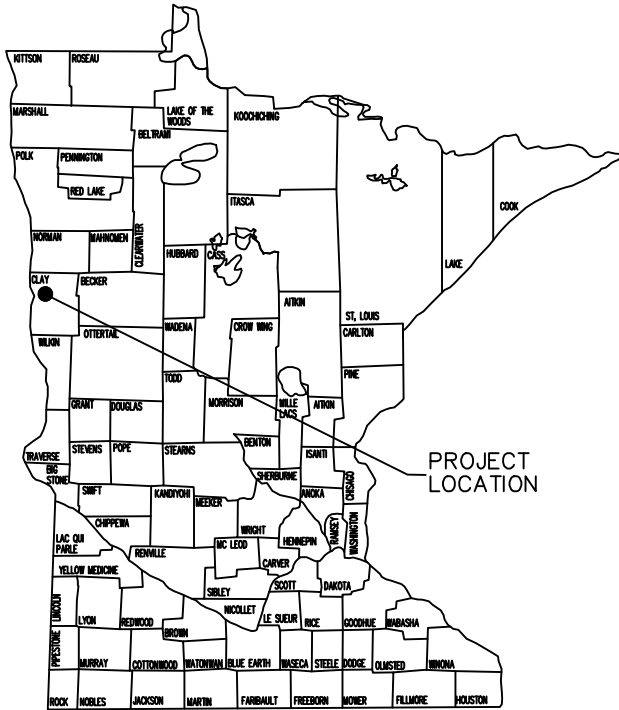


PROPOSED ENTRANCES FOR NEW LAND APPLICATION FIELD AMERICAN CRYSTAL SUGAR COMPANY MOORHEAD PLANT MOORHEAD, MINNESOTA



MINNESOTA
STATE MAP

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Responsive partner. Exceptional outcomes.

3303 FIECHTNER DRIVE
FARGO, NORTH DAKOTA
(701) 297-9600

CLIENT
AMERICAN CRYSTAL
SUGAR COMPANY
MOORHEAD, MN

PROJECT PROPOSED ENTRANCES FOR
NEW LAND APPLICATION FIELD

SHEET TITLE TITLE SHEET

REV	DWN	APP	REV DATE	DWN BY	CHK'D	APP'D	DWG DATE	PROJECT NO.	SHEET NO.	REV NO.
				EBH	MPM	JTK	AUGUST 2015	0203-0092	G-01	
							SCALE	NOT TO SCALE		

GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS, REQUIREMENTS OF CLAY COUNTY HIGHWAY DEPARTMENT, MN/DOT, AND ALL OTHER APPLICABLE REQUIREMENTS.
2. ALL WORK IS SUBJECT TO INSPECTION BY OWNER, ENGINEER, OR AUTHORIZED REPRESENTATIVE. ANY WORK DEEMED UNSATISFACTORY SHALL BE REPAIRED BY CONTRACTOR AT NO COST TO OWNER.
3. CONTRACTOR IS RESPONSIBLE FOR PUBLIC UTILITY LOCATES THROUGH GOPHER STATE ONE CALL. CONTRACTOR WILL COORDINATE PUBLIC UTILITY LOCATES A MINIMUM OF 48-HOURS PRIOR TO BEGINNING THE WORK.
4. CONTRACTOR SHALL FULFILL ALL ACSC HEALTH AND SAFETY REQUIREMENTS PRIOR TO INITIATING WORK.

FIELD ENGINEERING

1. CONTRACTOR SHALL PERFORM ALL FIELD ENGINEERING ASSOCIATED WITH PROJECT AND SHALL VERIFY ALL GRADES, SLOPES, CULVERT INVERTS, ETC. USING GPS, LASER LEVEL, OR EQUIVALENT MEANS.

