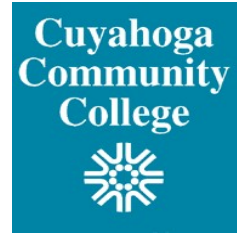


Metropolitan Campus MRC Driveway



Project Number: C20207076

**Cuyahoga Community College
Metropolitan Campus
2900 Community College Ave.
Cleveland, Ohio 44115**

STANDARD REQUIREMENTS AND SPECIFICATIONS FOR CONSTRUCTION General Contracting

Bid DUE Date: February 18, 2022 by 2:00 p.m. EST

Sealed Hard Copy and must include One Electronic (jump drive) copy bids will be received by:

Judi Cooper
Cuyahoga Community College District Office
700 Carnegie Avenue
Cleveland, Ohio 44115

Mandatory Pre-Bid meeting On-site: February 3, 2022 at 11:00 a.m. EST

Project Driveway Area just south of Recreation Center, just east of E30th St. – the ATTC Parking Lot #11 is closest location off Woodland Ave (east of E30th St.).

RFI's Deadline: February 11, 2022 by 12:00 p.m. EST

Prepared by:

GPD Group

520 South Main Street, Suite 2531

Akron, Ohio 44311

Phone: (216) 518-5544

Fax: (216) 518-5545

Contact: Ken Bukowski, kbukowski@gpdgroup.com

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Appendix

Cuyahoga Community College – Contractors Safety Guide

SPECIFICATIONS GROUP

FACILITY CONSTRUCTION SUBGROUP

Refer to contract construction drawing documents for sheet specifications.

END OF DOCUMENT

Document 00 31 32 – Geotechnical Data (General Contracting Project)

DOCUMENT 003132 - GEOTECHNICAL DATA

1.1 GEOTECHNICAL DATA

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information.
- B. Because subsurface conditions indicated by the soil borings are a sampling in relation to the entire construction area, and for other reasons, the Owner, the Architect, the Architect's consultants, and the firm reporting the subsurface conditions do not warranty the conditions below the depths of the borings or that the strata logged from the borings are necessarily typical of the entire site. Any party using the information described in the soil borings and geotechnical report shall accept full responsibility for its use.
- C. Geotechnical Engineering Report for Project, obtained by GPD Geotechnical Services, Inc., dated July 13, 2021, is available for viewing as appended to this Document.
- D. Related Requirements:
 - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.

END OF DOCUMENT 003132



GEOTECHNICAL ENGINEERING REPORT

CUYAHOGA COMMUNITY COLLEGE
METRO CAMPUS MRC DRIVEWAY
EAST 30TH STREET
CLEVELAND, OHIO

Prepared For:

Cuyahoga Community College



GPD Project No. 2021052.02
July 13, 2021

Delbert J. Channels

07/13/2021

Delbert J. Channels, PE
Director of Geotechnical Services



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SECTION 1

1.0 Introduction

GPD Group is pleased to submit this Geotechnical Report for the aforementioned project. The purpose of this study was to obtain information on the subsurface conditions at the proposed project site and based on this information, to provide geotechnical recommendations regarding the design and construction of pavements for the replacement of concrete driveway at Metro Campus MRC Building. Eight (8) borings extending to depths of 5 feet each below the existing pavement and ground surface were drilled at the site. A Boring Location Plan and individual boring logs are attached.

1.1 Project Description

The project area consists of the concrete driveway and surrounding grass areas located on the southern side of the MRC building, which in general parallels E30th Street going down to the lower-level delivery entrance doors, near the abandoned pedestrian tunnel that was coming from the MCC building. The drive will be used primarily for use for box truck delivery trucks. The project entails removal of the existing concrete drive and reconfiguration. The existing retaining walls in the area are intended to remain unchanged. The new drive is also to be constructed of concrete. Cuts and fills are anticipated to be minimal.

An examination of Cleveland Historic Maps shows the area was once occupied with residential structures. An alleyway is shown bisecting each property. The Cuyahoga Community College Metro Campus was developed sometime in the mid-1960's.

1.2 Purpose and Scope

The purposes of this report were to investigate subsurface conditions of the proposed development to provide geotechnical engineering recommendations for earthwork and pavements. Specifically, the scope of work included the following:


- ❖ Conducting a field exploration program consisting of site reconnaissance and drilling sample borings at selected locations within the existing and proposed pavement locations to explore subsurface conditions and collect soil samples.
- ❖ Conducting geotechnical engineering laboratory test on sampled soils to assist with soil classifications and estimation of engineering properties.
- ❖ Develop geotechnical engineering recommendations for the design and construction of pavement sections and earthwork for site grading.

SECTION 2

2.0 Subsurface Exploration Program

The subsurface exploration consisted of drilling and sampling eight (8) borings at the site to depths of 5 feet each below existing grades. GPD personnel using a handheld GPS unit laid out the boring locations. The locations should be considered accurate only to the degree implied by the means and methods used to define them. The boring locations were cleared for existing utilities per an Ohio 811 call (OUPS).

The borings were drilled with a track-mounted Geoprobe 7822DT rotary drill rig using hollow-stem augers and an automatic hammer to advance the boreholes. Representative soil samples were obtained by split-barrel sampling procedure in general accordance with the appropriate ASTM standards. In the



split-barrel sampling procedure, the number of blows required to advance a standard 2-inch O.D. split-barrel sampler the last 12 inches of the typical total 18-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N-Value). This value is used to estimate the in-situ relative density of cohesion-less soils and the consistency of cohesive soils. The sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the boring logs. The samples were sealed and returned to the laboratory for testing and classification.

The drill crew prepared field logs of each boring. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent an interpretation of the field logs and include modifications based on observations made by a Geotechnical Engineer and the results of laboratory testing.

2.1 Laboratory Testing

The samples were classified in the laboratory based on visual observation, texture, and plasticity. The descriptions of the soils indicated on the boring logs are in accordance with the enclosed General Notes and the Unified Soil Classification System. A brief description of this classification system is attached to this report.

The laboratory testing program consisted of performing the following tests:

- ❖ Natural water content tests (ASTM D-2216)

2.2 Subsurface Conditions

Concrete – Existing concrete pavements at the site ranged in thicknesses of 5.75 inches to 8 inches.

Topsoil – Surface topsoil depths of the existing lawn areas of the site were found to measure to depths of approximately 1 inch.

Fill – An existing fill was encountered at all the boring locations to depths of 3 to 5 feet below the site grades. The fills were found to consist primarily of sand soils with varying amounts of brick, concrete & cinders. The fills were generally damp and loose to dense in consistency.

Native Soils – Site soils consist of sands with varying levels of gravel. Soil consistencies across the boring locations were generally loose to medium dense and soil moistures that were damp. Refer to the attached boring logs for additional soil information.


2.3.1 Groundwater Conditions

The borings were monitored while drilling and immediately after completion for the presence and level of groundwater. Groundwater was not encountered in any of the boring depths. Fluctuations of the groundwater level can occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the borings were performed. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

SECTION 3

3.0 Engineering Recommendations

The following engineering recommendations are based on information provided to GPD Group regarding the design of the proposed project, the field and laboratory testing performed on the soil encountered at this



site, and other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, GPD should be immediately notified so that further evaluation and supplemental recommendations can be provided.

3.1 Geotechnical Considerations

Based on the information obtained during the course of this study, the following geotechnical considerations should be taken into account during the planning, design and construction phases of the project. These geotechnical considerations are provided as a summary of the primary issues we believe are associated with this site. This report must be read in its entirety for a full description of our geotechnical recommendations:

- ❖ The majority of the site subgrades encountered in the soil boring depths consisted of an existing sand fill. The fills were found to be loose to dense in consistency. Should any subgrades fail a proof-roll an undercut should occur to a stable subgrade under the direction of a Geotechnical Engineer or personnel under the direction of the Engineer, and backfilled with an approved material. If determined to be necessary, undercut depths should not surpass 18 inches. Should instability exist beyond a depth of 18 inches a layer of Tensar TX-1100 Geogrid should be placed along the base of the undercut and backfilled with 304 crushed limestone. Extensive undercutting is not anticipated, unless unsuitable basement backfill areas are encountered as described below.
- ❖ Historic imagery and maps show that the project area was once occupied by homes. Basement walls or rubble areas of demolished house structures might be encountered at planned subgrade. Any walls found to be within areas of proposed concrete drive areas should be removed to a depth of 24 inches below finished subgrade and backfilled with an approved material. Planned subgrade areas consisting of basement backfill rubble should be evaluated by a Geotechnical Engineer or personnel under the direction of the Engineer. Areas determined to consist of major amounts of rubble should be undercut to a depth as determined by the Geotechnical Engineer, based on the conditions encountered at that time.
- ❖ Contingent upon proper site preparation and thorough evaluation of the pavement subgrades, it is our opinion that the proposed pavements can be supported by the site soils.

The following report sections provide detailed recommendations regarding the geotechnical considerations presented above. In the event changes in the project design occur, GPD Group must review this report to determine if modifications to our recommendations are warranted.

3.2 Site Preparation

All vegetation, topsoil, tree roots, organic-containing soils, and any soft or otherwise unsuitable materials should be removed from the structure and pavement limits. Based on our borings, we estimate stripping depths of topsoil around 1 inch across the soil boring locations.

Subsequent to site clearing and topsoil removal; proof-rolling with heavy construction equipment such as a loaded tandem axle dump truck (approximately 60,000-pound gross) is recommended to aid in locating unstable subgrade materials. Proof-rolling is also recommended in cut areas, and areas left near existing grade after rough grading is completed. Unstable materials located by proof rolling should be removed and replaced with suitable compacted fill material. Areas of very loose to loose sand should be densified with a smooth drum vibratory roller.

Areas of unsuitable soil identified during proof-rolling or subsequent construction operations will need to be stabilized. Based on our borings and our experience during construction of similar structures, subgrade stabilization may be required to facilitate construction. Alternatives for subgrade stabilization could include

the following:

Scarification and Recompaction - It may be feasible to scarify, dry, and recompact the exposed soils that are higher in moisture and/or are very loose in consistency. The success of this procedure would depend primarily upon favorable weather and sufficient time to dry the soils. Even with adequate time and weather, however, stable subgrades may not be achievable if the thickness of the very loose soil is greater than 1 to 1-1/2 feet. Removing sections to greater depths and replacing the material in layers may be necessary.

Crushed Stone - The use of crushed stone or gravel could be used to improve subgrade stability. The thickness and type of crushed stone will depend upon the conditions encountered and the location of the area to be improved. GPD's on-site Quality Control representative will provide this information as needed. Typical undercut depths would range from 1/2 foot to 1-1/2 feet below finished subgrade elevation. The use of high modulus geotextiles (i.e., engineering fabric or geogrid) could also be considered after underground work such as utility construction is completed. Equipment should not be operated above the fabric or geogrid until one full lift of crushed stone fill is placed above it. The maximum particle size of granular material placed over geotextile fabric or geogrid should not exceed 1-1/2 inches.

3.3 Fill Material

Any fill or backfill required within structure and pavement limits should be select material, as approved by a qualified geotechnical engineer. For all filling operations, the following should be observed:

1. Prior to use, the approved fill material should be tested as outlined in ASTM D-698 to determine the maximum dry density and optimum moisture content for silty or cohesive soils, or ASTM D-4253 and D-4254 for clean granular soils. For each change in borrow material, additional tests will be required.
2. For all fill or backfill used, the fill material should be placed on the approved subgrade in controlled lifts, with each lift compacted to a stable condition, and to a minimum of 98% maximum dry density per ASTM D-698 at a moisture content within 1.5% of optimum for cohesive or silty borrow. Controlled lifts of granular material should be compacted to 80% relative density per ASTM D-4254.
3. All filling operations should be observed by a qualified soils technician with field density tests made, to assure compaction to specification.

Proper moisture control of fine-grained silty soils is critical in attaining the required compaction. It should be noted that both in-situ soils and new fill composed of fine-grained soils are susceptible to disturbance by construction equipment traffic when wet. Thus, construction operations should be planned to prevent such disturbance and the resulting weakening of the subgrade soils. Such precautions would include, but not be limited to grading the site to prevent ponding of water, sealing the subgrade soils at the end of operations each day, and allowing wet subgrades to dry before operating heavy equipment on the soil.

3.4 Pavements

3.4.1 Rigid Concrete Pavement

Table 1 provides a standard concrete pavement section.

Table 1: Recommended Rigid Concrete Pavement Sections

RECOMMENDED THICKNESSES (INCHES)*	
PAVEMENT MATERIAL*	STANDARD PAVEMENT SECTION
Concrete Pavement	6.0
Graded Aggregate Base (Item 304; ODOT Approved)	6.0

** Portland cement concrete should conform to ODOT guidelines and be adequately reinforced per Project Requirements*

The minimum concrete pavement design sections should conform to an allowable construction tolerance of plus or minus 0.25 inches. The concrete should be air-entrained (6.5% ±1.5%), be fiber reinforced, and have a minimum compressive strength of 4,000 psi after 28 days of laboratory curing per ASTM C-31.

Layout of saw-cut control joints should form square panels, and the depth of saw-cut joints should be approximately ¼ of the concrete slab thickness. Joints are to be spaced per project specifications. The joints should be sawed within six (6) hours of concrete placement or as soon as the concrete has developed sufficient strength to support workers and equipment. All joints, including sawed joints, shall be sealed as detailed in the project specifications.

SECTION 4

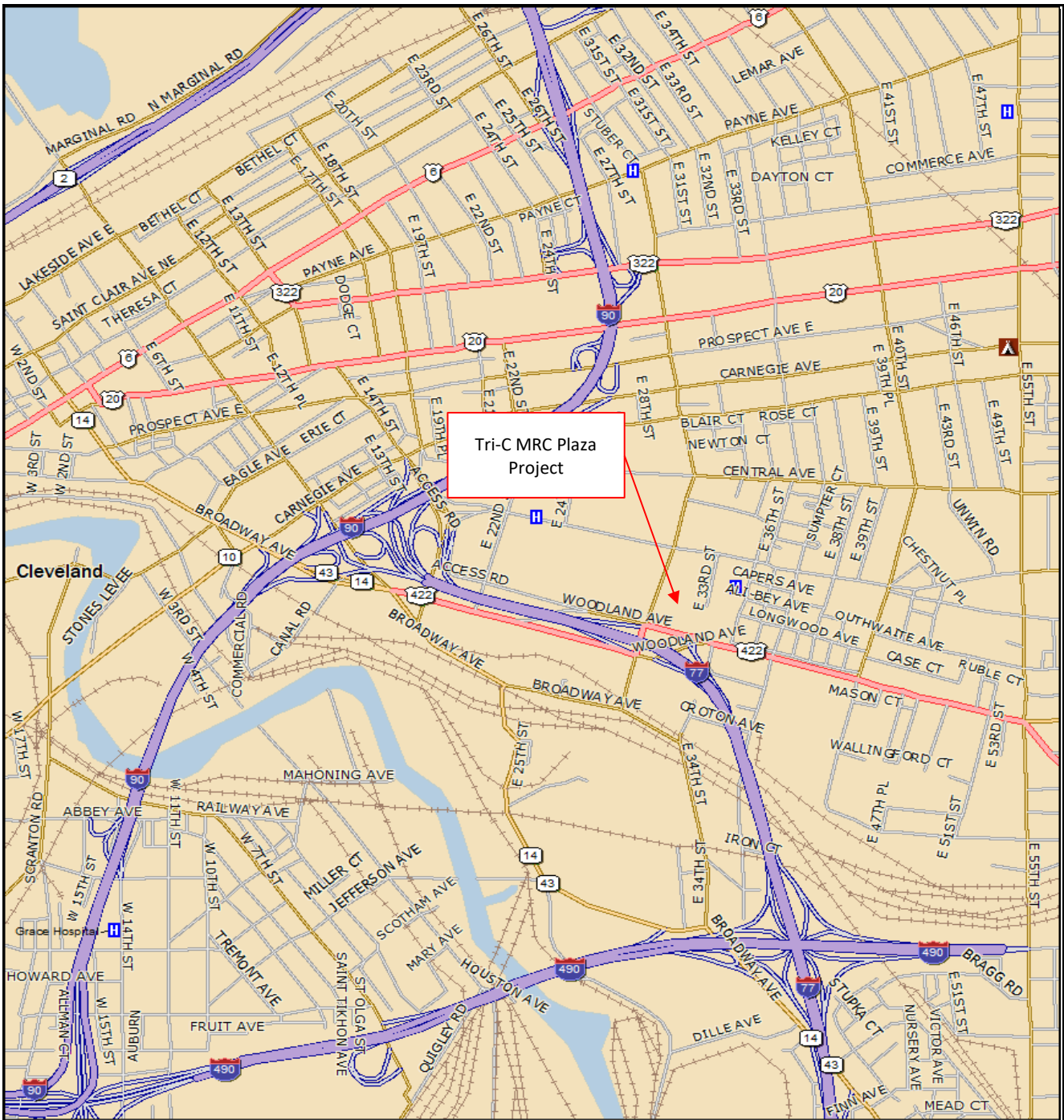
4.0 General Comments

GPD Group should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Subsequent to stripping topsoil, GPD should also be retained to provide testing and observation during site preparation and fill placement operations as well as during pavement construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of weather or between borings and areas covered by the existing facility. The nature and extent of such variations may not become evident until during or after construction. If variations appear, GPD should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken.

