITE, AND TO ELIMINATE TRACKING OF SOIL OFF SITE BY VEHICLES.

A REGULAR PROGRAM OF INSPECTION AND MAINTENANCE OF THE EROSION AND POLLUTION CONTROLS ARE REQUIRED BY THE MPCA
BASED ON THESE INSPECTIONS, THE EROSION AND POLLUTION CONTROLS WILL BE MAINTAINED, MAY BE MODIFIED, AND MAY BE
SUPPLEMENTED BY ADDITIONAL MEASURES IN ORDER TO ADEQUATELY MINIMIZE POLLUTANTS.

THE CONTRACTOR AND THE OWNER ARE JOINTLY REQUIRED TO SUBMIT TO THE MPCA A NOTICE OF TERMINATION (NOT) AFTER THE SITE HAS BEEN STABILIZED, CONSTRUCTION HAS ENDED, AND TEMPORARY EROSION CONTROL MEASURES HAVE BEEN REMOVED.

STORMWATER MANAGEMENT FEATURES IN ADDITION TO THOSE SHOWN ON THE PLANS SHALL BE PLACED, MONITORED, MAINTAINED, AND REMOVED AT THE DISCRETION AND DIRECTION OF THE ENGINEER AS NECESSARY.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING IS A SUGGESTED SEQUENCE OF CONSTRUCTION FOR THE INSTALLATION OF EROSION AND SEDIMENT CONTROLS AND IS NOT INTENDED TO BE A DEFINITIVE CONSTRUCTION SCHEDULE.

- 1. INSTALL TEMPORARY CONSTRUCTION ENTRANCES, AS REQUIRED.
- 2. INSTALL TEMPORARY SEDIMENT CONTROL DITCH CHECKS AT LOCATIONS SHOWN ON SHEET C-302
- 3. EXCAVATE POLK COUNTY DITCH 80 TO DESIGN WIDTH AND SLOPE AND PLACE SPOIL MATERIAL IN BANKS ALONG THE DITCH.
- 4. INSTALL ROCK DROP STRUCTURES AT REQUIRED LOCATIONS.
- 5. INSTALL TEMPORARY SOIL STABILIZATION ON DISTURBED AREAS, AS NEEDED.
- 6. COMPLETE FINAL GRADING
- 7. MULCH AND SEED DISTURBED AREAS AS SPECIFIED WITHIN 14 DAYS OF COMPLETION OF TOPSOIL PLACEMENT AND GRADING.
- 8. RESEED AREAS DISTURBED BY REMOVAL ACTIVITIES.

STORMWATER POLLUTION PREVENTION PLAN CONTACT

THE STORMWATER POLLUTION PREVENTION PLAN CONTACT SHALL BE AN INDIVIDUAL WHO IS KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION AND SEDIMENT CONTROL BMPS, WHO WILL OVERSEE THE IMPLEMENTATION AND THE INSTALLATION OF THE SWPPP AND INSPECTION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL BMPS BEFORE AND DURING CONSTRUCTION. THE SWPPP PLAN CONTACT IS LISTED BELOW:

SWPPP C	ONTACT: _	ZACH HERRMANN	PHONE:	701-237-5065
TITLE: PROJEC		T MANAGER		

GENERAL CONTRACTOR CONTACT INFORMATION (OPERATOR)

THE CONTRACTOR (OPERATOR) AS SHOWN ON THE NOTICE IS LISTED BELOW. THE CONTRACTOR SHALL HAVE OPERATIONAL CONTROL OF THE SWPPP AND IS RESPONSIBLE FOR ITS IMPLEMENTATION.

CONTACT DEDCON DUONE

OPERATOR	CONTACT PERS	ON CONTAC	I PERSON PHONE	
MAILING ADDRESS	CITY	STATE/PROVINCE	ZIP CODE	

"I , CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN. BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

PRINTED NAME OF APPLICANT	TITLE
SIGNATURE OF APPLICANT	DATE

SPILL PREVENTION NOTES

HOUSEKEEPIN

- 1. ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR.
- 2. EXCEPT FOR BULK MATERIALS, THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS.
- 3. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED.
- 4. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 5. WHEN POSSIBLE, ALL PRODUCTS WILL BE COMPLETELY USED BEFORE PROPERLY DISPOSING OF THE CONTAINERS OFF SITE.
- 6. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED.
- 7. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIAL STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
- ${\bf 8.\,DUST\,\,GENERATED\,\,WILL\,\,BE\,\,CONTROLLED\,\,IN\,\,AN\,\,ENVIRONMENTALLY\,\,SAFE\,\,MANNER.}$
- 9. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