SITE PREPARATION, MAINTENANCE AND RESTORATION

1. PROVIDE PROTECTION AND SUPPORT DURING CONSTRUCTION FOR EXISTING UTILITIES, STRUCTURES, AND SURFACE FEATURES ADJACENT TO CONSTRUCTION AREA OR EASEMENTS AND RIGHTS-OF-WAY.
2. STRIP TOPSOIL AS SHOWN ON THE PLAN SHEETS.
3. REMOVE UNSUITABLE MATERIAL LOCATED WITHIN WORKING LIMITS. DISPOSE OF UNSUITABLE MATERIAL IN A MANNER APPROVED BY OWNER.
4. ALL PUBLIC, OFF-SITE ROADS USED DURING THE PROJECT SHALL BE MAINTAINED AT ALL TIMES TO BE ACCESSIBLE BY PASSENGER CARS.
5. TRAFFIC CONTROL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE MUTCD.
6. RESTORE EXISTING UTILITIES, SURFACE FEATURES, AND STRUCTURES TO PRE-CONSTRUCTION CONDITIONS OR BETTER, INCLUDING ALL BORROW AREAS.

CMP CULVERT

1. EXCAVATE AND PREPARE SUBGRADE AS SHOWN ON DRAWINGS.
2. THE PIPE SHALL BE VISUALLY INSPECTED FOR CRACKS OR BROKEN ENDS. ANY PIPE CRACKED OR BROKEN SHALL BE REJECTED AND RETURNED TO THE MANUFACTURER. EXAMINE AND VERIFY ACCEPTABILITY OF SURFACE TO RECEIVE PRODUCT.
3. BACKFILL AS SHOWN ON DRAWINGS.

PRECAST REINFORCED BOX CULVERT


1. EXCAVATE AND PREPARE SUBGRADE AS SHOWN ON THE DRAWINGS.
2. CONCRETE BOX CULVERT SHALL BE MN/DOT CLASS 1 AND SHALL INCLUDE FLARED WING WALLS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
4. CULVERT SHALL BE INSPECTED FOR DEFECTS PRIOR TO INSTALLATION. ANY DEFECTIVE PIPE SHALL BE REJECTED AND RETURNED TO MANUFACTURER.
5. BACKFILL AS SHOWN ON DRAWINGS.

EROSION CONTROL

1. APPLY APPROPRIATE SOIL CONSERVATION MEASURES TO PROTECT PROJECT AREA AND ADJACENT LANDS. THESE MEASURES MAY INCLUDE, BUT NOT BE LIMITED TO, MULCHING, RAPID GROWTH VEGETATION, FABRIC MAT, BIO ROLLS, AND SILT FENCE.
2. SELECT METHODS OF EROSION AND SEDIMENT CONTROL IN FIELD TO MEET CONDITIONS ENCOUNTERED.
3. PROVIDE EROSION CONTROL MEASURES, IN-PLACE, BEFORE COMMENCING WORK ON PROJECT SITE.
 - A. MAINTAIN EROSION CONTROL MEASURE DURING COURSE OF CONSTRUCTION.
 - B. REMOVE EROSION CONTROL MEASURES UPON ESTABLISHMENT OF PERMANENT, SURFACE STABILIZATION.
4. CONTRACTOR AND OWNER SHALL INSPECT SEEDED AREAS FOR CONTRACT COMPLIANCE AND FINAL ACCEPTANCE OF WORK.

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 <p>Responsive partner. Exceptional outcomes.</p>			CLIENT AMERICAN CRYSTAL SUGAR COMPANY MOORHEAD, MN			PROJECT PROPOSED ENTRANCES FOR NEW LAND APPLICATION FIELD				
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				EBH	MPM	JTK	AUGUST 2015	0203-0092	G-02	
							SCALE	NOT TO SCALE		

CONTROLLED FILL

1. THE SIDE SLOPES OF THE ENTRANCES SHALL BE FIELD FIT TO THE PROPOSED CULVERTS AND SHALL BE NO STEEPER THAN 4:1.
2. CONTROLLED FILL SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DRY DENSITY.
3. PLACE AND COMPACT CONTROLLED FILL MATERIAL UNIFORMLY AROUND CULVERTS.
4. ACSC WILL SUPPLY CLAY MATERIAL FOR THE USE OF CONTROLLED FILL AS SHOWN ON SHEET C-01.
5. ACSC LIME SPALLS MAY ALSO BE USED AS A SUBSTITUTE FOR CONTROLLED FILL, CLASS 5, AND/OR GRANULAR BASE MATERIAL. IF LIME SPALLS ARE USED, THEY SHALL BE CAPPED BY A MINIMUM 12 INCHES OF CLAY OR MINIMUM 6 INCHES OF CLASS 5.
6. IN-PLACE DENSITY TESTING SHALL BE COMPLETED AT ENGINEER'S DISCRETION.