This report has been prepared for the exclusive use of **Cuyahoga Community College** for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless GPD Group reviews the changes and either verifies or modifies the conclusions of this report in writing.



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MN (8.6° W)



0 600 1200 1800 2400 3000 3600 ft

Data Zoom 13-1



SITE LOCATION MAP

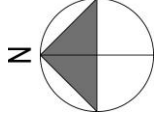
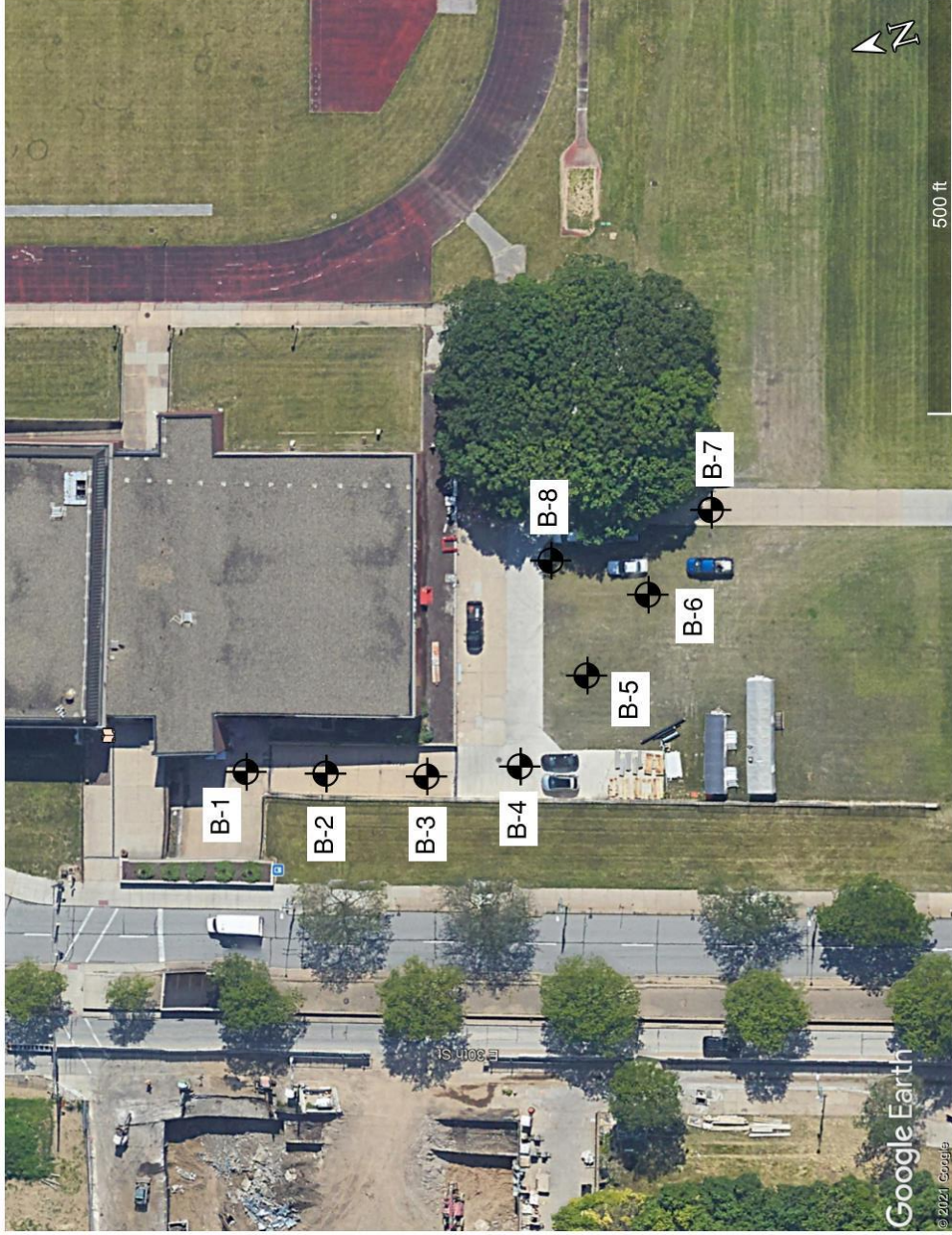
Tri-C Metro Campus MRC Driveway

E. 30th Street, Cleveland, Ohio

GPD Project Number: 2021052.02

Date: July 2021

LOCATION PLAN



PROJECT: Tri-C Metro Campus MRC Driveway

PROJECT NUMBER: 2021052.02

DATE: 7/8/2021

LOCATION: E. 30th Street, Cleveland, Ohio

Legend
Soil Boring:



520 South Main Street, Suite 2531 □ Akron, Ohio 44311 □ (330)572-2100

Boring Number: B-1

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		5.75" CONCRETE										
		6" SAND & GRAVEL.										
1		Damp, medium dense, dark brown, fine to medium SAND. (Fill)										
2			SS 1	92	10-8-9-7 (17)			7				
3		Damp, loose, brown, fine to medium SAND, trace of gravel.										
4			SS 2	83	5-3-2-3 (5)			6				
5												

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB.GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-2

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		8.25" CONCRETE										
1		5" SAND & GRAVEL										
2		Damp, medium dense, brown & black, fine to coarse SAND, trace of gravel & brick. (Fill)	SS 1	96	7-8-10-10 (18)			12				
3		Damp, medium dense, brown & black, fine to coarse SAND, minor sandstone fragments, trace of ciders & brick. (Fill)	SS 2	100	14-17-18-7 (35)			11				
4												
5												

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-3

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		7.75" CONCRETE										
1		Damp, medium dense, brown & black, fine to coarse SAND, minor brick, trace of gravel & cinders. (Fill)										
2			SS 1	96	9-10-12-16 (22)			12				
3												
4		Damp, medium dense, brown & black, fine to coarse SAND, trace of gravel. (Fill)										
5			SS 2	75	16-12-12-9 (24)			11				

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-4

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		6.75" CONCRETE										
1		Damp, medium dense, brown & black, fine to coarse SAND, trace of gravel. (Fill)										
2			SS 1	96	9-7-8-7 (15)			13				
3												
4		Damp, medium dense, brown, fine to coarse SAND, minor sandstone fragments. (Possible fill)	SS 2	33	4-8-5-4 (13)			11				
5												

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-5

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0	1" TOPSOIL	Damp, medium dense, brown & black SAND, minor concrete & brick. (Fill)										
1	[Cross-hatched pattern]											
2	[Cross-hatched pattern]		SS 1	96	10-15-10-6 (25)			13				
3	[Cross-hatched pattern]											
4	[Dotted pattern]	Damp, loose, brown, fine to medium SAND, trace of gravel & silt.	SS 2	100	2-2-2-2 (4)			7				
5	[Dotted pattern]											

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB.GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-6

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0	1" TOPSOIL	Damp, medium dense, brown, fine to coarse SAND, trace of gravel, cinders & brick. (Fill)										
1	[Cross-hatched pattern]											
2	[Cross-hatched pattern]		SS 1	100	3-7-8-7 (15)			9				
3	[Cross-hatched pattern]											
4	[Cross-hatched pattern]	Damp, dense, brown, fine to coarse SAND, some brick. (Fill)	SS 2	96	10-19-23-35 (42)			11				
5	[Cross-hatched pattern]											

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-7

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		8" CONCRETE										
1		Damp to moist, loose, brown & black, fine to coarse SAND, minor silt, trace of gravel. (Fill)										
2			SS 1	88	3-4-4-3 (8)			9				
3												
4		Damp to moist, medium dense, brown & black, fine to coarse SAND, some brick. (Fill)										
5			SS 2	50	5-4-6-6 (10)			13				

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ

Boring Number: B-8

CLIENT Cuyahoga Community College
PROJECT NUMBER 2021052.02
DATE STARTED June 23, 2021 **COMPLETED** June 23, 2021
DRILLING CONTRACTOR GPD Geotechnical Services, Inc.
DRILLING METHOD Hollow Stem Auger - 2 1/4" ID
LOGGED BY Nick Burgess **CHECKED BY** Thomas Kratz
NOTES Drill Rig: Geoprobe 7822

PROJECT NAME Metro Campus MRC Driveway
PROJECT LOCATION E. 30th Street, Cleveland, Ohio
GROUND ELEVATION _____ **HOLE SIZE** 6 in
GROUND WATER LEVELS:
AT TIME OF DRILLING --- None
AT END OF DRILLING --- None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0	1"	1" TOPSOIL Damp to moist, medium dense, dark brown, fine to coarse SAND, minor gravel, trace of brick. (Fill)										
1												
2			SS 1	92	5-6-6-6 (12)			10				
3												
4		Damp, loose, brown & black, fine to coarse SAND, minor gravel, trace of cinders. (Fill)	SS 2	100	7-3-3-3 (6)			11				
5												

Boring terminated at 5.0 feet

GENERALIZED SUBSURFACE PROFILE - GINT STD US LAB GDT - 7/19/21 11:38 - F:\GPD GILCHRIST\JOBS\2021\GPD\DRILLING\2021052.02 - TRIC METRO - MRC DRIVEWAY\B1 TO B8.GPJ



SOIL BORING B-1



SOIL BORING B-2

pic pg 1.xlsx



SOIL BORING B-3



SOIL BORING B-4

pic pg 2.xlsx



SOIL BORING B-5



SOIL BORING B-6

pic pg 3.xlsx



SOIL BORING B-7



SOIL BORING B-8

pic pg 4.xlsx

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.	SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
HSA: Hollow Stem Auger - typically 3 1/4" or 4 1/4" I.D. openings, except where noted.	ST: Shelby Tube - 3" O.D., except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry	BS: Bulk Sample
R.C.: Diamond Bit Core Sampler	PM: Pressuremeter
H.A.: Hand Auger	CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings
P.A.: Power Auger - Handheld motorized auger	

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
 N₆₀: A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
 Q_u: Unconfined compressive strength, TSF
 Q_p: Pocket penetrometer value, unconfined compressive strength, TSF
 w%: Moisture/water content, %
 LL: Liquid Limit, %
 PL: Plastic Limit, %
 PI: Plasticity Index = (LL-PL), %
 DD: Dry unit weight, pcf
 ▼, ▼, ▼: Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

<u>Relative Density</u>	<u>N - Blows/foot</u>
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

<u>Description</u>	<u>Criteria</u>
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

<u>Component</u>	<u>Size Range</u>
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (3/4 in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to 3/4 in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

<u>Description</u>	<u>Criteria</u>
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term</u>	<u>% Dry Weight</u>
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

<u>Q_u - TSF</u>	<u>N - Blows/foot</u>	<u>Consistency</u>
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

<u>Description</u>	<u>Criteria</u>
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term</u>	<u>% Dry Weight</u>
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

<u>Description</u>	<u>Criteria</u>	<u>Description</u>	<u>Criteria</u>
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick	Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick	Lensed:	Inclusion of small pockets of different soils
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing	Layer:	Inclusion greater than 3 inches thick (75 mm)
Slickensided:	Fracture planes appear polished or glossy, sometimes striated	Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
		Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

<u>Q_u - TSF</u>	<u>Consistency</u>
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

<u>Description</u>	<u>Criteria</u>
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

<u>Voids</u>	<u>Void Diameter</u>
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

<u>(Typically Sedimentary Rock)</u>	
<u>Component</u>	<u>Size Range</u>
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

<u>Rock Mass Description</u>	<u>RQD Value</u>
Excellent	90 -100
Good	75 - 90
Fair	50 - 75
Poor	25 -50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

Unified Soil Classification System

Major Divisions			Letter	Symbol	Description	
Coarse-grained Soils More than ½ retained on the No. 200 Sieve	Gravels More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels With Fines	GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.	
		Gravels With Fines	GC		Clayey gravels, gravel-sand-clay mixtures.	
	Sands More than ½ passing through the No. 200 sieve	Clean Sands	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.
			Clean Sands	SP		Poorly-graded sands and gravelly sands, little or no fines.
		Sands With Fines	Sands With Fines	SM		Silty sands, sand-silt mixtures
			Sands With Fines	SC		Clayey sands, sandy-clay mixtures.
Fine-grained Soils More than ½ passing through the No. 200 Sieve	Silts and Clays Liquid Limit less than 50%		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.	
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
			OL		Organic clays of medium to high plasticity.	
	Silts and Clays Liquid Limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.	
			CH		Inorganic clays of high plasticity, fat clays.	
			OH		Organic clays of medium to high plasticity.	
Highly Organic Soils			PT		Peat, muck, and other highly organic soils.	
Consistency Classification						
<i>Granular Soils</i>			<i>Cohesive Soils</i>			
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)			
	<u>MCS</u>	<u>SPT</u>		<u>MCS</u>	<u>SPT</u>	
Very loose	<5	<4	Very soft	<3	<2	
Loose	5 - 15	4 - 10	Soft	3 - 5	2 - 4	
Medium dense	16 - 40	11 - 30	Firm	6 - 10	5 - 8	
Dense	41 - 65	31 - 50	Stiff	11 - 20	9 - 15	
Very dense	>65	>50	Very Stiff	21 - 40	16 - 30	
			Hard	>40	>30	
MCS = Modified California Sampler			SPT = Standard Penetration Test Sampler			

Document 00 41 13 - Bid Form (General Contracting Project)

Sealed Hard Copy and must include One Electronic (jump drive) Copy bids will be received by the Cuyahoga Community College District at 700 Carnegie Avenue, Cleveland, Ohio, 44115 for:

Project: Metropolitan Campus - MRC Driveway
Project Number: C20207076

at

Cuyahoga Community College
2900 Community College Ave.
Cleveland, Ohio 44125

for the

Cuyahoga Community College District

The time for Substantial Completion of all Work is 45 consecutive days from the Notice to Proceed.

Having read and examined the proposed Contract Documents prepared by the Architect/Engineer for the above-referenced Project and the following Addenda:

Addendum Number	Date Received
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

The undersigned Bidder proposes to perform all Work for the applicable Contract in accordance with the proposed Contract Documents, for the following sum(s):

Bid Package 101 – GENERAL CONTRACT

ALLOWANCES (Include Allowance amount(s) in the respective Base Bid below. The below schedule of value unit prices are to be used for determining the final Allowance amount(s) due to the Contractor.)

Item	Description	Amount
Allowance A-1	Field Measured Repair Quantities, As Directed by Owner	\$15,000

SCHEDULE OF VALUE UNIT PRICES TO BE USED FOR ALLOWANCE AMOUNT (Unit prices shall be used for the purpose of determining the adjustment to the Final Payment of Contract Sum for actual field measured quantities of discovered, adjusted alternate bid items, or owner requested work items. The Contractor's Fee and Costs for unloading and handling on the Site, labor, installation costs, incidentals, and other expenses contemplated for the Unit Prices are included in the stated Unit Prices.)

Item	Description	Unit Price	Unit of Measure
Unit Price U-1	Proposed full depth macrofiber concrete pavement including aggregate base.	\$ _____	/ SF
Unit Price U-2	Proposed full depth microfiber concrete walk including aggregate base.	\$ _____	/ SF

Unit Price U-3 Field Measured base repair (remove and replace) quantities,
as directed by owner. Aggregate base per plan specifications. \$ _____ / CY

BASE BID (Including Allowance A-1 above):

ALL LABOR AND MATERIALS, for the sum of \$ _____

Sum in words: _____

_____ and _____ /100 dollars.

Alternate Bid Item #1 – Remove and Replace Concrete Pavement (Circle appropriate choice below and insert amount)

If Alternate is accepted, ADD TO / DEDUCT FROM Base Bid: \$ _____

Sum in words: _____ and _____ /100 dollars.

Alternate Bid Item #2 – Remove and Replace trench drain in lieu of reconstruction (Circle appropriate choice below and insert amount)

If Alternate is accepted, ADD TO / DEDUCT FROM Base Bid: \$ _____

Sum in words: _____ and _____ /100 dollars

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BIDDER AFFIRMATION AND DISCLOSURE

Bidder acknowledges that by signing the Bid Form on the Bidder Signature and Information page, that it affirms, understands, and will abide by the requirements of Executive Order 2019-12D. If awarded a Contract, the Bidder will become the Contractor and affirms that both the Contractor and its Subcontractors shall perform no services requested under this Contract outside of the United States.

The Bidder shall provide the locations where services under this Contract will be performed in the spaces provided below or by attachment. Failure to provide this information as part of its Bid may cause the Bidder to be deemed non-responsive and no further consideration will be given to its Bid. If the Bidder will not be using Subcontractors, indicate "Not Applicable" in the appropriate spaces.