HAZARDOUS MATERIALS

- 1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE
- 2. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION
- 3. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED.
- 4. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DEGREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND.
- 5. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
- 6. POTENTIAL PH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF CROMANATER BILWAYATER AND AND ASSOCIATION.

PRODUCT SPECIFIC PRACTICES

1. PETROLEUM PRODUCTS

ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

. FERTILIZERS

FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

3. PAINTS

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ANY APPLICABLE STATE AND LOCAL REGULATIONS.

4. CONCRETE TRUCKS

CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF-CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION, WASHOUT AREAS WILL BE PROPERLY STABILIZED.

SPILL CONTROL PRACTICES

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP, IF NEEDED.

- FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE
 AREA ON SITE. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BROOMS, DUST PANS, MOPS, RAGS,
 GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEANUP
- 3. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY.
- 4. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- 5. AFTER A SPILL, A REPORT WILL BE PREPARED DESCRIBING THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES TAKEN. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING, AS WELL AS CLEANUP INSTRUCTIONS IN THE EVENT OF REOCCURRENCES.
- 6. THE CONTRACTOR'S SITE SUPERINTENDENT, RESPONSIBLE FOR DAY-TO-DAY OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

SPILL RESPONSE

THE PRIMARY OBJECTIVE IN RESPONDING TO A SPILL IS TO QUICKLY CONTAIN THE MATERIAL(S) AND PREVENT OR MINIMIZE MIGRATION INTO STORMWATER RUNOFF AND CONVEYANCE SYSTEMS. IF THE RELEASE HAS IMPACTED ON-SITE STORMWATER, IT IS CRITICAL TO CONTAIN THE RELEASE MATERIALS ONSITE AND PREVENT THEIR RELEASE INTO RECEIVING WATERS. IF A SPILL OF POLLUTANTS THREATENS STORMWATER OR SURFACE WATER AT THE SITE, THE SPILL RESPONSE PROCEDURES OUTLINED BELOW MUST BE IMPLEMENTED IN A TIMELY MANNER TO PREVENT THE RELEASE OF POLLUTANTS.

- 1. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE NOTIFIED IMMEDIATELY WHEN A SPILL OR THE THREAT OF A SPILL IS OBSERVED. THE SUPERINTENDENT WILL ASSESS THE SITUATION AND DETERMINE THE APPROPRIATE RESPONSE.
- 2. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING EROSION AND SEDIMENT CONTROLS AND ENTERING RECEIVING WATERS, PERSONNEL WILL BE DIRECTED TO RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.
- 3. SPILL KITS CONTAINING APPROPRIATE MATERIALS AND EQUIPMENT FOR SPILL RESPONSE AND CLEANUP WILL BE MAINTAINED BY THE CONTRACTOR AT THE SITE.
- 4. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G., SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- 5. IF A SPILL OCCURS, THE SUPERINTENDENT OR THE SUPERINTENDENT'S DESIGNEE WILL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE MPCA.

- 6. PERSONNEL WITH PRIMARY RESPONSIBILITY FOR SPILL RESPONSE AND CLEANUP WILL RECEIVE TRAINING BY THE CONTRACTOR'S SITE SUPERINTENDENT OR DESIGNEE. THE TRAINING MUST INCLUDE IDENTIFYING THE LOCATION OF THE SPILL KITS AND OTHER SPILL RESPONSE EQUIPMENT AND THE USE OF SPILL RESPONSE MATERIALS.
- 7. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

SPILL NOTIFICATION

IN THE EVENT OF A SPILL, THE CONTRACTOR'S SITE SUPERINTENDENT WILL MAKE THE APPROPRIATE NOTIFICATION(S), CONSISTENT

REPORT ANY SPILL THAT MAY SERIOUSLY ENDANGER HEALTH OR THE ENVIRONMENT AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS FROM THE TIME OF BECOMING AWARE OF THE SPILL. THE REPORT MUST BE MADE TO EPA, EMERGENCY RESPONSE BRANCH, AND THE STATE OF MINNESOTA DIVISION OF HOMELAND SECURITY.