ROAD AGGREGATE

1. MATERIAL SHALL BE CLASS 5 AGGREGATE ACCORDING TO MN/DOT SPECIFICATIONS.
2. PLACE AGGREGATE MATERIALS WHEN SURFACE IS DRY, IN ACCORDANCE WITH THE DRAWINGS.
3. CLASS 5 MATERIALS SHALL BE PLACED IN MAXIMUM 6-INCH LIFTS.
4. CLASS 5 MATERIALS SHALL BE COMPACTED TO 100% OF STANDARD PROCTOR DRY DENSITY.
5. IN-PLACE DENSITY TESTING SHALL BE COMPLETED AT ENGINEER'S DISCRETION.

GEOTEXTILE FABRIC


1. GEOTEXTILE FABRIC SHALL BE MIRAFI 500X WOVEN FABRIC OR APPROVED EQUAL.
2. PLACE GEOTEXTILE AS SHOWN ON THE DRAWINGS.
3. ANY SEAM OVERLAPS SHALL BE A MINIMUM OF 12 INCHES.
4. ANY SEAM OVERLAPS SHALL BE ORIENTED IN DIRECTION OF FILLING (I.E., NO FILL MATERIAL SPREAD IN OR BENEATH OVERLAPS).

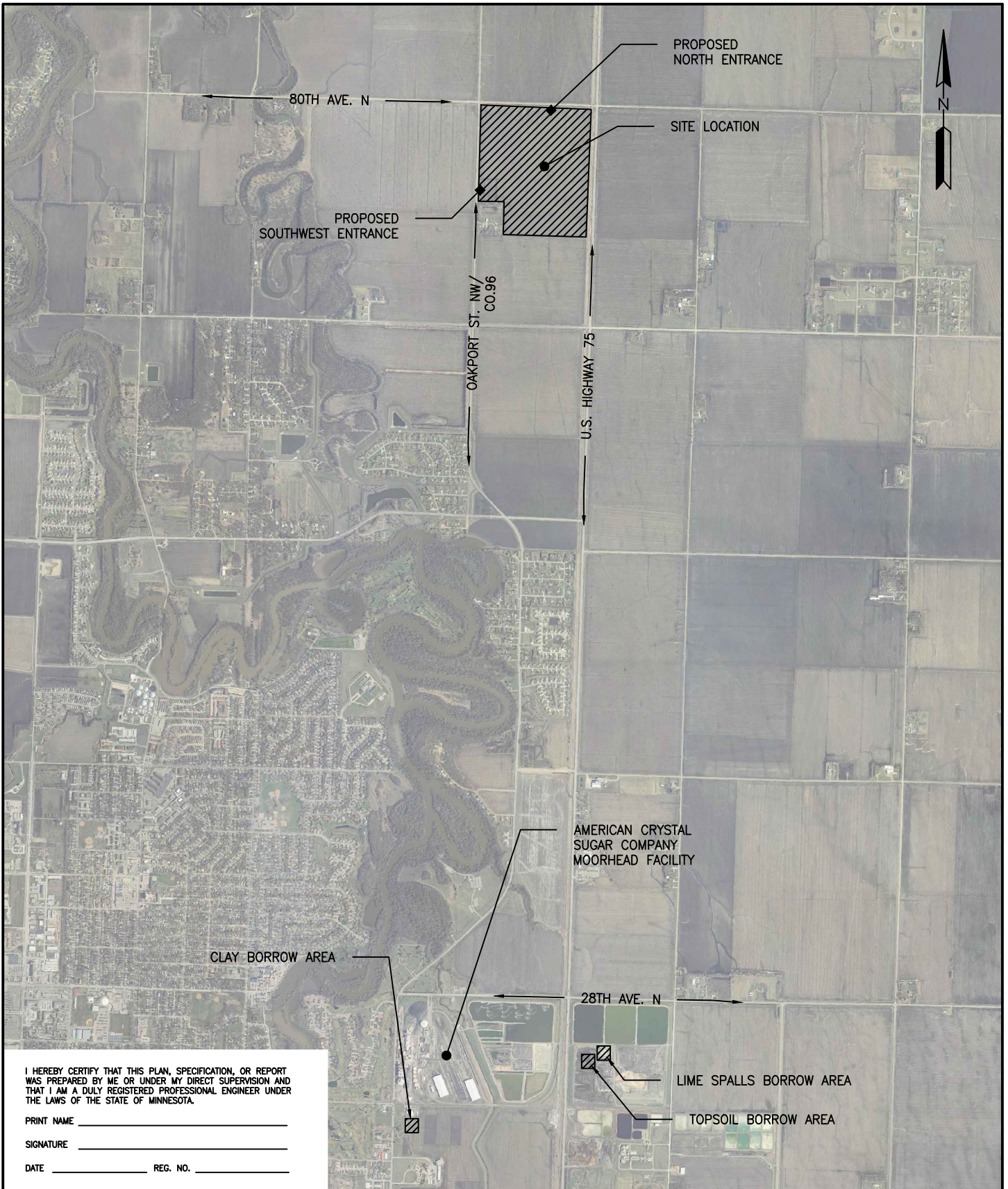
TURF RESTORATION

1. FINE GRADE ALL DISTURBED AREAS PRIOR TO APPLYING TOPSOIL AND SEED.
2. A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE PLACED ON THE SIDE SLOPES OF THE ENTRANCES.
3. ACSC WILL SUPPLY TOPSOIL MATERIAL AS NEEDED AS SHOWN ON SHEET C-01 OF THE DRAWINGS.
4. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH CLAY COUNTY HIGHWAY DEPARTMENT, MN/DOT, AND ALL OTHER APPLICABLE REQUIREMENTS.
5. CONTRACTOR AND OWNER SHALL INSPECT SEEDED AREAS FOR CONTRACT COMPLIANCE AND FINAL ACCEPTANCE OF WORK.