1. Principal business location of Contractor:

Address City, State, Zip

2. Location where services will be performed by Contractor:

Address City, State, Zip

Locations where services will be performed by Subcontractors, if known at time of Bid Opening:

Address City, State, Zip

Address City, State, Zip

Address City, State, Zip

3. Location where state data will be stored, accessed, tested, maintained, or backed-up, by Contractor:

Address City, State, Zip

Locations where state data will be stored, accessed, tested, maintained, or backed-up by Subcontractors, if known at time of Bid Opening:

Address City, State, Zip

Address City, State, Zip

Address City, State, Zip

BIDDER'S CERTIFICATIONS

The Bidder hereby acknowledges that the following representations in this Bid are material and not mere recitals:

1. The Bidder has read and understands the proposed Contract Documents and agrees to comply with all requirements of the proposed Contract Documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder, which might indicate a contrary intention.
2. The Bidder represents that the Bid is based upon the Basis of Design and Acceptable Components specified by the proposed Contract Documents.
3. The Bidder has visited the Site, become familiar with local conditions, and has correlated personal observations about the requirements of the proposed Contract Documents. The Bidder has no outstanding questions regarding the interpretation or clarification of the proposed Contract Documents.
4. The Bidder understands that the execution of the Project will require sequential, coordinated, and interrelated operations, which may involve interference, disruption, hindrance, or delay in the progress of the Bidder's Work. The Bidder agrees that the Contract Sum, as amended from time to time, shall cover all amounts due from the State resulting from interference, disruption, hindrance, or delay that is not caused by the State or its agents and employees. The Bidder agrees that any such interference, disruption, hindrance, or delay is within the contemplation of the Bidder and the State and that the Contractor's sole remedy from the State for any such interference, disruption, hindrance, or delay shall be an extension of time in accordance with the proposed Contract Documents.
5. During the performance of the Contract, the Bidder agrees to comply with Ohio Administrative Code ("OAC") Chapters 123:2-3 through 123:2-9 and agrees to incorporate the monthly reporting provisions of OAC Section 123:2-9-01 into all subcontracts on the Project, regardless of tier. The Bidder understands the State's Equal Opportunity Coordinator or the Contracting Authority may conduct pre-award and post-award compliance reviews to determine if the Bidder maintains nondiscriminatory employment practices, maintains an affirmative action program, and is exerting good faith efforts to accomplish the goals of the affirmative action program. For a full statement of the rules regarding Equal Employment Opportunity in the Construction Industry, see OAC Chapters 123:2-1 through 123:2-9.
6. The Bidder and each Person signing on behalf of the Bidder certifies, and in the case of a Bid by a joint venture each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: **(a)** the Base Bid, any Unit Prices, and any Alternate bid in the Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; **(b)** unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the Bid have not been knowingly disclosed by the Bidder and shall not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices or Alternate bid; **(c)** no attempt has been made or shall be made by the Bidder to induce any other Person to submit or not to submit a Bid for the purpose of restricting competition.
7. The Bidder understands that the Contract is subject to all the provisions, duties, obligations, remedies and penalties of Ohio Revised Code Chapter 4115 and that the Bidder shall pay any wage increase in the locality during the term of the Contract.
8. The Bidder shall execute the Agreement with the Contracting Authority, if a Contract is awarded on the basis of this Bid, and if the Bidder does not execute the Agreement for any reason, other than as authorized by law, the Bidder and the Bidder's Surety are liable to the State as provided in **Article 5** of the Instructions to Bidders.
9. The Bidder certifies that the upon the award of a Contract, as the Contractor it shall make a good faith effort to ensure that all of the Contractor's employees, while working on the Site, shall not purchase, transfer, use, or possess illegal drugs or alcohol or abuse prescription drugs in any way.
10. The Bidder acknowledges that it read all of the **Instructions to Bidders**, and in particular, **Section 2.10 - Submittals With Bid Form**, and by submitting its Bid certifies that it has read the Instructions to Bidders and it understands and agrees to the terms and conditions stated in them.

11. The Bidder agrees to furnish any information requested by the Contracting Authority or Architect/Engineer to evaluate the responsibility of the Bidder.
12. The Bidder agrees to furnish the submittals required by **Section 6.1** of the **Instructions to Bidders** for execution of the Agreement within 10 days of the date of the Notice of Intent to Award.
13. When the Bidder is a corporation, partnership or sole proprietorship, an officer, partner or principal of the Bidder, as applicable, shall print or type the legal name of the Bidder on the line provided, and **sign the Bid Form**.
14. When the Bidder is a joint venture, an officer, partner or principal, as applicable, of each member of the joint venture shall print or type the legal name of the applicable member on the line provided, and **sign the Bid Form**.
15. Bidder acknowledges that by signing the Bid Form on the following Bidder Signature and Information page that it is signing the actual Bid and when submitted as a part of its bid package, shall serve as the Bidder's authorization for the further consideration and activity in the bidding and contract process.
16. All signatures must be original.

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BIDDER SIGNATURE AND INFORMATION

Bidder's Authorized Signature: _____

Please print or type the following:

Name of Bidder's Authorized Signatory _____

Title: _____

Company Name: _____

Mailing Address: _____

Telephone Number: _____

Facsimile Number: _____

E-Mail Address: _____

Where Incorporated: _____

Federal Tax Identification Number: _____

Date enrolled in an OBWC-approved DFSP (month/date/year): _____ / _____ / _____

Contact person for Contract processing: _____

President's or Chief Executive Officer's Name / Title: _____

JOINT VENTURE ADDITIONAL BIDDER SIGNATURE & INFORMATION

Joint Venture Bidder's Authorized Signature: _____

Please print or type the following:

Name of Joint Venture Bidder's Authorized Signatory _____

Title: _____

Company Name: _____

Mailing Address: _____

Telephone Number: _____

Facsimile Number: _____

E-Mail Address: _____

Where Incorporated: _____

Federal Tax Identification Number: _____

Date enrolled in an OBWC-approved DFSP (month/date/year): _____ / _____ / _____

Contact person for Contract processing: _____

President's or Chief Executive Officer's Name / Title: _____

END OF DOCUMENT



Contractors Safety Guide

MUST READ & SIGN

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All contractors and their employees performing work activities in facilities or on properties of Cuyahoga Community College (Tri-C) shall be issued a copy of this guide as part of the pre-bid material for bid and capital projects and prior to beginning work on any campus or facility. If you are using a cell phone, please inform the Police Department of the city you are in to patch you through to the Tri-C Police dispatching center so they can properly guide emergency crews to the correct location(s)

Important Phone Numbers:

Campus Emergency -----4911
Campus Police Non-Emergency -----216-987-4325
EHS -----216-987-3557
West Plant Manager -----216-987-5346
East Plant Manager -----216-987-2347
Metro Plant Manager -----216-987-4508
Westshore Plant Manager -----216-987-5807
CCW Plant Manager -----216-987-5856
CCE Plant Manager -----216-987-2931
Brunswick University Center -----216-987-2930
STJC/HMC/TIC -----216-987-4718

Accidents

Please refer to the Tri-C Office of Environmental Health & Safety (EHS) web site for the following:

- Procedures for Injuries/Illnesses at Work
If you become injured at work, injured (ill) employees shall follow these procedures
- Report Accidents/Incidents on Campus by downloading Accident Report Form Employee Rights and Responsibilities

Asbestos

Many Tri-C buildings have asbestos or material that has not been tested and is considered presumed asbestos-containing material (PACM). These locations will be made known to the Project Manager upon request. The Project Manager will make known the asbestos hazards in the work area before work is initiated.

All renovations or demolitions have to be approved by the Project Manager and Environmental Health & Safety prior to any project start up. All documentation (i.e. testing, clearances, etc.) must be provided to the Project Manager.

Only trained and certified contract workers will handle all asbestos projects.

Automatic Sprinkler Work

The Executive Director, Emergency Manger, Fire & Safety Systems must approve all plans for contract work dealing with fire suppression equipment and Campus Police will be notified before work starts. No Hot Work Permits will be issued for the contracted work area until fire suppression work has been completed.

Barricades and Guardrails

Hazardous areas must be cordoned off with barricades or tape to restrict access to employees, students and the general public, and Tri-C staff and students. All guardrails must meet the Occupational Safety & Health (OSHA) Standards for guardrail construction and standards for fall protection of workers must also be met. When barricades, guardrails or opening covers must be removed for work to proceed, permission to remove them must be obtained from the Tri-C Project Manager. Fall protection devices must be used to protect workers in conjunction with appropriate tie-off locations. Barricades, guardrails and covers must be replaced immediately after work is completed.

Blasting Operations

Advance notification of blasting operations must be provided to the Project Manager, Environmental Health & Safety, Campus Police Department, Cleveland Fire Department and local officials. The contractor is solely responsible to obtain all necessary permits from the appropriate agencies to conduct these operations and must also supply a copy

of these permits to the Project Manager prior to project initiation. Final authority to proceed must be granted by the Tri-C Project Manager prior to the onset of the operation.

All explosives and detonation caps must be removed from the Tri-C property at the end of each workday unless the contractor has made arrangements with the Tri-C Project Manager and the Tri-C Police Department, and blasting equipment must be stored in an approved magazine while on Tri-C property.

Break Rooms

Contractors are only allowed access to break rooms as determined by the Project Manager.

Burning, Welding or Cutting

A Tri-C Hot Work Permit must be obtained from the Plant Manager before any burning, welding or cutting operations. Non-combustible, flame-proof shields or screens must be used to protect Tri-C employees, general public, and students from direct rays and/or arc flash. A fire watch must be maintained and all adjacent combustible materials must be removed or protected from the area. All work practices must conform to those of the American Welding Society as well as the instructions on the Hot Work Permit. Contractors must furnish their own 10 pound ABC rated fire extinguisher. All smoke detectors in the area must be covered or bagged to prevent contaminants and smoke from getting into to the detector and causing alarm. Also, if the fire system needs to be taken out of service temporarily. The Executive Director, Emergency Manger, Fire & Safety Systems must be notified and grant approval prior to any temporary shutdowns or the covering of fire detection equipment.

Chemicals

Contractors must assure the safe use and disposal of any chemicals, tools, equipment or other materials with which they are working. Under no circumstances are chemicals to be emptied into drains or left behind for Tri-C to dispose of.

Contractor must provide the Tri-C Project Manager and EHS with a list of chemicals to be used on Tri-C property and a copy of the Safety Data Sheet (SDS) that is compliant with the current OSHA Hazard Communication Standard (i.e., Global Harmonization System-compliant). The SDS must be accessible at all times when contractors are working with said chemical(s). Each chemical container that is brought on Tri-C's property must be labeled with the identity of the chemical, any hazard rating, the name of the contractor and any subcontractor using the chemical. Contractors must follow the safety procedures recommended by the manufacturer of any chemicals, tools and equipment or other materials used on Tri-C property, including but not limited to the procedures set forth in the SDS, those described in additional literature distributed with the items used, and those described in labels attached to the items or containers.

Combustion Engines

Liquefied petroleum (LP) or any combustion-type engine may be used with restrictions. Permission must be obtained from the Project Manager before using such equipment on, around or near any Tri-C building.

Compressed Air

Compressed air should never be used to clean dust from a worker's clothes or body.

Compressed Gas Cylinder

All compressed gas cylinders, whether in use or in transit, must be fastened securely in an upright position by a chain, suitable strap or a rigid retaining bar or structure. Compressed gas cylinders shall be secured on approved carriers or holders and must always be maintained in an upright position.

Regulators are required to reduce compressed gases to safe operating pressures. If a leak develops in a cylinder, it shall be immediately removed to a safe location outside. The supplier of the cylinder shall be notified if necessary. Cylinders must be permanently marked or stenciled to identify the type of gas in the cylinder in accordance with the requirements of ANSI Standards.

Confined Space Entry Permits

A confined space is a space that: (1) Contains or has a potential to contain a hazardous atmosphere. A hazardous atmosphere is an atmosphere that may expose employees to the risk of death, incapacitation, or impairment of ability to self-rescue that is, escape unaided from a permit space, injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor or mist in excess of 10 percent of its lower explosion limit (LEL).
- Combustible dust at a concentration that meets or exceeds its LEL (approximated to a visibility of 5 feet or less).
- Atmospheric oxygen concentration below 19.5% or above 23.5%.
- Atmospheric concentration of any substance for which a dose or permissible exposure limit has been established.
- Any other atmospheric condition that is immediately dangerous to life or health.

(2) Contains a material that has the potential for engulfing an entrant such as water, sand, and soil; (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or (4) Contains any other recognized serious safety or health hazard.

The contractor must have a copy of their Confined Space Entry Program on site and have all necessary equipment for entry. Prior to entering, the contractor must notify EHS staff of their intent to enter a confined space. A contractor may not enter any confined space until authorized to do so by the Project Manager. Once approved, the Project Manager will issue the permit.

Contractor Access

For security reasons, a contractor's access to Tri-C buildings is restricted to designated entrances. Emergency exits shall only be used in the event of an emergency. Doors locked from the outside (emergency exits) must never be propped open without the prior approval of the Project Manager.

Before work starts:

1. Contractors must provide key loss insurance up to \$250,000.00.

2. Contractors who will be working with asbestos must show certification to the Project Manager and EHS of attendance to an approved asbestos awareness course for all workers.
3. Contractors must provide PPE (personal protective equipment) for their workers at all times.
4. Contractors must provide evidence of safety training to the Project Manager and EHS.

Electrical

All electrical installations must comply with the requirements of the National Electrical Code, NFPA 70E and Tri-C's Electrical Standards. All equipment being worked on at Tri-C will be at a zero state for energy potential if possible to minimize the risk of injury.

Whenever work is to be performed on systems exceeding 600 volts, special instructions must be obtained and followed from the Plant Manager. An Energized Work Permit must be completed and approved by the Plant Manger before work may begin. Contractor must coordinate access/shutdown of any electric system with the Plant Manager. New equipment will use the same labeling used on existing equipment. Proposed grounding must be approved by the Plant Manager. The Project Manager must receive Lockout / Tag out documents from the General Contractor who would then forward to EHS for review before the project starts. See Appendix A for minimum requirements for Lockout / Tag out.

Emergency Equipment

Tri-C fire or emergency equipment must not be moved, blocked or have access restricted, unless specific permission to do so has been granted. This permission will be granted on a case-by-case basis by the Executive Director, Emergency Manger, of Safety and Security Systems. Fire protection and detection systems must not be moved, modified or disabled without the permission of the Access Control Manager or the Fire Prevention Officer.

Excavation and Trenches

Before beginning any excavation work, the existence and location of all underground pipes, tanks and equipment must be determined. The OSHA construction standard for excavation must be followed in all excavation projects.

Eyewash and Safety Shower

Water supply to eyewash and safety shower stations must be assured at all times. If work requires a shut-down of the water supply, building occupants must be notified in advance. Contact the Project Manager and EHS for additional information.

Facilities

The use of Tri-C owned equipment such as electrical trucks, machinery, and power/hand tools is not permitted except where specifically authorized by the Tri-C Plant Manager. Contractor personnel are not to operate valves or controls to shutdown, isolate, start or adjust operating systems or equipment without specific permission of the Tri-C Plant Manager. When

working on systems which could be activated or on isolated sections of active systems, the isolation device must be locked and tagged out (Appendix A). The Tri-C Project Manager will arrange the notification and scheduling of Lockout/Tag out with affected Tri-C areas in accordance with the project specifications.

Fall Protection

All safety belts and lanyards must meet OSHA requirements. When a lanyard is a wire rope or nylon webbing, a shock absorber must be used.

Fire

1. Contractors shall preview work areas to identify components of the fire alarm detection, notification and activation devices, sprinkler and or special suppression systems that may be affected by their work. Contractors shall work with the Executive Director, Emergency Manger, Fire and Safety Systems and make necessary provisions to reduce accidental damage or activation of all life safety systems.
2. Contractors requiring a sprinkler or fire alarm system to be deactivated or put into test mode shall give a minimum of 48 hours' notice prior to commencement of their work.
3. Only contractors licensed by the State of Ohio Department of Commerce Division of State Fire Marshal for fire alarm and or sprinkler systems may initiate any modifications to the system, including but not limited to new installations, relocations, or removals of any and all devices.
4. Contractors will provide their own fire extinguishers and apply for a Hot Work Permit when appropriate.
5. Contractors and all Contractor employees must know how to call Tri-C Police in the event of an emergency. This information is provided during the Contractor Training session that is required before contractors are permitted to work on campus.
6. Contractors who need a Hot Work Permit must plan work accordingly and provide 48 hour notice to AC&SS before permit is issued.

First Aid Kits

Every contractor is required to have a first aid kit and contractor employees must be made aware of its location. All injuries requiring first aid assistance by local hospitals must be reported to the Tri-C Project Manager and EHS.

Hot Work Procedure - Tri-C Employees (See Appendix B for full procedures)

1. Obtain a Hot Work Permit from the Plant Manager.
2. The Plant Manager will consult with Applicant to verify as much detail as possible.
3. If fire alarms need to be taken out of a service or if any modification to the fire prevention systems is deemed necessary to safely perform hot work, contact the Executive Director, Emergency Manger, Fire and Safety Systems for assistance in this process and approval of fire watch measures. **The signature of authorized Plant Manager is required for permit to be issued.**
4. Employees' signature is verification that applicable precautions have been taken.

5. Departmental representatives reserve the right to inspect all job sites prior to issuing the permit. Fire Prevention Officer maintains original application and Applicant receives carbon copy.
6. Post and maintain permit(s) in work area throughout the duration of the hot work activity and restrict access to the area until work is complete and the area restored to its original condition.
7. Additional permits are required should work extend twenty-four (24) hours beyond the start time indicated on the permit. A permit may be issued for a period of time longer than twenty-four (24) hours for longer remodeling/repair jobs but no longer than one (1) week.