REPORTABLE SPILLS ARE THOSE THAT:

- 1. THREATEN OR ARE IN A POSITION TO THREATEN WATERS OF THE STATE, SUCH AS SURFACE OR GROUND WATER.
- 2. CAUSE IMMEDIATE DANGER TO HUMAN HEALTH OR SAFETY
- 3. CAUSE HARM OR THREATEN TO HARM WILDLIFE OR AQUATIC LIFE.
- 4. ARE RELEASES OF OIL OR HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES UNDER SECTION 311 OF THE CLEAN WATER ACT (SEE 40 CFR 110.10 AND CFR 117.21) OR SECTION 102 OF CERCLA (SEE 40 CFR 302.4).

SOME RELEASES MAY REQUIRE IMMEDIATE RESPONSE BY TRAINED EMERGENCY PERSONNEL. THIS MAY BE COORDINATED THROUGH THE MPCA, EMERGENCY RESPONSE AGENCIES THAT MAY BE NEEDED IF THERE IS ANY QUESTION AS TO PROPER RESPONSE, CALL THE MPCA AT 651-296-6300 OR 800-657-3864, ASK FOR A MEMBER OF THE EMERGENCY RESPONSE TEAM (24 HOUR EMERGENCY RESPONSE), AND PROVIDE ALL RELEVANT INFORMATION ABOUT THE INCIDENT.

POLLUTION PREVENTION MEASURES

- 1. THE CONTRACTOR SHALL REMOVE ALL WASTES COMPOSED OF BUILDING MATERIALS, FLOATING DEBRIS, PAPER, FABRIC, AND OTHER WASTES FROM THE SITE FOR DISPOSAL IN LICENSED DISPOSAL FACILITIES. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIAL SHALL BE BURIED, DUMPED, OR DISCHARGED TO THE WATERS OF THE STATE AT THE SITE. ALL WASTES SHALL BE DISPOSED OF PROPERLY AND MUST COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS.
- 2. THE CONTRACTOR SHALL PROVIDE CONTAINMENT AROUND FUELING AND CHEMICAL STORAGE AREAS TO ENSURE THAT SPILLS IN THESE AREAS DO NOT REACH WATERS OF THE STATE. CONTINGENCIES SHALL BE PROVIDED FOR THE TREATMENT AND/OR DISPOSAL OF CONTAMINATION BY ACTS OF VANDALISM.
- 3. CONCRETE WASH WATER, GRINDINGS, AND SLURRY SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, STORM SEWER SYSTEMS, OR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES. DESIGNATED CONCRETE WASHOUTS SHALL BE CONSTRUCTED.
- 4. CONCRETE WASHOUTS SHALL BE CLEANED BY THE CONTRACTOR WHEN THEY REACH 80% OF THEIR CAPACITY. ALL MATERIAL REMOVED FROM THE STRUCTURE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF AND SHALL NOT BE DISPOSED OF ON SITE

DUST CONTROL

- 1. NO PERSON MAY CAUSE OR PERMIT THE HANDLING, TRANSPORTING OR STORING OF ANY MATERIAL IN A MANNER WHICH ALLOWS OR MAY ALLOW CONTROLLABLE PARTICULATE MATTER TO BECOME AIRBORNE. EXCEPT AS OTHERWISE NOTED, THE CONTRACTOR MAY NOT CAUSE NOR PERMIT THE CONSTRUCTION, REPAIR, DEMOLITION, OR USE OF UNPAVED OR UNTREATED AREAS WITHOUT FIRST PUTTING INTO EFFECT AN ONGOING PROGRAM USING THE BEST PRACTICAL METHODS TO PREVENT PARTICULATE MATTER FROM BECOMING AIRBORNE.
- 2. THE CONTRACTOR SHALL DEVELOP A DUST CONTROL PLAN, ADMINISTERED BY THE SWPPP CONTACT PERSON THAT USES ALL REASONABLE PRECAUTIONS TO PREVENT DUST EMISSIONS FOR THE ENGINEER'S APPROVAL.