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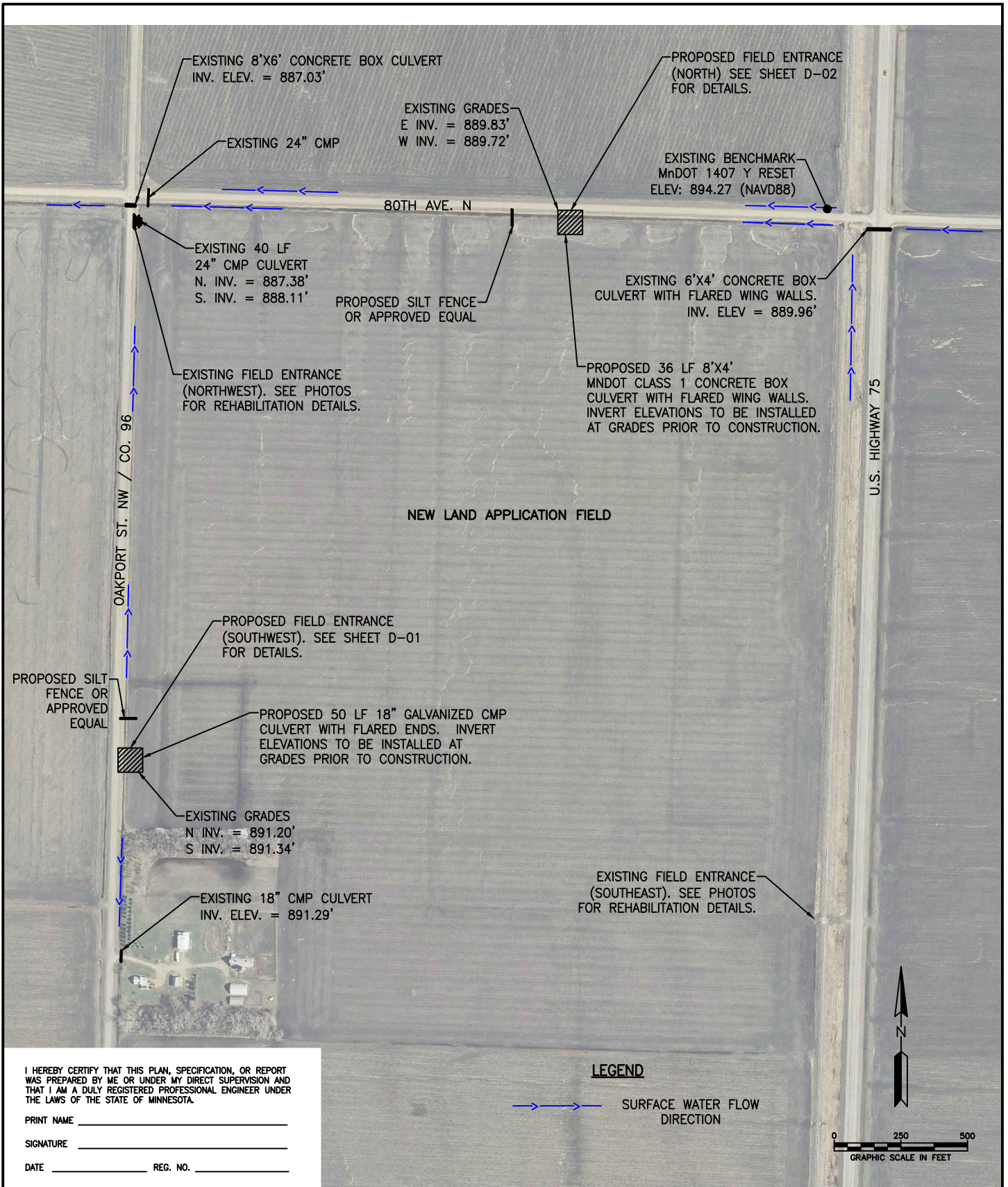
 <p>Responsive partner. Exceptional outcomes.</p>			3303 FIECHTNER DRIVE FARGO, NORTH DAKOTA (701) 297-9600			CLIENT AMERICAN CRYSTAL SUGAR COMPANY MOORHEAD, MN		PROJECT PROPOSED ENTRANCES FOR NEW LAND APPLICATION FIELD		
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				EBH	MPM	JTK	AUGUST 2015 SCALE NOT TO SCALE	0203-0092	G-03	