Hot Work Procedure – Outside Contracted Employee (See Appendix B for full procedures)

1. Obtain a blank Hot Work Permit from Tri-C's Plant Manager.
2. Fire Prevention Official will consult with Applicant to verify as much detail as possible.
3. If fire alarms systems need to be taken out of a service or if any modification to fire prevention systems is deemed necessary to safely perform hot work, contact the Executive Director, Emergency Manger, Fire and Safety Systems for assistance in this process and approval of fire watch measures. **The signature of authorized Plant Manager is required for permit to be issued.** (Permit is attached as Appendix C)
4. Employees' signature is verification that applicable precautions have been taken.
5. Departmental representatives reserve the right to inspect all job sites prior to issuing the permit
6. Fire Prevention Officer maintains original application and Applicant receives carbon copy.
7. Post and maintain permit in work area throughout the duration of the hot work activity and restrict access to the area until work is complete and the area is restored to its original condition.
8. Additional permits are required should work extend twenty-four (24) hours beyond the start time indicated on the permit. A permit may be issued for a period of time longer than twenty-four (24) hours for longer remodeling/repair jobs but no longer than one (1) week.
9. All work practices must conform to the American Welding Society and the instructions on the hot work permit.
10. Contractors must furnish their own 10 pound ABC rated fire extinguisher.

Keys

Tri-C has installed electronic key boxes to provide access to work areas. A *Key Box Access Request Form* must be signed by each contractor and your Tri-C Point-of-Contact, and approved by the Plant Manager for processing. Following approval, each contractor will be given a key code that will allow access to the key boxes needed for their work activities.

1. Do not loan, transfer, give possession of, misuse, modify, or alter Tri-C keys or the key ring.
2. Never allow others to use your PIN (code), nor is it permissible to use another's PIN/ code.

3. Upon noticing any damage to a key, key ring, or key box, the contractor must report it to Tri-C's Police Department immediately.
4. Contractors must have suitable key loss insurance to the value of \$250,000.00 and must show proof of said insurance coverage.
5. Never cause, allow, or contribute to the making of a copy/duplicate of any Tri-C key.
6. Loss of a key can be a significant financial responsibility for you, ranging from \$58 to \$500,000. The contractor (and his or her company) are responsible for costs associated with replacing all locks/keys affected by your loss.
7. Ask the value of your particular key(s) before you sign the *Key Box Access Request Form* to be aware of the liability.
8. Abide by the *Tri-C Access Control Regulations* described on the Tri-C website.
9. Prior to departure from the Tri-C campus, contractors must lock and verify all doors in areas they have worked in are locked and return all keys.
10. For any questions or concerns, please contact the Executive Director, Emergency Manger, Fire and Safety System.

Ladders

Ladders must conform to OSHA design requirements and be free of defects. Wooden ladders must not be painted. Ladders must be secured to keep them from shifting, slipping, being knocked over or blown over by climatic conditions. Wooden ladders should be used during electrical work or activities

Mechanical Equipment

Contractor must follow Tri-C's Mechanical Standards. All access/shutdowns of mechanical equipment must be coordinated with the Plant Manager. All work must be scheduled off hours unless permission has been otherwise granted. All equipment installed must be connected to the Building Automation System, and all electrical connections must comply with Tri-C's electrical safety requirements.

Mercury Spills

Every effort should be made to prevent all spills of metallic mercury. For mercury spills of any volume, all personnel shall leave the area and contact Tri-C Police Department to arrange for cleanup. The Contractor should also notify Campus Police when there has been a spill. The spill area must to roped, taped or barricaded to prevent accidental exposure. The contractor may be held responsible for the cost of cleanup and disposal.

Mercury Bulbs

All fluorescence light bulbs and high intensity mercury lights will be recycled by a licensed bulb recycler and removed off site by the contractor. Contractors should never leave waste behind. All broken bulbs will be handled as hazardous waste. For further information, contact EHS.

Overhead Work

Overhead work must not be performed above Tri-C's employees, students or the general public. Access to areas affected by overhead work shall be restricted.

Parking

All vehicles parked outside a fenced staging area on Tri-C's property must display a valid Tri-C Parking permit unless parked in a pay-per-hour space. If parked at a meter, the meter must be paid. Use of any parking facilities for construction related activity must be approved in advance by Tri-C Police Department. Tri-C Contractors are subject to Tri-C Parking Rules and Regulations. Violations of these rules are subject to issuance of parking citations and/or vehicle impound.

PCBs

Before starting work that involves PCBs or PCB containing material, the contractor must submit two copies of their procedures for handling, packaging, shipping and disposal of PCBs to the Project Manager and EHS. The contractor must also label all items and containers with the appropriate labels for removal from Tri-C property. The contractor must ensure that the manifest and land disposal requirements (LDR) are properly completed and signed in accordance with Federal and State regulations.

Environmental Health & Safety staff will review and sign all Hazardous Waste Manifests.

Personal Protective Equipment

In certain construction and maintenance operations personal protective equipment, including but not limited to safety glasses, goggles, respirators, hardhats and other protective clothing must be worn at all times. The type of PPE to be worn will be determined by the physical and chemical hazards of the contracted job. The contractor is responsible for the selection of PPE for their employees that is necessary to perform the job safely and correctly. All OSHA requirements for employee safety must be strictly adhered to.

Plumbing

All plumbing work and installations must comply with the requirements in the Ohio Plumbing Code with points of emphasis/special importance given to:

- Backflow protection must be provided for all domestic water installations that use water for a non-potable use. For Non-health (Non-Toxic - no chemicals added cross connections) an ASSE 1015 double-check backflow preventer shall be installed. This is defined as any point on a water supply system where a polluting substance may come in contact with potable water aesthetically affecting the taste, odor or appearance of the water, but not hazardous to health.
- For Health Hazard (Toxic - cross-connections defined as any point on a water supply system where a contaminating substance may come in contact with potable water creating an actual health hazard, causing sickness or death) an ASSE 1013 shall be installed. Irrigation systems must be protected from backflow by either a pressure vacuum breaker, or a reduced pressure backflow preventer. The device must be protected from freezing the temperature shall be maintained at 40 degrees Fahrenheit or higher inside the enclosure.
- When any mechanical or plumbing line penetrates any floor surface or a brick/block/concrete wall it must be sleeved. The sleeve shall be 2 times the diameter of the pipe penetrating the surface. Annular spaces between sleeves and pipes shall be filled or tightly caulked in an approved manner. Annular spaces between sleeves and pipes in fire-resistance rated assemblies shall be filled or tightly caulked in accordance with the Ohio Building Code.

- All storm drains shall receive water only from the following sources: rainwater; surface water; subsurface water; and similar liquid wastes. Drain disposal of chemicals is never permitted (i.e., cement; rubber/silicone based products; or paints, etc.). In addition, the maximum discharge temperature into any drain shall be 140 degrees Fahrenheit.

Refrigerants

Only certified technicians may perform work on equipment with refrigerants. The contractor must provide a copy of the technician's certifications prior to project start-up. The contractor must provide documentation to the Tri-C Project Manager indicating the date, type of service, amount and type of refrigerant used. All work must conform to the 40 CFR parts 82 for the protection of stratospheric ozone.

Roof Safety

At least two of the contractor's employees must be present during all work on campus roofs. All construction projects that have the potential for a fall hazard must comply with OSHA's 29 CFR 1926 sub part M, and 1910.23. It is the contractor's responsibility to train all of their employees on all relevant safety issues.

Safety Representative

It is the responsibility of all contractors to appoint a Safety Representative (holding at least a foreman position), to oversee all contract work at Tri-C. The foreman will perform daily job inspections and correct any unsafe conditions. It is the contractor's responsibility to train all of their employees on all relevant safety issues. The foreman must investigate any accident and report to the Tri-C Project Manager, Environmental Health & Safety and Risk Management.

Safety Rules and Procedures

To report a medical emergency:

- Call 216-987-4235 or dial 4911 to contact Tri-C Police Department.
- Police will provide or arrange required services, including Local Emergency Medical Services.

Security Requirements

The following items are not permitted on Tri-C's property: alcoholic beverages, illicit drugs, drug related paraphernalia, explosives, firearms and ammunition.

Smoking

Smoking, vaping and chewing tobacco in Tri-C buildings is prohibited. Tri-C is a tobacco-free campus. If you chose to smoke, you must do so outside in a location no closer than 20 feet from building doorways.

Solvents and Paints

The use of solvents, chemicals or paints requires prior approval of Tri-C. An SDS for each substance must be submitted to the Project Manager and EHS for review and approval. Adequate ventilation must be maintained at all times when paints, chemicals or solvents are used. Personnel must use proper respiratory protection and protective equipment when toxicity of the material requires such protection. Flammable solvents and materials must be

used with caution when possible sources of ignition exist.

When flammable solvents are being used, the contractor must post signs in the area to identify the hazard(s) present in the area. Flammable paint and solvents must be stored in an approved flammable liquids storage cabinet when storage is required. Corrosives (acid, bases) and flammables must never be stored together. If a cabinet is not available, all chemicals must be removed from Tri-C property by the end of the workday. The Contractor, not Tri-C, is responsible for the proper disposal of all waste chemicals.

Tar Pots

Tar pots are never permitted on roofs and each pot must have its own 10 pound ABC fire extinguisher. Tar pots must be kept a minimum of 10 feet from any building. Before using a tar pot, the contractor must have approval from the Project Manager.

Tri-C Telephones

Use of telephones is restricted to Tri-C business-related calls. See your foreman for phone locations.

Tools – Hand and Power

All hand tools and operations of hand tools shall conform to the OSHA construction standard 1926.302.

Vehicles

All contractor personnel shall park their vehicles in areas designated as appropriate by the Project Manager. Refer to the Parking section contained in this document.

Warning Signs

The contractor must provide all warning signs, barriers, barricades etc., whenever such notification is warranted. Where signs and barricades do not provide adequate protection, flagmen must be used.

Worksite Housekeeping

Waste material and debris must be removed from the job site at the end of each workday. Waste material and debris must never be thrown from any level to another. Material must be piled, stacked or otherwise stored to prevent tipping or collapse.

Overhead storage of tools, equipment etc., by the contractor is prohibited. No waste material will be left by the contractor in the space above suspended ceiling panels.

The foreman will perform daily job inspections and correct any unsafe conditions. It is the contractor's responsibility to train all of their employees on all relevant safety issues. The foreman must investigate any accident and report to the Tri-C Project Manager, Environmental Health & Safety and Risk Management. "Contractors should be aware of air intake without exposing residents to foul air, high levels of exhaust or particulate matter and potential problems".

The Contractor agrees to provide for a safe and healthy work environment, and to maintain compliance with all applicable provisions of the Occupational Safety and Health Administration's (OSHA) regulations as set forth in the Chapter 29 of Code of Federal Regulations pertaining to health and safety in the workplace (29 CFR 1910 and 1926). The Contractor also agrees to provide to Environmental Health and Safety evidence of applicable written programs prior to beginning work. These include but are not limited to Lockout/Tag Out (Control of Hazardous Energy), Confined Space, Hazard Communication, and Hearing Conservation.

The Contractor understands the signatures below represent an authorization to proceed with work space activities only, and do not, nor are they intended to, represent approval of plans, designs, methods, specifications and work practices of the Contractor.

As an agent of the above company, I have read and agree to the above outlined conditions in this book on behalf of the company and understand all employees and sub-contractors are beholden to it:

Contractor Authorized Representative _____

Date _____

Contractor name _____ (please print)

Registration # _____

Cuyahoga Community College Authorized Representative

Name _____ **Dept.** _____

Date _____



IMPROVEMENT PLANS

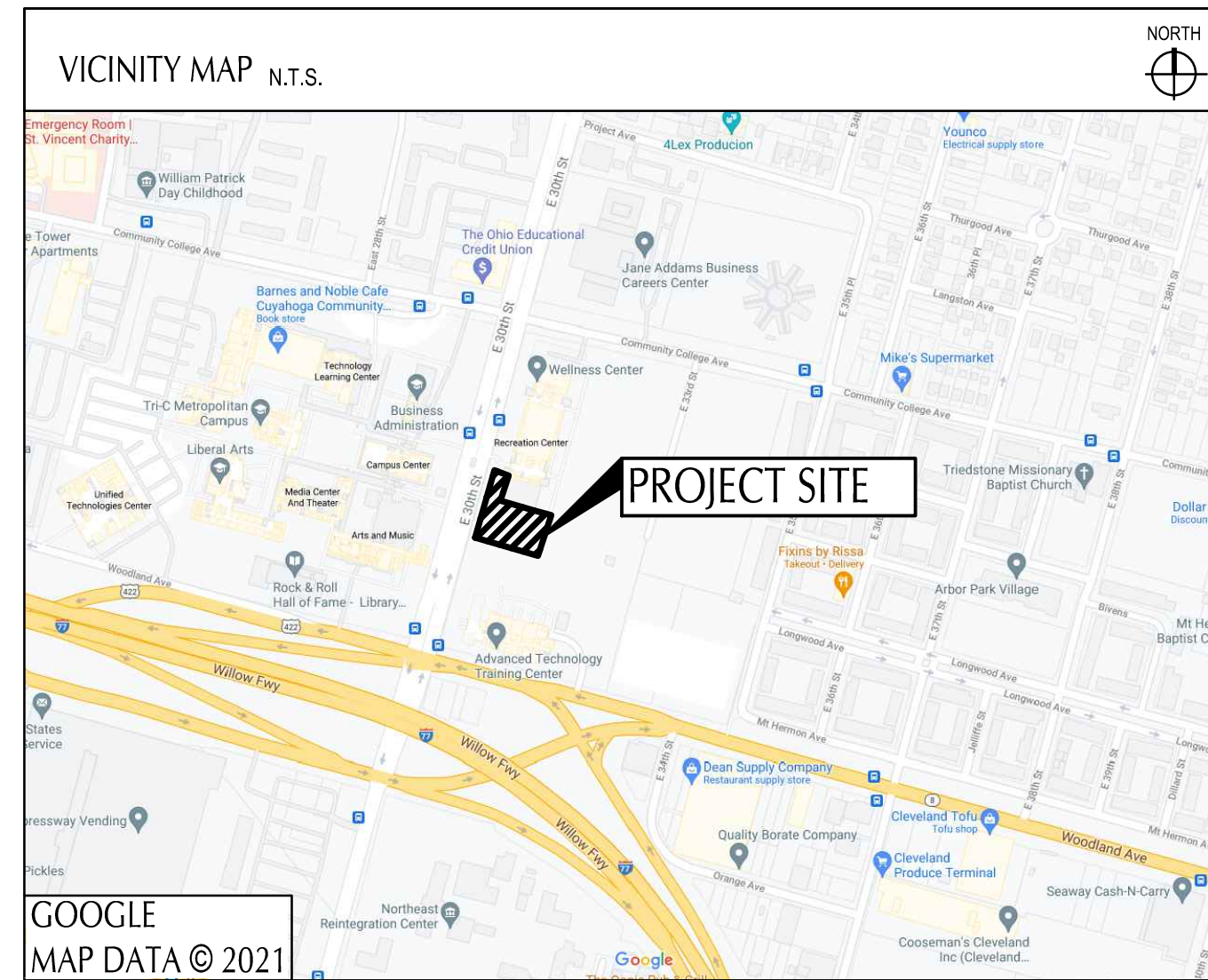
CUYAHOGA COMMUNITY COLLEGE

METRO MRC DRIVEWAY

2900 COMMUNITY COLLEGE AVE

CLEVELAND, OHIO 44115

ISSUED FOR BID JANUARY 27, 2022



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PLAN REPRODUCTION WARNING
 THE PLANS HAVE BEEN PREPARED FOR PRINTING ON ANSI D (22"x34") SHEETS. PRINTING ON OTHER SIZE SHEETS MAY DISTORT SCALES. REFER TO GRAPHIC SCALES.