3. THE PLAN MUST

- 3.1 IDENTIFY ALL POTENTIAL FUGITIVE DUST EMISSION SOURCES.
- 3.2 ASSIGN DUST CONTROL METHODS.
- 3.3 DETERMINE FREQUENCY OF APPLICATION3.4 RECORD ALL DUST CONTROL ACTIVITIES.
- 3.5 MONITOR YOUR DUST CONTROL EFFORTS.
- 4. THE PLAN SHALL HAVE PROVISIONS FOR NOTIFYING SUBCONTRACTORS AND OTHERS ACCESSING THE DISTURBED AREAS OF THEIR RESPONSIBILITIES TO CONTROL FUGITIVE DUST (I.E., OBSERVING ON-SITE VEHICLE SPEED LIMITS, TRACK OUT, BEST PRACTICAL METHODS OF DUST CONTROL BEING USED ON SITE WHEN WORKING ON PAVEMENTS AND IN DISTURBED AREAS, KEEPING OFF DISTURBED AREAS THAT HAVE BEEN STABILIZED, ETC.).
- 5. THE PLAN SHALL ADDRESS THE TYPE OF BEST PRACTICAL METHODS OF FUGITIVE DUST CONTROL TO BE USED BY CONTRACTOR TO CONTROL FUGITIVE DUST IN DETAIL. MORE THAN ONE TYPE OF FUGITIVE DUST CONTROL METHOD MAY BE NECESSARY TO PREVENT FUGITIVE DUST GENERATION, AND USE OF MULTIPLE FUGITIVE DUST METHODS WIS BE ADDRESSED, IF APPLICABLE. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO THE PROVISIONS CONTAINED IN THEIR DEVELOPED PLAN.
- 6. THE PLAN SHALL HAVE PROVISIONS FOR UPDATING THE PLAN IN THE EVENT CHANGES TO THE PROJECT OCCUR AND RESUBMITTAL OF THE PLAN TO THE PROJECT ENGINEER.

Houston Engineering Inc. Fargo Drawn by CJJ Date 9-13-2018

| 701.237.5065 | Checked by 701.237.5101 ZOH, JMW AS SHOWN

POLK COUNTY DITCH 80 SYSTEM IMPROVEMENTS
SAND HILL RIVER WATERSHED DISTRICT
FERTILE, MINNESOTA

SWPPP NOTES

PROJECT NO. 1812-057

SHEET

C-301

EROSION AND SEDIMENT CONTROL NOTES:

- 1. NO EARTHWORK OPERATIONS SHALL BEGIN PRIOR TO ALL TEMPORARY PERIMETER EROSION AND SEDIMENT CONTROL MEASURES BEING INSTALLED.
- 2. AGGREGATE CONSTRUCTION ENTRANCES SHALL BE PROVIDED AT ALL ACCESS POINTS TO THE CONSTRUCTION SITE. LOCATIONS OF CONSTRUCTION ENTRANCES ARE APPROXIMATE AND SHALL BE FIELD LOCATED. ANY SEDIMENT TRACKED OR DEPOSITED ONTO OFF-SITE PAVED SURFACES SHALL BE REMOVED WITHIN 24 HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING TO REMOVE ANY ACCUMULATED SEDIMENT FROM OFF-SITE PAVED SURFACES.
- 3. SEDIMENT ACCUMULATED BEHIND FIBER ROLLS AND SILT FENCE SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE FIBER ROLL OR SILT FENCE. ANY INFFECTIVE (DECOMPOSED, TORN, COLLAPSED) FIBER ROLLS OR SILT FENCE SHALL IS REPLIACED IMMEDIATELY.
- 4. ALL STORM DRAIN INLETS WITHIN THE PROJECT LIMITS AND IN THE IMMEDIATE VICINITY OF THE SITE SHALL HAVE SEDIMENT PROTECTION MEASURES. THIS INCLUDES INLETS AFFECTED BY SEDIMENT TRACKED FROM THE SITE.
- 5. VEGETATIVE BUFFERS SHALL HAVE A MINIMUM WIDTH OF 25 FEET FOR EVERY 125 FEET OF DISTURBED AREA THAT DRAINS TO THE BUFFER. FOR EACH ADDITIONAL 5 FEET OF DISTURBANCE, AN ADDITIONAL 1 FOOT OF BUFFER MUST BE ADDED. THE BUFFER SHALL HAVE A MAXIMUM 5 PERCENT SLOPE AND CONCENTRATED FLOWS TO THE BUFFER SHALL BE MINIMIZED.
- 6. VEGETATIVE BUFFER SHALL CONSIST OF DENSE GRASS VEGETATION 3 TO 12 INCHES TALL WITH UNIFORM COVERAGE OVER 90 PERCENT OF THE BUFFER. NO MORE THAN 10 PERCENT OF THE BUFFER MAY CONSIST OF WOODY VEGETATION.
- 7. ALL DISTURBED AREAS THAT HAVE BEEN FINAL GRADED OR ARE NOT ACTIVELY BEING WORKED SHALL BE STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 14 DAYS AFTER COMPLETION OF THE WORK. USE SEEDING AND MULCHING, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. USE EARLY APPLICATION OF GRAVEL BASE IN PAVED AREAS.
- 8. AREAS WHERE CONSTRUCTION ACTIVITY WILL RESUME WITHIN 15 DAYS OF THE TIME CONSTRUCTION ACTIVITY TEMPORARILY CEASES NEED NOT BE STABILIZED.
- 9. FIBER ROLLS OR SILT FENCE SHALL BE INSTALLED ON ALL DISTURBED AREAS WITH SLOPES STEEPER THAN 3:1 AND LENGTHS GREATER THAN 75 FEET. ANY SLOPE EXHIBITING RILLS, SIGNIFICANT EROSION, OR EVIDENCE OF CONCENTRATED FLOW SHALL BE REGRADED TO PLAN GRADES AND FIBER ROLLS OR OTHER TEMPORARY EROSION CONTROL MEASURE INSTALLED TO PREVENT FUTURE EROSION.
- 10. ALL TEMPORARY OR PERMANENT DRAINAGE DITCHES, SWALES, OR STORM SEWER DISCHARGE POINTS SHALL HAVE THEIR NORMAL WETTED PERIMETER STABILIZED WITHIN 200 LINEAL FEET OF THE PROPERTY EDGE OR POINT OF DISCHARGE TO A SURFACE WATER. STABILIZATION SHALL BE ACCOMPLISHED BY THE USE OF EROSION CONTROL BLANKETS, SODDING, APPLICATION OF RIPRAP, OR OTHER METHOD OF STABILIZATION.
- 11. ALL TEMPORARY OR PERMANENT DRAINAGE DITCHES, SWALES, OR STORM SEWER DISCHARGE POINTS SHALL BE STABILIZED WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER, INCLUDING STORM SEWER SYSTEMS.
- 12. TEMPORARY SOIL STOCKPILES SHALL BE SURROUNDED BY SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND SHALL NOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.
- 13. DEWATERING OR BASIN DRAINAGE RELATED TO CONSTRUCTION SHALL BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN. IF THE WATER CANNOT BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN, IT SHALL BE TREATED WITH ONE OF THE DEWATERING STRUCTURES SHOWN. ALL WATER FROM DEWATERING OR BASIN DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT OT THE WETLAND.
- 14. DEWATERING IS LIMITED TO STORMWATER AND GROUNDWATER THAT MAY COLLECT ON SITE, AND THE FOLLOWING ALLOWABLE NON-STORMWATER SOURCES: FIRE-FIGHTING, FIRE HYDRANT FLUSHING, POTABLE WATER LINE FLUSHING, INFREQUENT BUILDING AND EQUIPMENT WASH DOWN WITHOUT DETERGENTS, UNCONTAMINATED FOUNDATION DRAINS, SPRINGS, LAWN WATERING, AND AIR CONDITIONING CONDENSATE. THE OPERATION MUST NOT LEAD TO SEDIMENT DEPOSITS WITHIN STORM SEWERS, DITCHES, AND SURFACE WATERS. THE OPERATION MUST NOT CAUSE OR POTENTIALLY CAUSE A VISIBLE PLUME IN A SURFACE WATER.
- 15. TEMPORARY SEDIMENTATION BASINS SHALL BE PROVIDED WHEN 10 OR MORE ACRES OF DISTURBED AREA DRAIN TO A COMMON LOCATION. THE BASIN MUST BE PROVIDE PRIOR TO RUNOFF LEAVING THE SITE OR ENTERING SURFACE WATERS
- 16. ANY SEDIMENT ACCUMULATION IN SURFACE WATERS, INCLUDING DRAINAGEWAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, SHALL BE REMOVED AND THE AREA STABILIZED WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOILS. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. THE CONTRACTOR IS RESPONSIBLE FOR CONTRACTING ALL OF THE APPROPRIATED AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
- 17. TEMPORARY EROSION AND SEDIMENT CONTROLS IN ADDITION TO THOSE SHOWN ON THE PLANS SHALL BE INSTALLED IF DEEMED NECESSARY OR AT THE DIRECTION OF THE ENGINEER/OWNER'S REPRESENTATIVE.
- 18. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION AND PERMANENT VEGETATION HAS BEEN ESTABLISHED. MINIMUM VEGETATION ESTABLISHMENT IS 70% COVER. MAINTAIN ALL TEMPORARY EROSION CONTROL DEVICES UNTIL 70% ESTABLISHED COVER IS ACHIEVED.
- 19. STORMWATER CONTROLS ARE EXPECTED TO WITHSTAND AND FUNCTION PROPERLY UP TO A TWO-YEAR, 24-HOUR PRECIPITATION EVENT. VISIBLE EROSION AND/OR OFF-SITE SEDIMENT DEPOSITS SHOULD BE MINIMAL.