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Responsive partner. Exceptional outcomes.				SHEET TITLE SITE MAP		PROJECT NO. 0203-0092	
REV	DWN	APP	REV DATE	DWN BY	CHK'D	APP'D	SHEET NO.
				EBH	MPM	JTK	C-01
				DWG DATE AUGUST 2015		REV NO.	
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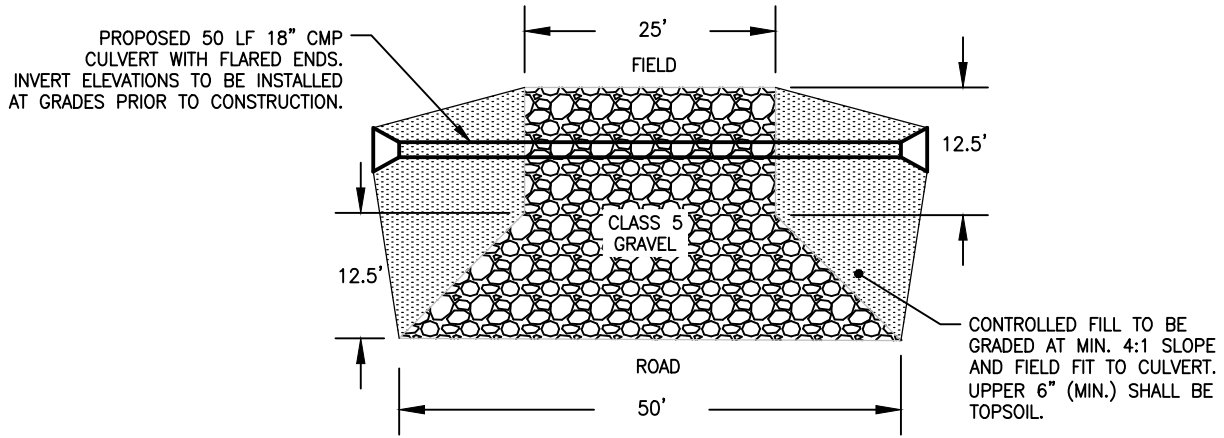
Responsive partner. Exceptional outcomes.