REV.	DATE	DESCRIPTION

CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

TITLE SHEET

ISSUED FOR:	
PERMIT	
BID	01/27/2022
CONSTRUCTION	
RECORD	

PROJECT MANAGER	DESIGNER
KB	TJW

JOB NO.
 2021052.02

TS-001

DEMOLITION NOTES

- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY DEMOLITION PROCESS. CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC OHIO EPA OR LOCAL GOVERNING AUTHORITIES AIR PERMITS FOR INSTALLATION AND OPERATION. CONTRACTORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING GOVERNING BODIES. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO THE OHIO EPA AND LOCAL GOVERNING AUTHORITIES TO DETERMINE ANY CORRECTIVE ACTIONS THAT MAY BE REQUIRED.
- DEMOLITION INCLUDES THE FOLLOWING:
 - TRANSFER BENCHMARK CONTROL TO NEW LOCATIONS OUTSIDE THE DISTURBED AREA PRIOR TO COMMENCING DEMOLITION OPERATIONS (WHEN APPLICABLE).
 - DEMOLITION AND REMOVAL OF SITE IMPROVEMENTS NECESSARY FOR THE PROPOSED CONSTRUCTION OF NEW IMPROVEMENTS.
 - RE-ROUTING, RELOCATING, DISCONNECTING, CAPPING OR SEALING, AND ABANDONING/REMOVING SITE UTILITIES IN PLACE (WHICHEVER IS APPLICABLE).
- REMOVE AND LEGALLY DISPOSE OF ITEMS CALLED OUT TO BE REMOVED. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS. THOSE ITEMS INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN SHALL BE CLEANED, SERVICED, AND OTHERWISE PREPARED FOR REUSE. CONTRACTOR TO STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.
- PROTECT ITEMS INDICATED TO REMAIN AGAINST DAMAGE AND SOILING THROUGHOUT CONSTRUCTION. WHEN PERMITTED BY THE OWNER'S REPRESENTATIVE OR OWNER, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION THROUGHOUT CONSTRUCTION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS. PROMPTLY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEMOLITION OPERATIONS AT THE CONTRACTORS COST.
- CONTRACTOR SHALL SCHEDULE DEMOLITION ACTIVITIES WITH THE CONSTRUCTION/PROJECT MANAGER INCLUDING THE FOLLOWING:
 - DETAILED SEQUENCE OF DEMOLITION AND REMOVAL WORK, WITH STARTING AND ENDING DATES FOR EACH ACTIVITY.
 - DATES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES.
 - IDENTIFY AND ACCURATELY LOCATE UTILITIES AND OTHER SUBSURFACE STRUCTURAL, ELECTRICAL, OR MECHANICAL CONDITIONS.
- REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE STARTING DEMOLITION. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE THROUGHOUT CONSTRUCTION OPERATIONS.
 - DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES. EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER'S REPRESENTATIVE AND AUTHORITIES HAVING JURISDICTION, PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND TO GOVERNING AUTHORITIES.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES SERVING THE SITE. ARRANGE TO SHUT OFF AND CAP UTILITIES WITH UTILITY COMPANIES AND FOLLOW THEIR RESPECTIVE UTILITY KILL AND CAP POLICIES. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING BY THE UTILITY COMPANY.
- CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA. SAFE PASSAGE INCLUDES THE ERECTION OF TEMPORARY PROTECTION AND/OR BARRICADES AS PER LOCAL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH THE CURRENT ADA REGULATIONS. USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- CLEAN ADJACENT BUILDINGS AND IMPROVEMENT OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
- PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE WILL NOT BE PERMITTED. NO BURNING OF ANY MATERIALS ON SITE SHALL BE PERMITTED.
- IT IS NOT EXPECTED THAT ASBESTOS WILL BE ENCOUNTERED IN THE COURSE OF THIS CONTRACT. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND THE OWNER.
- BELOW-GRADE DEMOLITION: DEMOLISH PAVEMENTS AND OTHER BELOW-GRADE DEMOLITION, AS FOLLOWS:
 - COMPLETELY REMOVE BELOW-GRADE DEMOLITION, INCLUDING KNOWN AND UNKNOWN PAVEMENT SECTIONS INCLUDING UNDERLYING CONCRETE SLABS, AND OTHER BELOW GRADE CONCRETE SLABS FOUND DURING DEMOLITION (INCLUDING ITEMS WHICH MAY NOT BE IDENTIFIED HEREIN).
- FILLING BELOW-GRADE AREAS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF PAVEMENTS AND OTHER REMOVED ITEMS WITH SOIL MATERIALS ACCORDING TO THE RECOMMENDATIONS OF THE HIRED ON-SITE GEOTECHNICAL ENGINEER'S REPRESENTATIVE. CONTRACTOR SHALL CONTACT GEOTECHNICAL ENGINEER PRIOR TO FILLING ANY AREAS TO OBSERVE FILL PROCEDURES.
- CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFICWAYS IF REQUIRED BY GOVERNING REGULATIONS.
- CONTRACTOR TO WET SAW CUT EXISTING PAVEMENT TO REMAIN AT NEXT NEAREST JOINT PRIOR TO REMOVALS OF CURB, GUTTER, PAVEMENT, ETC.
- WHERE APPLICABLE, THE CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS WITH SMALL HANDHELD GRINDERS OR SCARIFIERS OR OTHER METHODS, WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE. TAKE CARE DURING MARKING REMOVAL NOT TO SCAR, DISCOLOR, OR OTHERWISE DAMAGE THE PAVEMENT SURFACE. DO NOT OVERPAINT OR USE OTHER METHODS OF COVERING MARKINGS INSTEAD OF REMOVAL.
- IF UNDERGROUND TANKAGE IS ENCOUNTERED DURING DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL COORDINATE REMOVAL AND REPLACEMENT WITH THE STATE BUREAU OF UNDERGROUND STORAGE TANK REGULATIONS (BUSTR). UNDERGROUND TANK REMOVAL SHALL ALSO INCLUDE THE REMOVAL OF ANY MONITORING WELLS, IN ACCORDANCE WITH GOVERNING AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL FULLY SECURE WORK AREA WITH THE APPROPRIATE SIGNAGE, FENCING, AND BARRICADES WHICH ACCOMMODATE VISUALLY IMPAIRED PERSONS AS AGREED UPON WITH SITE CONSTRUCTION/PROJECT MANAGER AND OWNER TO WARN AND KEEP PEOPLE OUT OF THE SITE WORK AREA FOR THE DURATION OF THE PROJECT.

GENERAL PLAN AND SURVEY NOTES

- PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY. THE GEOTECHNICAL BORING LOGS DATED MARCH 15, 2018 ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND SHALL BE USED AS A REFERENCE.
- THE CONTRACTOR SHALL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL BORING AND PAVEMENT CORE LOGS, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLAN AND SPECIFICATIONS AND DISCLOSED BY THE REFERENCED DOCUMENTS WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING AS REQUIRED ABOVE, OF SUCH DIFFERING CONDITIONS.
- ALL WORK WITHIN THE RIGHTS OF WAY (IF APPLICABLE) SHALL BE IN ACCORDANCE WITH THE GOVERNING JURISDICTION AND SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE ANY MAINTENANCE OF TRAFFIC WITH THE OWNER'S REPRESENTATIVE AND THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL AT ALL TIMES ENSURE THAT SWPP MEASURES PROTECTING EXISTING DRAINAGE FACILITIES BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY PHASE OF THE SITE CONSTRUCTION OR LAND ALTERATION.
- ALL WORK SHALL BE COMPLETED IN A NEAT AND ORDERLY MANNER REMOVING ALL EXCESS MATERIAL AND WASTE FROM THE SITE INCLUDING TIMELY REMOVAL OF ANY CONCRETE SPLATTER, UPON COMPLETION OF PROJECT, CONTRACTOR SHALL CLEAN THE PAVED AREAS PRIOR TO REMOVAL OF TEMPORARY SEDIMENT CONTROLS, AS DIRECTED BY THE CITY AND/OR CONSTRUCTION/PROJECT MANAGER. IF POWER WASHING IS USED, NO SEDIMENT LADEN WATER SHALL BE WASHED INTO THE STORM SYSTEM. ALL SEDIMENT LADEN MATERIAL ON PAVEMENT OR WITHIN THE STORM SYSTEM SHALL BE COLLECTED AND REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE.
- THESE PROJECT CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE A CONTRACTUAL RELATIONSHIP BETWEEN GPD GROUP INC. AND THE CONTRACTOR / SUBCONTRACTOR / OR OTHER AFFILIATED PARTIES.
- NEITHER THE ENGINEER NOR THE OWNER SHALL BE RESPONSIBLE FOR CONSTRUCTION OR SAFETY, MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES UTILIZED IN CONSTRUCTION BY THE CONTRACTOR OR SUBCONTRACTORS. ANY SEQUENCING OR SUGGESTED NOTATIONS WHICH MAY APPEAR IN THE PLANS IS INTENDED TO ASSIST IN THE UNDERSTANDING OF PROJECT INTENT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE SECTIONS OF OSHA STANDARDS, LOCAL, AND STATE REGULATIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM(S) THAT IS REQUIRED.
- DETAILS, NOTES, AND OTHER REFERENCES CONTAIN HEREIN MAY HAVE BEEN ATTAINED FROM OUTSIDE REFERENCE SOURCE LOCATIONS SUCH AS, BUT NOT LIMITED TO, LOCAL AUTHORITY AGENCIES, DESIGN REFERENCE MANUALS, MANUFACTURER'S RECOMMENDED DOCUMENTATION, OR OTHER INDUSTRY SOURCES. GPD DOES NOT WARRANT INFORMATION OR REPRESENTATION OF SAID CONTENT CONTAINED HEREIN, IT IS SHOWN SOLELY FOR REFERENCE ONLY OF DESIGN INTENT AT THE TIME OF PLAN PREPARATION. THE CONSTRUCTION TEAM MEMBERS (CONTRACTOR AND OWNER'S REPRESENTATIVE, WHERE APPLICABLE) SHALL OBTAIN THE MOST CURRENT DETAILED INFORMATION FROM THE RESPECTIVE SOURCE TO CONSTRUCT THE IMPROVEMENTS UNDER THE AUTHORITY OF THE RESPECTIVE GOVERNING AGENCIES. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN THE ORIGINAL DESIGN INTENT AND THE CONSTRUCTION TEAM OBTAINED REFERENCE MATERIAL, THE OWNER'S REPRESENTATIVE OR THE PROJECT'S CONTACT PERSON SHALL BE NOTIFIED PRIOR TO COMMENCING OF ASSOCIATED WORK.
- CONDUCT CONSTRUCTION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFICWAYS.
- THE OWNER PROVIDED EXISTING CONDITIONS BACKGROUND MAPPING FROM 2018 WAS UTILIZED TO DEVELOP THESE PLANS. THE G.C. IS RESPONSIBLE FOR LOCATING ALL EXISTING AND PROPOSED IMPROVEMENTS PER THESE PLANS AND ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DIFFERING OR CONFLICTING INFORMATION PRIOR TO THE START OF WORK EFFORTS. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN HEREIN WHICH DIFFERS IN THE FIELD IF THE CONTRACTOR DOES NOT PROVIDE THE OWNER ADVANCE NOTIFICATION, PRIOR TO THE START OF WORK.
- THE LOCATIONS OF UNDERGROUND FACILITIES WITHIN AND AROUND THE WORK AREA ARE NOT SHOWN WITHIN THE PLAN SET. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO BECOME FAMILIAR WITH THE SITE'S POSSIBLE BELOW GRADE FEATURES, INCLUDING BUT NOT LIMITED TO, ROOMS, VAULTS, UTILITIES, ETC. AND SHALL CONDUCT A WALK THROUGH WITH THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR REPAIR TO DAMAGE CAUSED BY THEIR WORK FORCE TO FACILITIES WHICH ARE NOT INTENDED TO BE DISTURBED.
- THE CONTRACTOR SHALL RUN AN INDEPENDENT VERTICAL CONTROL TRAVERSE AND A HORIZONTAL CONTROL TRAVERSE THROUGH THE REFERENCED PROJECT CONTROL DATUM TO CONFIRM GEOMETRIC DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE FACILITY'S REPRESENTATIVE INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF CAR CHARGING SPACES TO BE COMPLETED BY ANOTHER CONTRACTOR THAT IS NOT A PART OF THIS PLAN SET.

CONCRETE NOTES AND SPECIFICATIONS

- ALL EXTERIOR SITE SPECIFIC PORTLAND CEMENT CONCRETE (PCC) (I.E. SIDEWALK, PAVEMENT OR CURBING) SHALL MEET THE MINIMUM REQUIREMENTS OF THE LATEST EDITIONS OF THE STATE DEPARTMENT OF TRANSPORTATION (DOT) AND THE AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATIONS USING THE RESPECTIVE ASTM STANDARDS FOR MATERIALS USED. MIXING, TRANSPORTATION, FORMING, PLACEMENT, CURING, AND SEALING. THE MINIMUM STRENGTH FOR NORMAL WEIGHT CONCRETE IS 4000 PSI AT 28 DAY STRENGTH. CONTRACTOR SHALL REFER TO DETAILS, NOTES, AND SPECIFICATIONS WITHIN THE CONSTRUCTION DOCUMENTS FOR VARIATIONS TO THIS SPECIFICATION. MIX DESIGN SHOP DRAWINGS SHALL BE TAILORED TO THE ACTUAL FIELD PLACEMENT CONDITIONS AND BE SUBMITTED TO THE CONSTRUCTION/PROJECT MANAGER IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.
- ALL EXTERIOR CONCRETE CURBS SHALL HAVE JOINTS PER ACI 300. CURB JOINTS ARE TO ALIGN WITH CONCRETE PAVEMENT JOINTS WHERE APPLICABLE, TYPICALLY BEING 10 FT TO 12 FT. ALL EXTERIOR VEHICULAR CONCRETE PAVEMENT AND FLOWWAYS SHALL HAVE CONTROL JOINTS PER TABLE BELOW AND EXPANSION JOINTS PER ACI 303 TYPICAL RECOMMENDATIONS.

SLAB THICKNESS - "T"	MAXIMUM JOINT SPACING
LESS THAN 4 INCHES	8 FEET
4 - < 5 INCHES	10 FEET
5 - < 6 INCHES	12.5 FEET
6 INCHES - < 8 INCHES	15 FEET
8 INCHES - < 10 INCHES	15 FEET
- ALL JOINTS, INCLUDING SAWED JOINTS, SHALL BE SEALED. JOINTS SHALL BE CLEANED AND DRIED PRIOR TO SEALING. JOINT SEALING MATERIALS SHALL COMPLY WITH ASTM D 3408 FOR HOT APPLIED ELASTOMERIC, TT-S-001543A FOR SILICONE RUBBER, AND TT-S-002305 FOR SINGLE COMPONENT ELASTOMERIC SEALER WIDTH, DEPTH, AND PREPARED APPLICATION SURFACES SHALL BE PER MANUFACTURERS RECOMMENDATIONS. JOINT FILLER MATERIAL SHALL CONFORM TO ASTM D1751 OR ASTM D8139 AND EXTEND THE FULL DEPTH OF CONTACTING SURFACE.
- ALL CONCRETE PANELS SHALL BE SQUARE WITH A LENGTH TO WIDTH RATIO NO GREATER THAN 1.25 TO 1 AND HAVE A MEDIUM BROOM FINISH (TRANSVERSE, SLIP RESISTANT FOR PEDESTRIAN PATHWAYS) WHICH SHALL BE TO MINIMUM STRENGTH PRIOR TO OPENING FOR VEHICULAR TRAFFIC AREAS. STAGGERED/OFFSET JOINT, INTERIOR CORNERS, ANGLES LESS THAN 90 DEGREES, SLABS LESS THAN 18-INCHES WIDE, AND ODD SHAPES SHALL NOT BE PERMITTED. BLOCKOUTS AROUND ALL PAVEMENT CASTINGS SHALL BE PROVIDED IN ACCORDANCE WITH ACI RECOMMENDATIONS.
- ALL JOINTING (IF) SHOWN HEREIN IS ONLY A GENERAL GUIDELINE OF DESIGN INTENT. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FINAL LAYOUT OF THE JOINTING WHICH COINCIDES WITH THEIR MEANS AND METHODS TO ENSURE NO UNDESIRABLE CRACKS FORM THROUGH ANY PLACED CONCRETE. JOINTS SHALL BE APPROPRIATELY PLACED AS SOON AS POSSIBLE TO KEEP UNNECESSARY CRACKS FROM DEVELOPING. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF THEIR PAVEMENT JOINT LAYOUT TO OWNER / CONSTRUCTION MANAGER PRIOR TO PLACEMENT FOR RECORD. THE CONTRACTOR SHALL REPLACE ANY CRACKED CONCRETE, WHICH HAS NOT BEEN PLACED/FINISHED IN ACCORDANCE WITH ACI STANDARDS, TO THE NEXT JOINT PAST THE EFFECTED AREA AT NO ADDITIONAL COST TO THE PROJECT WITHIN ONE YEAR OF PROJECT COMPLETION.
- DESIGN INTENT CONCRETE AND SHALL CONFORM TO THE FOLLOWING MINIMUM AND MAXIMUM VALUES:

a. STRENGTH	PER MIX DESIGN, MINIMUM 4000 PSI
b. PORTLAND CEMENT CONTENT	590 LB / CY (ASTM C150 TYPE III)
c. POZZOLAN MATERIALS (SEE NOTES BELOW)	SILICA FUME MAY REPLACE MAX. 7% CEMENT FLY ASH OR SLAG CEMENT MAY REPLACE MAX. 20% CEMENT
d. MAX W/C RATIO	PER MIX DESIGN, MAXIMUM 0.45
e. ENTRAINED AIR	6.5% AVG ± 1.5% (7.0% TARGET) ASTM C260
f. SLUMP	4" MAX WITHOUT WATER REDUCER
g. SLUMP WITH HRWR OR MID RANGE WR	6" TO 8"
h. WATER REDUCER	NORMAL TYPE A (ASTM C494)
i. RETARDER	NORMAL TYPE B OR D AS NEEDED (REQUIRED IF CONCRETE TEMPERATURE EXCEEDS 85F)
j. CONCRETE TEMPERATURE AT PLACEMENT	50F-80F
k. ACCELERATOR	NON-CHLORIDE TYPE ONLY - CALCIUM CHLORIDE IS PROHIBITED
l. FIBERS TO BE USED FOR SHRINKAGE CRACK CONTROL - (CURBS, WALKS, STEPS, RAMPS)	POLYPROPYLENE OR POLYETHYLENE MICRO SYNTHETIC FIBERS @ 1.5 LBS / CY (FIBERMESH 300 OR APPROVED EQUAL)
- FOR USE AS W.W.F. REPLACEMENT (VEHICULAR TRAFFIC PAVEMENT)	MACRO SYNTHETIC FIBERS @ 4.0 LBS / CY (TUF-STRAND SF OR APPROVED EQUAL)
- ALL SYNTHETIC FIBERS SHALL BE TYPE III PER ASTM C1116 AND ASTM D7508. MACRO FIBERS SHALL BE 1.5 TO 2.25 INCHES IN LENGTH.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, ASTM A1064, ASTM A307, AND ASTM A775. WHEN USED, ALL W.W.F. SLAB REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS AND BE FLAT SHEETS ONLY. ZINC REPAIR MATERIAL SHALL CONFORM TO ASTM A780.
- CONCRETE SHALL ARRIVE AT JOB SITE WITH APPROPRIATE W/C RATIO. NO WATER SHALL BE ADDED TO CONCRETE ON SITE WHICH EXCEEDS THE MAXIMUM ALLOWED W/C RATIO AS INDICATED BY THE WRITTEN BATCH PLANT TICKET FROM THE SUPPLIER. SUPERPLASTICIZER AND/OR OTHER ADMIXTURES MAY BE UTILIZED TO ACHIEVE DESIRED WORKABILITY OR TO ACCOUNT FOR ADVERSE PLACEMENT CONDITIONS. ADMIXTURES SHALL BE UTILIZED ONLY IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS AND MEET THE REQUIREMENTS OF ASTM C494 AND/OR ASTM C1017.
- CONTRACTOR SHALL HAVE A MIN. 5 YEARS EXPERIENCE WITH SUCCESSFUL PLACEMENT OF CONCRETE UTILIZING POZZOLAN MATERIALS. MIX DESIGNS WHICH UTILIZED POZZOLAN MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL DOT SPECIFICATIONS AND ACI STANDARDS. FLY ASH SHALL MEET THE REQUIREMENTS OF ASTM C618, CLASS C OR CLASS F, EXCEPT THE LOSS ON IGNITION MUST NOT EXCEED 5%. SLAG CEMENT ACCORDING TO ASTM C989, GRADE 100 MINIMUM. SILICA FUME SHALL BE DRY DENSIFIED MEETING THE REQUIREMENTS OF ASTM C1240. USE OF MATERIALS SHALL BE IN ACCORDANCE WITH ACI 211.1.
- AGGREGATES SHALL BE LOW-SHRINKAGE / WELL GRADED PER ASTM C33 AND THE LOCAL DOT SPECIFICATIONS WHICH ARE RESISTANT TO FREEZE / THAW, SULFATE ATTACK, AND ARE NOT ALKALI-CARBONATE AGGREGATES OR SUSCEPTIBLE TO ALKALI-AGGREGATE REACTIVITY. SLAG AGGREGATES SHALL NOT BE PERMITTED IN ANY CONCRETE MIX.
- LIQUID MEMBRANE FORMING CURING COMPOUNDS SHALL BE PER ASTM C1315 TYPE II CLASS A IN ACCORDANCE WITH ACI 308. LIQUID MEMBRANE FORMING CURING COMPOUNDS SHALL BE WHITE PIGMENTED AND TWO COATS APPLIED IN TWO PERPENDICULAR UNIFORM APPLICATIONS PER MANUFACTURERS RECOMMENDATIONS WITHIN THE ALLOWABLE TIME PERIODS. APPLICATIONS SHALL BE PHOTOGRAPH DOCUMENTED FOR EVEN AND CONSISTENT COVERAGE SIMILAR TO THE APPEARANCE OF A BLANK WHITE SHEET OF COPY PAPER, NO POOLING OF MATERIAL SHALL BE ACCEPTED.
- CONCRETE SEALER SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. A WRITTEN STATEMENT FROM THE MANUFACTURE FOR THE SEALER AND CURING COMPOUND SHALL BE PROVIDED GUARANTEEING COMPATIBILITY.
- REFER TO ACI INDUSTRY STANDARDS FOR CONCRETE PLACEMENT AND INSTALLATION. CONTRACTOR SHALL INCLUDE PROVISIONS IN ACCORDANCE WITH ACI 305R AND 306R FOR HOT AND COLD WEATHER PLACEMENT WHEN PROJECT SCHEDULE TIMING FALLS WITHIN THE REQUIRED TEMPERATURE RANGES PER ACI AND THE LOCAL DOT.

GRADING PLAN NOTES

- THE CONTRACTOR SHALL WORK WITH AND PROVIDE SUFFICIENT ADVANCED NOTICE OF WORK ACTIVITIES TO AN OWNER HIRED SOILS ENGINEER WHICH WILL MAKE GEOTECHNICAL RECOMMENDATIONS BASED ON FIELD CONDITIONS DURING CONSTRUCTION. THE GEOTECHNICAL ENGINEER'S FIELD TECHNICIAN IS TO BE PRESENT FOR PROOFOFF(S), UNDERCUT AND BASE REPAIR ACTIVITIES, AND PLACEMENT OF ASPHALT MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY PROJECT OWNER'S REPRESENTATIVE IF ANY UNSUITABLE SOILS ARE FOUND.
- BEFORE STARTING GRADING OPERATIONS, SEE STORMWATER POLLUTION PREVENTION PLAN NOTES AND DETAILS.
- PRIOR TO SITE CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL ALL SWPP MEASURES TO PROTECT EXISTING DRAINAGE FACILITIES. CONTRACTOR SHALL PREVENT SILTATION FROM ENTERING ANY DRAINAGE INLETS OR LEAVING THE SITE AT ALL TIMES.
- STRIP PAVEMENT AREAS OF ALL ORGANIC TOPSOILS. STOCKPILE SUITABLE TOPSOILS FOR RESPREADING ONTO LANDSCAPE AREAS. ALL EXCESS EXCAVATED MATERIALS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE.
- OBTAIN APPROVED BORROW SOIL MATERIALS OFF-SITE WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE ON-SITE.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS REFERENCED IN THIS PLAN SET AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS, THE SITE GRADING, EXCAVATION, AND EMBANKMENT SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
- AT A MINIMUM ALL FILLED AREAS SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY PER A.S.T.M. TEST D-698. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 1.5% ABOVE NOR 1.5% BELOW OPTIMUM.
- FOLLOWING GRADING OF SUBSOIL TO SUBGRADE ELEVATIONS THE CONTRACTOR SHALL PLACE TOPSOIL TO A 6" DEPTH IN ALL DISTURBED AREAS WHICH ARE NOT TO BE PAVED. TOPSOIL SHALL BE PLACED AND REPAID CURBS SHALL BE SLIGHTLY ABOVE THE TOP OF CURB TO ACCOUNT FOR SETTLEMENT OF THE TOPSOIL. SMOOTHLY FINISH GRADE TO MEET SURROUNDING LAWN AREAS AND ENSURE POSITIVE DRAINAGE. STOCKPILED TOPSOIL SHALL BE SCREENED PRIOR TO RESPREADING. TOPSOIL SHALL BE FREE OF SUBSOIL, DEBRIS, BRUSH AND STONES LARGER THAN 1" IN ANY DIMENSION. ROCK HOUNDING IN PLACE WILL NOT BE PERMITTED. ALL EXCESS TOPSOIL SHALL BE LEGALLY DISPOSED OF OFF SITE.
- ELEVATIONS, WHEN GIVEN, ARE AT BOTTOM FACE OF CURB AND/OR FINISHED PAVEMENT GRADE UNLESS OTHERWISE SPECIFIED. ALL PAVEMENT SHALL BE LAID ON A STRAIGHT, EVEN, AND UNIFORM GRADE WITH A MINIMUM OF 1% SLOPE TOWARD THE COLLECTION POINTS UNLESS OTHERWISE SPECIFIED. DO NOT ALLOW NEGATIVE GRADES OR PONDING OF WATER.
- WHEN CONSTRUCTING ASPHALTIC CONCRETE PAVEMENTS, CONTRACTOR SHALL PROVIDE BUILT END JOINT TO MEET EXISTING PAVEMENT IN ELEVATION AT DRIVE RETURNS AND ENSURE POSITIVE DRAINAGE.

GENERAL UTILITY NOTES

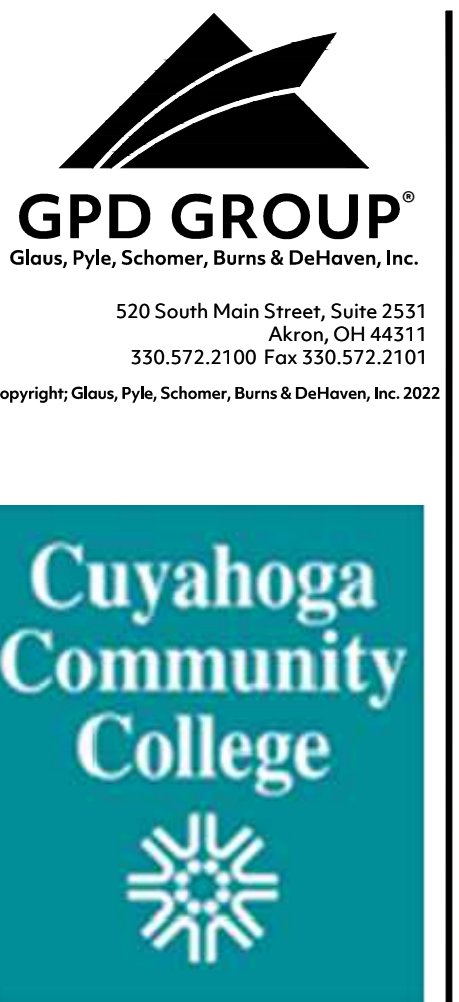
- CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES IMMEDIATELY AFTER BID IS AWARDED AND ENSURE THE UTILITY COMPANIES HAVE THE ESSENTIALS REQUIRED FOR COMPLETE SERVICE INSTALLATION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER OF ANY TIME FRAMES ESTABLISHED BY UTILITY COMPANIES WHICH WILL NOT MEET OPENING DATE.
- CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERT ELEVATION, AND CONDITION OF EXISTING UTILITIES WHICH ARE INTENDED TO BE UTILIZED AS A CONNECTION POINT FOR ALL PROPOSED UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR TO ENSURE EXISTING UTILITIES ARE IN GOOD CONDITION AND FREE FLOWING (IF APPLICABLE), IF ELEVATIONS, SIZE, OR LOCATION DIFFER FROM WHAT IS SHOWN ON PLANS, CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY.
- WHERE PLANS PROVIDE FOR PROPOSED WORK TO BE CONNECTED TO, OR CROSS OVER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING THE PROPOSED WORK. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE RESULTS IN A CHANGE IN THE PLAN, THE CONSTRUCTION MANAGER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED WORK WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ITEM.
- UTILITY SERVICE PROVIDER'S RULES AND REQUIREMENTS TAKE PRECEDENCE OVER INFORMATION HEREIN. IF DISCREPANCY ARISES, CONTRACTOR SHALL FULLY COORDINATE WITH UTILITY SERVICE PROVIDER PRIOR TO START OF CONSTRUCTION.

STORM SEWER NOTES

- ALL STORM SEWER PIPE 12" OR GREATER IN DIAMETER SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) SMOOTH INTERIOR PIPE (UNLESS OTHERWISE NOTED ON PLAN). HDPE PIPE SHALL CONFORM TO ASTM D 3350 AND JOINTS PER ASTM F477. STORM SEWER LESS THAN 12" IN DIAMETER SHALL BE PVC, SDR 35, PER ASTM D 3034 AND JOINTS PER ASTM D 3212 (OR APPROVED EQUAL).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BACKFILLING AND PIPE INSTALLATION, PIPE MATERIAL AND TAP CONNECTION.

ADA NOTES

- THE LATEST EDITION OF LOCAL JURISDICTION ACCESSIBILITY REGULATIONS, THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) STANDARDS AND SPECIFICATIONS, AND ANSI A117.1 STANDARD FOR ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES SHALL BE CONSIDERED PART OF THESE PLANS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH THESE STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL ADHERE TO ALL CURRENT ADA AND LOCAL/FEDERAL REGULATIONS (WHICHEVER MORE STRINGENT) FOR ALL ACCESSIBLE ROUTES APPLICABLE FOR THE SUBJECT PROPERTY IMPROVEMENT. IF ANY DISCREPANCIES OCCUR, CURRENT ADA AND LOCAL REGULATIONS TAKE PRECEDENCE OVER PROJECT SITE PLANS.
 - TEMPORARY ACCESSIBILITY PARKING, PATHWAYS, AND ASSOCIATED SHALL BE PROVIDED BY THE CONTRACTOR TO ROUTE PUBLIC AROUND THE CONSTRUCTION WORK AREA. WHEN AN EXISTING HANDICAP PARKING AREA, SIDEWALK, RAMP OR ASSOCIATED ACCESSIBILITY FEATURE CANNOT BE MAINTAINED DUE TO CONSTRUCTION ACTIVITIES, TEMPORARY ACCESSIBILITY FEATURES OF EQUAL ARE TO BE PROVIDED. TEMPORARY FEATURES AND ROUTES MUST MEET THE ACCESSIBILITY REQUIREMENTS OF THE LOCAL JURISDICTION AND THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) AND SHALL BE CLEARLY MARKED WITH THE PROPER SIGNAGE. TEMPORARY ROUTES SHALL PROVIDE A SMOOTH, CONTINUOUS HARD SURFACE THROUGHOUT THE ENTIRE LENGTH. THERE SHOULD BE NO ABRUPT CHANGES IN GRADE THAT COULD CAUSE TRIPPING OR BE A BARRIER TO ITS ACCESSIBILITY USE.
 - ADA RAMPS SHALL BE UPDATED IN THE EVENT OF AN ALTERATION OF THE EXISTING PAVEMENT ADJACENT TO THE ADA RAMP, SUCH AS...
 - OPEN-GRADED SURFACE COURSE
 - CAPE SEALS
 - MILL & FILL / MILL & OVERLAY
 - HOT IN-PLACE RECYCLING
 - MICROSURFACING / THIN LIFT OVERLAY
 - ADDITION OF NEW LAYER OF ASPHALT
 - RECONSTRUCTION
 - NEW CONSTRUCTION
 HOWEVER, ADA RAMPS DO NOT NEED TO BE UPDATED IN THE EVENT OF MAINTENANCE TO THE PAVEMENT ADJACENT TO THE ADA RAMP, SUCH AS...
 - CRACK FILLING AND SEALING
 - SURFACE SEALING
 - CHIP SEALS
 - SLURRY SEALS
 - FOG SEALS
 - SCRUB SEALING
 - JOINT CRACK SEALS
 - DOWN BAR RETROFIT
 - SPOT HIGH-FRICTION TREATMENTS
 - DIAMOND GRINDING
 - PAVEMENT PATCHING.
- ALL PROPOSED (OR REPLACEMENTS OF EXISTING) ADA FEATURES SHALL BE INSTALLED PER THE LOCAL JURISDICTION OR FEDERAL REGULATIONS, WHICHEVER MORE STRINGENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, SIGNAGE, LONGITUDINAL SLOPES, CROSS SLOPES, RAMPS, VERTICAL CLEARANCES, MINIMUM PARKING / MANEUVERING DIMENSIONS, GROUND SURFACE OPENINGS, HANDRAILS, VERTICAL CHANGES IN ELEVATION, ETC. SHALL BE ADDED BY THE CONTRACTOR.
- ALL JOINTS/GAPS IN THE ACCESSIBLE PATHWAY OF TRAVEL SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/4 INCH IN DIAMETER
 - CONTRACTOR SHALL FLATTEN GUTTER PITCH WITHIN ACCESSIBLE PATHWAYS AS REQUIRED TO ENSURE ADA COMPLIANCE.
 - CONTRACTOR SHALL UTILIZE ASPHALT LEVELING COURSE AS WITHIN ADA PARKING / PATHWAYS AS REQUIRED TO ENSURE ADA COMPLIANCE.
 - ABRUPT CHANGES IN ELEVATION WITHIN ACCESSIBLE PATHWAYS SHALL BE A MAXIMUM OF 1/4 INCH.
 - CONTRACTOR SHALL ENSURE GRATES AND OTHER CASTINGS WITHIN ACCESSIBLE PATHWAYS ARE ADA COMPLIANT.
 - ADA PARKING AND LOADING AREAS SHALL BE STRIPED IN THE COLOR BLUE ON BOTH SIDES.
 - LANDINGS, ADA PARKING, AND LOADING AREAS SHALL HAVE A MAXIMUM OF 1.8% SLOPE IN ANY DIRECTION. CONTRACTOR SHALL ENSURE MINIMUM DIMENSIONS FOR ADA COMPLIANCE.
 - RAMPS SHALL HAVE A MAXIMUM OF 8.0% RUNNING SLOPE AND 1.8% CROSS SLOPE.
 - NON LANDING, RAMPS, LOADING ZONES, AND PARKING ACCESSIBLE PATHWAYS SHALL HAVE A MAXIMUM OF 4.5% RUNNING SLOPE AND 1.8% CROSS SLOPE.
 - CONTRACTOR SHALL FIELD VERIFY, PRIOR TO THE START OF CONSTRUCTION THAT ALL EXISTING ADA PATHWAYS TO REMAIN WITHIN AND AROUND THE PROJECT LIMITS ARE IN COMPLIANCE WITH CURRENT ADA STANDARDS. ANY AREAS FOUND SHALL BE REMOVED AND REPLACED TO BE IN COMPLIANCE WITH CURRENT ADA STANDARDS. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING IF ANY NON-COMPLAINT PATHWAYS EXIST PRIOR TO START OF WORK.
 - ADA CONSTRUCTION TOLERANCE NOTES:
 - MAX. CONSTRUCTED WALK CROSS SLOPE SHALL NOT BE MORE THAN 2.0%.
 - MAX. CONSTRUCTED WALK RUNNING SLOPE SHALL NOT BE MORE THAN 5.0%.
 - MAX. CONSTRUCTED CURB RAMP RUNNING SLOPE SHALL NOT BE MORE THAN 8.3%.
 - MAX. CONSTRUCTED SLOPE IN ANY DIRECTION WITHIN ADA PARKING, RAMP LANDINGS, AND LOADING AREAS SHALL NOT BE MORE THAN 2.0%.
 - ANY CONSTRUCTED AREAS WITH SLOPES MORE THAN CODE ALLOWABLE WILL NOT BE ACCEPTED AND WILL REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE AT NO ADDITIONAL COST TO THE PROJECT IN ORDER TO BE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.