FINAL STABILIZATION

- ALL SOIL-DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A MINIMUM DENSITY OF 70 PERCENT OF THE NATIVE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIPRAP, GABIONS, OR GEOTEXTILES) HAVE BEEN ACHIEVED.
- 2. FOR SOIL-DISTURBING ACTIVITIES ON LAND USED FOR AGRICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRE-DISTURBANCE AGRICULTURAL USE. AREAS DISTURBED THAT WERE NOT PREVIOUSLY USED FOR AGRICULTURAL ACTIVITIES, SUCH AS BUFFER STRIPS IMMEDIATELY ADJACENT TO WATERS OF THE STATES, AND AREAS NOT BEING RETURNED TO THEIR PRE-DISTURBANCE AGRICULTURAL USE MUST MEET THE FINAL STABILIZATION CRITERIA ABOVE.
- 3. FINAL STABILIZATION HAS BEEN ACHIEVED WHEN THE ABOVE CRITERIA HAS BEEN MET AND:
 - ALL DRAINAGE DITCHES CONSTRUCTED TO DRAIN WATER FROM THE SITE FOLLOWING CONSTRUCTION HAVE BEEN STABILIZED TO PREVENT EROSION.
 - 3.2 ALL TEMPORARY, SYNTHETIC, AND STRUCTURAL EROSION AND SEDIMENT CONTROLS HAVE BEEN REMOVED.
 - 3.3 ANY ACCUMULATED SEDIMENT HAS BEEN REMOVED FROM ALL STORMWATER CONVEYANCES AND BASINS USED FOR PERMANENT WATER QUALITY MANAGEMENT. ANY REMOVED SEDIMENT THAT EXPOSES SOIL MUST BE STABILIZED TO PREVENT EROSION.