CLIENT
AMERICAN CRYSTAL SUGAR COMPANY
MOORHEAD, MN

PROJECT
PROPOSED ENTRANCES FOR
NEW LAND APPLICATION FIELD

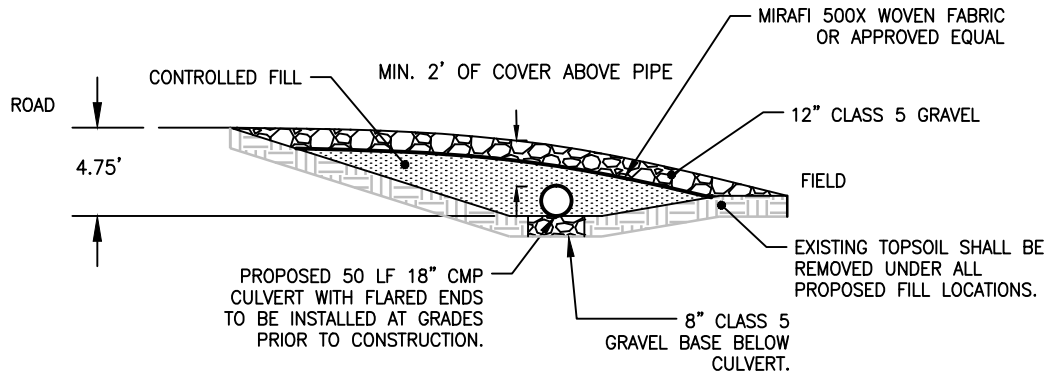
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PROPOSED APPROACH
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				EBH	JCS	JTK	SCALE	AS SHOWN	0203-0092	C-02	



PROPOSED APPROACH (SW CORNER) – PLAN VIEW
NOT TO SCALE

1
D-01



PROPOSED APPROACH (SW CORNER) – CROSS SECTION
NOT TO SCALE

2
D-01

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Responsive partner. Exceptional outcomes.