DESCRIPTION	DATE	REV.

CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

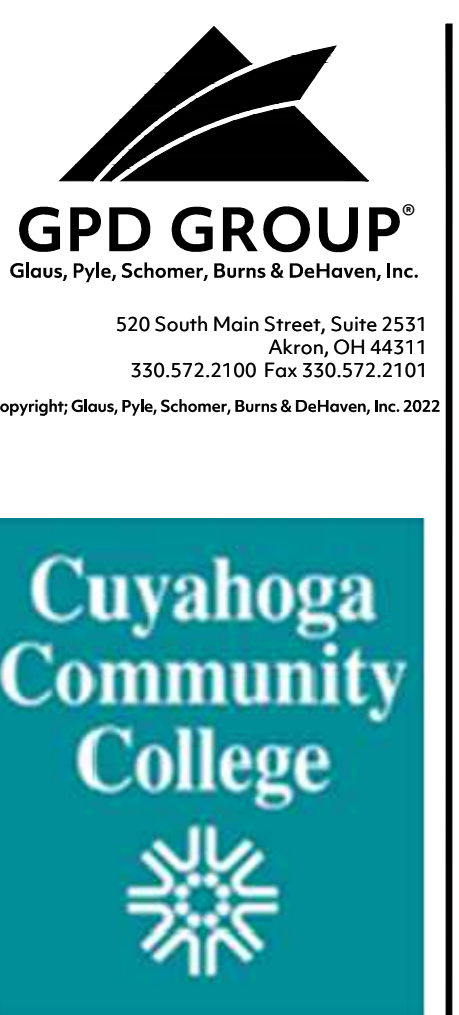
GENERAL NOTES

ISSUED FOR:	
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BID	01/27/2022
CONSTRUCTION	
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PROJECT MANAGER	DESIGNER
KB	TJW