INSPECTION AND MONITORING

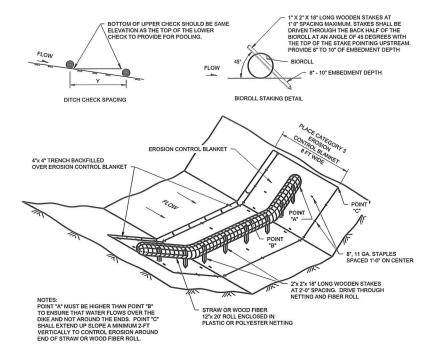
- 1. A COPY OF THE COMPLETED AND SIGNED NOTICE OF INTENT, COVERAGE LETTER FROM THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA), STORMWATER POLLUTION PREVENTION PLAN (SWPPP), SITE INSPECTION RECORDS, AND THE GENERAL PERMIT SHALL BE KEPT ON SITE DURING CONSTRUCTION. IF NO REASONABLE ON-SITE LOCATION IS AVAILABLE, THE DOCUMENTS MAY BE RETAINED AT A READILY AVAILABLE ALTERNATIVE LOCATION. ALL RECORDS SHALL BE RETAINED FOR A PERIOD OF THREE YEARS AFTER THE SUBMISSION OF THE NOTICE OF TERMINATION.
- 2. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE INDIVIDUAL PRESENT ON THE PERMITTED PROJECT SITE (OR AVAILABLE TO THE PROJECT SITE IN 72 HOURS) THAT IS TRAINED BY LOCAL, STATE, OR FEDERAL AGENCIES; PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, OR PERMANENT STORMWATER MANAGEMENT. THE INDIVIDUAL SHALL BE KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) AND SHALL BE FAMILIAR WITH THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS.
- 3. INSPECTION SHALL BE PERFORMED BY, OR UNDER THE DIRECTION OF, THE PERMITTEE AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.50 INCHES OF RAIN PER 24-HOUR PERIOD DURING ACTIVE CONSTRUCTION. THE PERMITTEE SHALL USE A RAIN GAUGE NEAR THE SITE OR UTILIZE THE NEAREST NATIONAL WEATHER SERVICE PRECIPITATION GAUGE STATION. ANY GAUGE USED SHALL BE LOCATED WITHIN 5 MILES OF THE STORMWATER DISCHARGE.
- 4. ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION SHALL BE RECORDED IN WRITING AND THESE RECORDS SHALL BE RETAINED. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:
 - 4.1 DATE AND TIME OF INSPECTION.
 - 4.2 NAME OF PERSON(S) CONDUCTING INSPECTIONS.
 - .3 FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS.
 - CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES).
 - 4.5 DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.50 INCHES IN 24 HOURS.
 - 1.6 DOCUMENTATION THAT THE SWPPP PLAN HAS BEEN AMENDED WHEN SUBSTANTIAL CHANGES ARE MADE TO THE EROSION AND SEDIMENT CONTROLS OR OTHER BMPS IN RESPONSE TO INSPECTIONS.

5. INSPECTIONS SHALL INCLUDE THE FOLLOWING:

- 1 ALL EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWPPP MUST BE INSPECTED TO ENSURE THEY ARE OPERATING CORRECTLY AND IN SERVICEABLE CONDITIONS.
- 5.2 SURFACE WATERS, DRAINAGE DITCHES, AND CONVEYANCE SYSTEMS, INCLUDING STORM SEWER, MUST BE INSPECTED FOR SEDIMENT DEPOSITS AND/OR VISIBLE PLUMES.
- 5.3 EXIT POINTS FROM THE CONSTRUCTION SITE ONTO PAVED SURFACES MUST BE INSPECTED FOR SEDIMENT BEING TRACKED BY VEHICLES OR EQUIPMENT.
- 5.4 VEGETATIVE BUFFERS MUST BE INSPECTED FOR PROPER DISTRIBUTION OF FLOWS, SEDIMENT
- 6. EROSION AND SEDIMENT CONTROLS FOUND IN NEED OF MAINTENANCE BETWEEN INSPECTIONS NEED TO BE REPAIRED OR SUPPLEMENTED WITH APPROPRIATE MEASURES WITHIN 48 HOURS OF DISCOVERY.

OTES: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPARA NADIOR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. TYPE 5 GEOTEXTILE TYPE 5 GEOTEXTILE

CONSTRUCTION ENTRANCE



TEMPORARY DITCH CHECK NOT TO SCALE

BIOROLL LOCATION AND STORAGE TABLE			
BIOROLL NO.	STATION	BIOROLL NO.	STATION
1	4+20	16	145+55
2	9+15	17	151+71
3	14+40	18	156+73
4	19+37	19	161+75
5	29+15	20	166+79
6	35+75	21	171+83
7	61+50	22	176+88
8	88+34	23	178+19
9	93+37	24	1025+83
10	98+39	25	2023+65
11	103+41	26	2030+98
12	110+13	27	2040+79
13	118+40	28	2052+97
14	123+42	29	2078+99
15	141+00		

Fargo	Drawn by CJJ	Date 9-13-2018
P: 701.237.5065 F: 701.237.5101	Checked by ZOH, JMW	Scale AS SHOWN