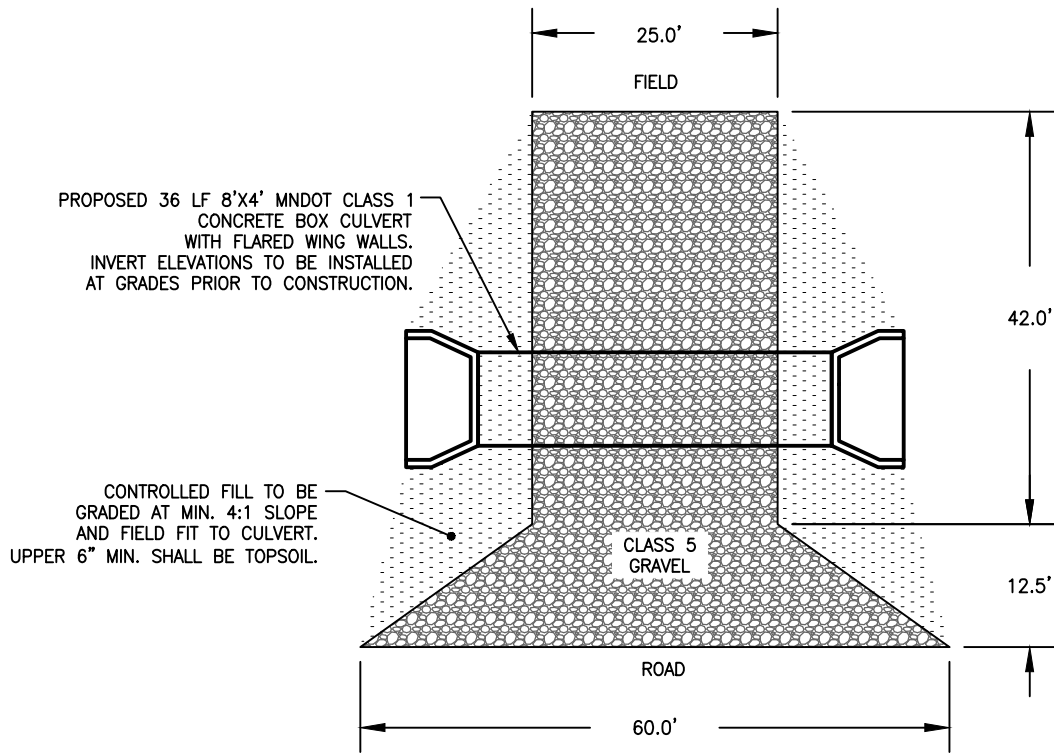
3303 FIECHTNER DRIVE
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PROJECT
PROPOSED APPROACHES FOR
NEW LAND APPLICATION FIELD

SHEET
TITLE
PROPOSED SOUTHWEST
APPROACH DETAILS

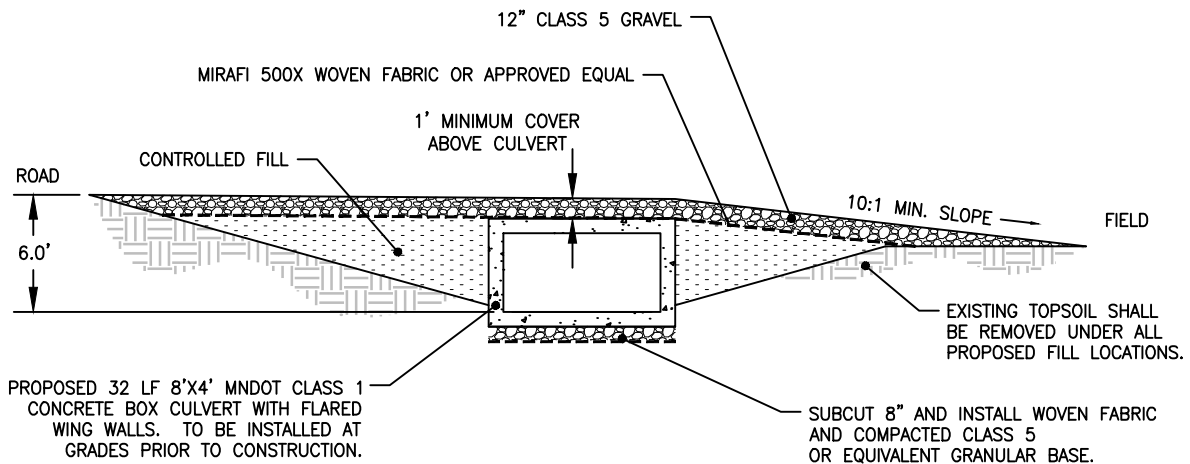
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				EBH	MPM	JTK	AUGUST 2015	0203-0092	D-01	
							SCALE			
							NOT TO SCALE			



PROPOSED APPROACH (NORTH) - PLAN VIEW

NOT TO SCALE

1
D-02



PROPOSED APPROACH (NORTH) - CROSS SECTION

NOT TO SCALE

2
D-02

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PROJECT
PROPOSED ENTRANCES FOR
NEW LAND APPLICATION FIELD

SHEET TITLE
PROPOSED NORTH APPROACH
DETAILS

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