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C-001

1	2	3	4	5
ARTICLE 1	ARTICLE 7	ARTICLE 13	ARTICLE 17	ARTICLE 20
<p>1.1 SCOPE OF WORK</p> <p>ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION) EXCEPT AS MODIFIED HEREIN, AND THE ORDINANCES OF THE LOCAL GOVERNING AUTHORITIES NECESSARY TO COMPLETE THESE ITEMS AS SPECIFIED AND REQUIRED. ITEMS THAT MAY NOT BE SHOWN FOR PROPOSED IMPROVEMENTS SHALL BE CONSIDERED INCIDENTAL TO PROJECT.</p> <p>BASE BID ITEMS WORK EMBRACED BY THIS CONTRACT GENERALLY CONSISTS OF SELECTIVE DEMOLITION, PAVEMENT BASE REPAIRS, EXCAVATION, SUBGRADE COMPACTION, AGGREGATE BASE, CONCRETE PAVEMENT, TRENCH DRAINS, STORM SEWERS, SEEDING AND MULCHING, AND COMPLETE RESTORATION OF THE PROJECT SITE INCLUDING ALL INCIDENTALS TO, NECESSARY APPURTENANCES AND ITEMS AS SPECIFIED HEREIN AND/OR SHOWN ON THE DRAWINGS; AND SHALL INCLUDE THE FURNISHING OF ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND SERVICES FOR AND INCIDENTAL TO THE IMPROVEMENTS PROPOSED BY THIS CONTRACT.</p> <p>THE PRICE BID SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, EXCAVATION, EMBANKMENT, DISPOSAL OF EXCESS EXCAVATED MATERIAL OFF SITE, AND ALL OTHER NECESSARY WORK, PERMITS, TESTING AND/OR INSPECTION REQUIRED BY THE OWNER AND/OR GOVERNMENTAL AGENCIES NECESSARY TO COMPLETE THESE ITEMS AS SPECIFIED AND REQUIRED.</p> <p>ARTICLE 2</p> <p>2.1 MAINTAINING TRAFFIC</p> <p>ADEQUATE PROTECTION AND PASSAGE SHALL BE PROVIDED BY THE CONTRACTOR FOR THE TRAVELING PUBLIC AT ALL TIMES DURING THE PROGRESS OF THE WORK.</p> <p>EVENTS, SCHEDULES, ACTIVITIES, ETC. MAY REQUIRE CERTAIN NO WORK PERIODS. CONTRACTOR SHALL FULLY COORDINATE WITH THE OWNER PRIOR TO STARTING WORK AND SHALL MAKE AREAS AVAILABLE FOR SAFE USE UPON THE OWNER'S REQUEST.</p> <p>THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL PROPERTIES ALONG THE LINE OF THE WORK AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN TEMPORARY DRIVEWAYS, ALL SIGNS, LIGHTS, BARRICADES, WATCHMEN, FLAGMEN ETC., NECESSARY FOR THE MAINTENANCE OF LOCAL TRAFFIC ALL IN ACCORDANCE WITH ITEM 614 OF THE ODOT SPECS, LATEST EDITION, AND SHALL BE RESPONSIBLE FOR ALL DAMAGES TO PERSONS OR PROPERTY DUE TO OR RESULTING FROM ANY WORK UNDER THIS CONTRACT.</p> <p>IF IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THE CONTRACTOR IS NOT PROPERLY MAINTAINING TRAFFIC, THE REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO HIRE POLICEMEN, THROUGH THE LOCAL POLICE DEPARTMENT, TO PROPERLY MAINTAIN TRAFFIC. THE COST OF THE POLICEMEN WILL BE AT THE CONTRACTOR'S EXPENSE.</p> <p>THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER'S REPRESENTATIVE AT LEAST TWO DAYS PRIOR TO THE WORK BEING PERFORMED. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY'S POLICE, FIRE, AND SERVICE DEPARTMENTS AT LEAST THREE DAYS PRIOR TO THE WORK.</p> <p>THE FULL COST OF MAINTAINING ALL TRAFFIC SHALL BE INCLUDED IN THE PRICES BID PER OTHER ITEMS OF WORK AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREFORE.</p> <p>ARTICLE 3</p> <p>3.1 EXISTING TRAFFIC SIGNS, ETC.</p> <p>ALL TRAFFIC SIGNS, TRAFFIC CONTROL DEVICES, ETC., OF WHATEVER NATURE MOVED OR DISTURBED DURING CONSTRUCTION MUST BE RESET OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE. IF THEY ARE NOT RESET OR REPLACED BY THE CONTRACTOR, THE OWNER OR THE CITY SHALL RESET OR REPLACE THEM AND CHARGE THE COST OF DOING THIS WORK AGAINST THE CONTRACTOR.</p> <p>CONTRACTOR SHALL PROVIDE TEMPORARY DETOUR SIGNAGE FOR MAINTAINING TRAFFIC AND PER OWNERS REQUIREMENTS.</p> <p>THE COST OF RESETTING, REPLACING OR RELOCATING SHALL BE INCLUDED IN THE PRICES BID PER OTHER ITEMS AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREFORE.</p> <p>ARTICLE 4</p> <p>4.1 EXISTING STRUCTURES AND PAVEMENT</p> <p>ANY SIDEWALK, PAVEMENT, GUARDRAIL, FENCE, WALLS, BUILDINGS, DRAINAGE PIPE OR DRAINAGE STRUCTURE, MONUMENTS, LANDMARKS, ETC., DISTURBED, OR DAMAGED OUTSIDE OF THE CONSTRUCTION LIMITS DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AND NO ADDITIONAL COMPENSATION WILL BE MADE THEREFORE.</p> <p>ARTICLE 5</p> <p>5.1 SAFETY REQUIREMENTS</p> <p>THE CONTRACTOR SHALL FURNISH AND USE SAFETY DEVICES AND SAFE GUARDS AS PRESCRIBED BY PUBLIC LAW 91-596 "OCCUPATIONAL SAFETY AND HEALTH ACT, LATEST EDITION" HE SHALL DO EVERYTHING REASONABLE NECESSARY TO PROTECT THE LIFE, HEALTH, SAFETY AND WELFARE OF ANY EMPLOYEE AND VISITORS. ALL OWNER REQUIRED SAFETY TRAINING AND REQUIREMENTS MUST BE COMPLIED WITH.</p> <p>ARTICLE 6</p> <p>6.1 INSPECTION AND TESTING</p> <p>THE CONTRACTOR SHALL PAY FOR AND INCLUDE IN HIS BID FOR OTHER ITEMS ALL NECESSARY REGULATORY COSTS OF INSPECTION, PERMITS AND TESTING WHERE REQUIRED BY ALL GOVERNMENTAL AUTHORITIES INVOLVED.</p> <p>THE CONTRACTOR SHALL COORDINATE WITH THE OWNER HIRED THIRD PARTY GEOTECHNICAL ENGINEER / CONSTRUCTION MATERIALS TESTING (CMT) FIRM FOR THE EXISTING CONDITIONS GEOTECHNICAL CONSTRUCTION TESTING AND PLACEMENT TESTING OF MATERIALS SUCH AS, BUT NOT LIMITED TO, SUBGRADE PREPARATION AND PAVING MATERIALS.</p> <p>CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVES TO OVERSEE CONSTRUCTION ACTIVITIES AND PROVIDE 48 HOUR, (2 BUSINESS DAYS), NOTIFICATION PRIOR TO INSPECTIONS, TESTINGS, ETC.</p> <p>NO WORK SHALL BE PERFORMED WITHIN THE RIGHT OF WAY WITHOUT 24 HOUR NOTIFICATION OF LOCAL AGENCIES.</p>	<p>PAVEMENT SUBGRADE AND EXCAVATION</p> <p>THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, ETC., NECESSARY TO COMPLETE THE EXCAVATION FOR THE PAVEMENT SUBGRADE IN CONFORMITY WITH THE LINES, GRADES, THICKNESS AND CROSS SECTIONS SHOWN/INTENDED ON THE PLAN AND IN ACCORDANCE WITH THE REQUIREMENT OF ITEM 209 IN THE ODOT SPECS.</p> <p>ALL SUBGRADE CONSTRUCTION SHALL BE AS PER PLAN AND INCLUDE THE EXCAVATION AND REMOVAL AND REPLACEMENT OF EXISTING UNACCEPTABLE FILL MATERIAL AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER. THE EXCAVATION SHALL BE TO THE DEPTH AS DIRECTED IN ORDER TO REMOVE AND DISPOSE OF EXISTING BURIED TOPSOIL AND ORGANIC MATERIAL. UPON REMOVAL AND DISPOSAL OF THE UNACCEPTABLE MATERIAL THE EXCAVATION SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE DETAILED SPECIFICATION AS STATED HEREIN.</p> <p>ALL EXISTING SHALE, ROCK, SLAG OR CINDERS, TREES, BRUSH, ROOTS, AND OR ANY OTHER OBJECTIVE MATERIALS, NOT INCLUDED IN ANY ITEM ELSEWHERE IN THESE SPECIFICATIONS ENCOUNTERED DURING THE PROGRESS OF THE WORK, SHALL BE REMOVED FROM THE PAVEMENT AREAS, TO THE FULL DEPTH OF THE PROPOSED SUBGRADE.</p> <p>IF ANY EXCAVATION BY THE CONTRACTOR INTERFERES WITH THE EXISTING DRAINAGE IN ANY WAY, THE CONTRACTOR SHALL REMEDY THE SITUATION AS DIRECTED BY THE OWNER'S REPRESENTATIVE, AND THE COST THEREFORE SHALL BE INCLUDED IN THIS WORK.</p> <p>ARTICLE 14</p> <p>14.1 PORTLAND CEMENT CONCRETE PAVEMENT</p> <p>REFER TO SHEET C-001 FOR CONCRETE SPECIFICATIONS.</p> <p>ARTICLE 15</p> <p>15.1 BEDDING AND BACKFILL</p> <p>THE MATERIAL TO BE USED FOR BEDDING AND BACKFILL PURPOSES SHALL BE AS SHOWN ON THE DETAILED PLANS AND AS NOTED UNDER THIS ARTICLE.</p> <p>ALL SEWER PIPE SHALL HAVE BEDDING OF COARSE INTERLOCKING LIMESTONE AGGREGATE NO. 57 FOR 60" OR SMALLER DIAMETER PIPE AND THE COST THEREFORE SHALL BE INCLUDED IN THE PRICES BID FOR SEWER.</p> <p>ARTICLE 8</p> <p>8.1 SUBGRADE COMPACTION AND PROOF ROLLING</p> <p>THIS WORK SHALL CONSIST OF COMPACTING THE SUBGRADE UNDER NEW PAVEMENTS SHALL CONFORM TO THE REQUIREMENTS OF ITEM 204 IN THE ODOT SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN OR AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER.</p> <p>SOFT SUBGRADE ENCOUNTERED IN CUTS DUE TO NO FAULT OR NEGLECT OF THE CONTRACTOR SHALL BE EXCAVATED TO THE LIMITS DETERMINED BY THE GEOTECHNICAL ENGINEER AND BACKFILLED WITH COMPACTED GRANULAR MATERIAL CONFORMING TO "SUBBASE". THE REMOVAL, DISPOSAL AND BACKFILL OF ANY UNSUITABLE SUBGRADE MATERIAL ENCOUNTERED SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE BID FOR "STABILIZATION OF SUBGRADE SOFT SPOTS WITH FABRIC AND AGGREGATE".</p> <p>ARTICLE 9</p> <p>9.1 REMOVE AND DISPOSE OF EXISTING PAVEMENT</p> <p>THIS WORK SHALL CONSIST OF THE REMOVAL AND SATISFACTORY DISPOSAL OF ALL EXISTING CONCRETE AND ASPHALT PAVEMENTS, BASES AND PAVEMENT TAPERS INCLUDING ANY WEARING COURSE AND EXISTING CONCRETE CURBING NECESSITATED BY THE CONSTRUCTION OF THIS PROJECT AND SHALL CONFORM WITH THE REQUIREMENTS OF ITEMS 202 IN THE ODOT SPECS.</p> <p>THE LIMITS OF REMOVAL SHALL BE AS SHOWN ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.</p> <p>THE CONTRACTOR SHALL SAW CUT FULL DEPTH, ALONG THE LIMIT SHOWN, ALL EXISTING CONCRETE AND/OR ASPHALT PAVEMENTS OR BASES PRIOR TO COMMENCING WITH THE REMOVAL.</p> <p>THIS ITEM SHALL INCLUDE FURNISHING ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY FOR THE REMOVAL OF AND DISPOSAL OF EXISTING PAVEMENT TO COMPLETE THESE ITEMS AS SPECIFIED, COMPLETE AND ACCEPTED.</p> <p>ARTICLE 10</p> <p>10.1 REMOVAL OF UNSUITABLE EXCAVATED MATERIAL</p> <p>ALL MATERIAL IN EXCESS OF THAT REQUIRED FOR BACKFILL AND ALL MATERIAL NOT SUITABLE OR NOT APPROVED BY THE ENGINEER FOR BACKFILL MUST BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE COST OF REMOVING ALL EXCAVATED MATERIAL, INCLUDING EARTH, OLD PIPE, PAVING MATERIALS AND OTHER DEBRIS CREATED IN THE COURSE OF THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED THEREFORE.</p> <p>ARTICLE 11</p> <p>11.1 CONSTRUCTION STAKING</p> <p>THE CONTRACTOR SHALL FURNISH ALL CONSTRUCTION STAKES. THIS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF ERROR OR OMISSIONS IN CONSTRUCTION. THE CONTRACTOR SHALL PROMPTLY CONTACT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE ANY DISCREPANCIES BETWEEN THE PLANS AND THE STAKES. THE COST OF RESTAKING SHALL BE BORNE BY THE CONTRACTOR.</p> <p>ARTICLE 12</p> <p>12.1 CLEARING AND GRUBBING</p> <p>THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, ETC., NECESSARY TO COMPLETE THE CLEARING, GRUBBING, SCALPING, REMOVING TREES AND STUMPS, AND REMOVING ALL VEGETATION AND CONSTRUCTION DEBRIS FROM THE LIMITS SHOWN ON PLANS, EXCEPT OBJECTS THAT ARE TO REMAIN IN ACCORDANCE WITH THE REQUIREMENT OF ITEM 204 IN THE ODOT SPECS.</p>	<p>AGGREGATE BASE</p> <p>THIS WORK SHALL CONSIST OF FURNISHING, PLACING AND COMPACTING AGGREGATE BASE ON A PREPARED SURFACE IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 304 IN THE ODOT SPECIFICATIONS AND CONSTRUCTED TO THE THICKNESS AS SHOWN ON PLANS.</p> <p>AGGREGATE TYPE SHALL BE CRUSHED LIMESTONE. THE USE OF SLAG AGGREGATES SHALL NOT BE ALLOWED. NO RECYCLED CONTENT MAY BE USED IN ANY AGGREGATE BASE COURSE.</p> <p>CONTRACTOR SHALL NOT EXCEED MAXIMUM LIFT THICKNESS AS SPECIFIED IN ODOT 304.04.</p> <p>THE CONTRACTOR SHALL PROVIDE THE ENGINEER LABORATORY REPORTS FOR THE TYPE AND DRY RODDED WEIGHT OF THE AGGREGATE BASE BEING USED FOR THIS PROJECT.</p> <p>THIS ITEM SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PLACING AND HANDLING ALL MATERIALS AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.</p> <p>ARTICLE 14</p> <p>14.1 PORTLAND CEMENT CONCRETE PAVEMENT</p> <p>REFER TO SHEET C-001 FOR CONCRETE SPECIFICATIONS.</p> <p>ARTICLE 15</p> <p>15.1 BEDDING AND BACKFILL</p> <p>THE MATERIAL TO BE USED FOR BEDDING AND BACKFILL PURPOSES SHALL BE AS SHOWN ON THE DETAILED PLANS AND AS NOTED UNDER THIS ARTICLE.</p> <p>ALL SEWER PIPE SHALL HAVE BEDDING OF COARSE INTERLOCKING LIMESTONE AGGREGATE NO. 57 FOR 60" OR SMALLER DIAMETER PIPE AND THE COST THEREFORE SHALL BE INCLUDED IN THE PRICES BID FOR SEWER.</p> <p>ARTICLE 16</p> <p>16.1 SEEDING AND MULCHING</p> <p>ALL LAWN AREAS DISTURBED DURING CONSTRUCTION SHALL BE FERTILIZED, SEEDED AND MULCHED UPON COMPLETION OF THE CONSTRUCTION TO THE APPROVAL OF THE OWNER.</p> <p>TOP SOIL SHALL BE PROVIDED ALONG ALL ADJOINING REPLACEMENT HARD SURFACES.</p> <p>THE SEEDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 659 IN THE ODOT SPECS AND AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL USE MINIMUM SIX (6") OF TOPSOIL FOR SUBGRADE UNDER SEEDED AREAS.</p> <p>THE CONTRACTOR MAY USE APPROVED SCREENED STOCKPILED TOPSOIL ON THE PROJECT SITE FOR RESPREAD TO LANDSCAPE AREAS.</p> <p>NO WORK SHALL BE PERFORMED AFTER OCTOBER 15TH OR BEFORE MARCH 15TH.</p> <p>THE CONTRACTOR SHALL PROVIDE WHATEVER DEVICES ARE REQUIRED SUCH AS HOSES AND TANK TRUCKS TO DISTRIBUTE WATER AND SPRINKLERS TO APPLY IT. LAWN AREAS, INCLUDING THE SUBGRADE, SHALL BE KEPT THOROUGHLY MOIST FOR THREE WEEKS AFTER SEEDING AS DICTATED BY WEATHER AND RATE OF GROWTH. SEEDED AREAS SHALL BE PROTECTED FROM TRAFFIC BY ERECTION OF BARRIERS. ALL SEEDED AREAS SHALL ACHIEVE MIN 80% ESTABLISHMENT PRIOR TO FINAL ACCEPTANCE OF WORK.</p> <p>THIS ITEM SHALL INCLUDE FURNISHING, HANDLING AND PLACING ALL MATERIALS INCLUDING TOPSOIL, FERTILIZER, MULCH, WATERING AND FOR ALL FINE GRADING, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SPECIFIED, COMPLETE AND ACCEPTED.</p>	<p>CLEAN-UP</p> <p>UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL CONTAINERS, SURPLUS MATERIALS AND DEBRIS LEAVING THE SITE IN A CLEAN AND ORDERLY CONDITION ACCEPTABLE TO THE OWNER.</p> <p>CONTRACTOR SHALL REMOVE ALL SEDIMENTATION AND/OR DEBRIS FOUND WITHIN THE STORM SEWER AS A CAUSE OF DEMOLITION AND/OR CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST.</p> <p>ARTICLE 18</p> <p>18.1 PRE-CONSTRUCTION VIDEO</p> <p>CONTRACTOR SHALL PROVIDE AUDIO VIDEO COLOR FILMING OF EXISTING SITE CONDITIONS APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.</p> <p>IN GENERAL, FILM COVERAGE SHOULD INCLUDE, BUT NOT LIMITED TO; ALL EXISTING DRIVEWAYS, SIDEWALKS, CURBS, WALLS, FENCES, BUILDING, DOORS, DITCHES (DRAINAGE PATTERS ARE OF PARTICULAR CONCERN), STREETS (INCLUDING CONDITION OF PAVING FOR FULL WIDTH), LANDSCAPING, TREES, CULVERTS, CATCH BASINS (SEDIMENT/DEBRIS ACCUMULATIONS OF WHAT CAN BE VIEWED FROM OUTSIDE OF STORM SEWERS ARE OF PARTICULAR CONCERN), HEADWALLS, FENCES, VISIBLE UTILITIES, AND ALL BUILDINGS LOCATED WITHIN THE ZONE OF INFLUENCE OF CONSTRUCTION. OF PARTICULAR CONCERN ARE EXISTING FAULTS, FRACTURES, DEFECTS, OR OTHER IMPERFECTIONS. ANY MILLINGS, SEDIMENT, OR DEBRIS FOUND IN CATCH BASIN INLETS FROM THE CONSTRUCTION ACTIVITIES AT THE END OF THE PROJECT SHALL BE COMPLETE CLEANED OUT BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.</p> <p>THIS ITEM SHALL INCLUDE FURNISHING ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SPECIFIED, COMPLETE AND ACCEPTED.</p> <p>ARTICLE 19</p> <p>19.1 SHOP DRAWINGS AND SUBMITTALS</p> <p>A. THE CONTRACTOR SHALL SUBMIT FOR THE ENGINEER'S REVIEW DETAILED DRAWINGS, APPLICABLE CATALOG DATA, SPECIFICATIONS AND MATERIAL CERTIFICATIONS FOR ALL EQUIPMENT AND MATERIALS SPECIFIED OR NECESSARY FOR THE PROPER COMPLETION OF THE WORK.</p> <p>B. THE INTENT OF THE SHOP DRAWINGS IS TO DEMONSTRATE THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT OF THE WORK AND TO PROVIDE THE DETAILED INFORMATION NECESSARY FOR THE FABRICATION, ASSEMBLY AND INSTALLATION OF THE WORK SPECIFIED. IT IS NOT INTENDED THAT EVERY DETAIL OF ALL PARTS OF TO BE SUBMITTED, HOWEVER SUFFICIENT DETAIL WILL BE REQUIRED TO ASCERTAIN COMPLIANCE WITH THE SPECIFICATIONS AND ESTABLISH THE QUALITY OF THE IMPROVEMENTS. SHOP DRAWINGS SHALL BE CLEAR AND COMPLETE ENOUGH TO ENABLE THE ENGINEER AND OWNER TO DETERMINE THAT ITEMS PROPOSED TO BE FURNISHED CONFORM TO THE SPECIFICATIONS AND THAT ITEMS DELIVERED TO THE SITE ARE ACTUALLY THOSE THAT HAVE BEEN REVIEWED.</p> <p>C. IT IS EMPHASIZED THAT THE ENGINEER'S REVIEW OF CONTRACTOR'S SUBMITTED DATA IS FOR GENERAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS, BUT SUBJECT TO THE DETAILED REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS. ALTHOUGH THE ENGINEER MAY REVIEW SUBMITTED DATA IN MORE OR LESS DETAIL, SUCH REVIEWING IS AN EFFORT TO DISCOVER ERRORS AND OMISSIONS IN CONTRACTOR'S DRAWINGS AND TO ASSIST THE CONTRACTOR IN COORDINATING AND EXPEDITING HIS WORK. ENGINEER'S REVIEW SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO PROPERLY COORDINATE THE WORK AND TO ENGINEER THE DETAILS OF THE WORK IN SUCH MANNER THAT THE PURPOSES AND INTENT OF THE CONTRACT WILL BE ACHIEVED. SUCH REVIEW BY THE ENGINEER SHALL NOT BE CONSTRUED AS PLACING ON HIM OR ON THE OWNER ANY RESPONSIBILITY FOR THE ACCURACY AND FOR PROPER FIT, FUNCTIONING OR PERFORMANCE OF ANY PHASE OF THE WORK INCLUDED IN THE CONTRACT.</p> <p>D. SHOP DRAWINGS SHALL BE SUBMITTED IN PROPER SEQUENCE, AND WITH DUE REGARD TO THE TIME REQUIRED FOR CHECKING, TRANSMITTAL AND REVIEW SO AS TO CAUSE NO DELAY IN THE WORK.</p> <p>E. IT IS THE RESPONSIBILITY OF EACH PRIME CONTRACTOR TO FURNISH TO ALL OTHER PRIME CONTRACTORS AND ESPECIALLY THE GENERAL CONSTRUCTION CONTRACTOR REVIEWED SHOP DRAWINGS FOR GUIDANCE IN INTERFACING THE VARIOUS TRADES, I.E. SLEEVES, INSERTS, ANCHOR BOLTS, TERMINATIONS AND SPACE REQUIREMENTS</p> <p>F. THE CONTRACTOR SHALL NOT PERFORM WORK REQUIRING SHOP DRAWINGS UNTIL SAME HAVE BEEN REVIEWED AND APPROVED BY ENGINEER AND OWNER.</p> <p>G. THE CONTRACTOR SHALL NOT CONSTRUCT ACCEPTANCE OF SHOP DRAWINGS AS APPROVAL OF CHANGES FROM CONTRACT PLAN AND SPECIFICATION REQUIREMENTS.</p> <p>H. NO CHANGES TO CONTRACT DOCUMENTS WILL BE ACCEPTED THROUGH THE SHOP DRAWING REVIEW PROCESS. CONTRACTOR SHALL SUBMIT A FORMAL WRITTEN REQUEST FOR CHANGE. THE FORMAL WRITTEN REQUEST FOR CHANGE SHALL INCLUDE:</p> <p>H.1. LIST OF REQUESTED CHANGES (I.E. ASPHALT OR CONCRETE MIX DESIGN, CASTINGS, UTILITY STRUCTURE SIZING/MATERIAL, SIZING OF MATERIALS SPECIFIED, SPECIFIED MANUFACTURE'S PROPRIETARY PRODUCTS, OTHER MATERIALS, ETC.)</p> <p>H.2. REASONING FOR REQUESTED CHANGE (I.E. AVAILABILITY OF MATERIALS, PROJECT SAVINGS, EASE OF CONSTRUCTION, CONSTRUCTION TIMING, ETC.)</p> <p>H.3. PROJECT CREDITS, IF ANY; INCLUDING MATERIAL, LABOR, TIMING, ENVIRONMENTAL, AND/OR EQUIPMENT COSTS.</p> <p>H.4. DETAILED DRAWINGS, APPLICABLE CATALOG DATA, SPECIFICATIONS AND MATERIAL CERTIFICATIONS FOR ALL REQUESTED CHANGES.</p>	<p>PRE-CONSTRUCTION MEETING</p> <p>A. PRIOR TO THE CONTRACTOR BEGINNING ANY WORK ON THE PROJECT, THE OWNER WILL SCHEDULE AND HOLD A PRE-CONSTRUCTION MEETING TO DISCUSS ALL ASPECTS OF THE CONTRACT WORK.</p> <p>B. THE CONTRACTOR SHALL BE PRESENT AND BE PREPARED TO COMMENT ON HIS SCHEDULE FOR CONSTRUCTION OF THIS PROJECT.</p> <p>C. INCLUDED IN THE SCHEDULE SHALL BE BOTH A PLAN AND IMPLEMENTATION SEQUENCE OF THE PROPOSED EROSION CONTROL EFFORTS REQUIRED BY THE CONTRACT.</p> <p>D. ACCEPTANCE OF BOTH THE SCHEDULE BY THE OWNER IS REQUIRED PRIOR TO THE START OF ANY WORK.</p> <p>20.2 PROGRESS SCHEDULE.</p> <p>A. IMMEDIATELY AFTER SIGNING THE CONTRACT, THE GENERAL CONSTRUCTION CONTRACTOR SHALL PREPARE A GRAPHIC PROGRESS SCHEDULE, INDICATING THE WORK TO BE EXECUTED DURING EACH MONTH AND THE RATE OF EXPECTED PROGRESS TO SECURE COMPLETION ON THE AGREED-UPON COMPLETION DATE. COPIES OF SUCH GRAPHIC PROGRESS CHARTS, UPON WHICH HAS BEEN INDICATED THE ACTUAL PROGRESS, SHALL BE FURNISHED TO THE OWNER AT EACH PHASE OF WORK EFFORT.</p> <p>B. SHOULD THE RATE OF PROGRESS FALL MATERIALLY BEHIND THE SCHEDULED RATE OF PROGRESS, AND UNLESS THE DELAY IS AUTHORIZED BY THE OWNER, AT THE OWNER'S DISCRETION IT MAY BE REQUESTED THAT EACH OFFENDING CONTRACTOR FURNISH ADDITIONAL LABOR, WORK OVERTIME, OR TAKE OTHER NECESSARY MEANS REQUIRED FOR COMPLETION OF THE WORK ON THE SCHEDULED DATE. NO ADDITIONAL COMPENSATION BEYOND THE SET CONTRACT PRICE SHALL BE PAID FOR ACTION TAKEN OR OVERTIME EXPENSE INCURRED IN MAINTAINING SCHEDULED PROGRESS.</p> <p>OWNERS CONTACT PERSONS.</p> <p>CONTRACTOR SHALL KEEP ALL PROJECT CONTACTS WELL INFORMED OF ACTIVITIES. CONTRACTOR SHALL FULLY COORDINATE WITH ANY THIRD PARTY GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVES; INCLUDING OWNER HIRED CONSTRUCTION MATERIAL TESTING (CMT) FIRM; FOR EFFECTIVE USE OF PERSONNEL TIME. SHOULD OWNER'S REPRESENTATIVES; INCLUDING OWNER HIRED CONSTRUCTION MATERIAL TESTING (CMT) FIRM; REQUIRE ADDITIONAL COMPENSATION DUE TO LACK OF COMMUNICATION AT FAULT OF THE CONTRACTOR, THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR ANY EXTRA INCURRED COSTS, AND FOR EACH OCCURRENCE.</p> <p>20.4 COMPLETION DATE.</p> <p>THE CONTRACTOR SHALL COMPLETE THE WORK ON OR BEFORE THE DATE SPECIFIED IN THE PROPOSAL. THE CONTRACTOR MAY, AT ANY TIME PRIOR TO THE EXPIRATION OF THE CONTRACT AS SPECIFIED OR EXTENDED, MAKE A WRITTEN REQUEST TO THE OWNER FOR AN EXTENSION OF TIME OUTLINING THEREIN THE REASONS FOR SUCH A REQUEST. AN OPINION BY THE CONTRACTOR THAT INSUFFICIENT TIME WAS ORIGINALLY SPECIFIED WILL NOT BE CONSIDERED A VALID REASON. IF THE OWNER FINDS THAT THE WORK HAS BEEN DELAYED DUE TO CONDITIONS BEYOND THE CONTROL AND WITHOUT THE FAULT OF THE CONTRACTOR, HE MAY ESTABLISH A NEW COMPLETION DATE BASED ON THE NUMBER OF ADDITIONAL DAYS HE MAY DETERMINE APPROPRIATE.</p> <p>20.5 ENGINEERING COSTS AFTER OFFICIAL DATE OF COMPLETION.</p> <p>SHOULD THE CONTRACTOR FAIL TO COMPLETE THE IMPROVEMENT WITHIN THE TIME SPECIFIED, HE SHALL REIMBURSE THE OWNER FOR ANY EXTRA COSTS NECESSITATED BY THE CONTINUANCE OF THE WORK BEYOND THE TIME SPECIFIED FOR COMPLETION.</p> <p>20.6 FINAL INSPECTION.</p> <p>UPON NOTICE FROM THE CONTRACTOR THAT THE WORK HAS IN FACT BEEN COMPLETED AS DETERMINED BY THE OWNER, THE ENGINEER MAY MAKE A FINAL INSPECTION WITH THE OWNER AND CONTRACTOR AND WOULD, SUBSEQUENT TO THE INSPECTION, NOTIFY THE CONTRACTOR IN WRITING OF ALL ITEMS OF THE WORK THAT ARE INCOMPLETE OR DEFECTIVE. THE CONTRACTOR SHALL IMMEDIATELY TAKE SUCH ACTION AS IS NECESSARY TO COMPLETE OR REPAIR THE ITEMS.</p> <p>20.7 REPAIRS FOR ONE-YEAR AFTER ALL CONTRACTOR WORK IS COMPLETE.</p> <p>THE CONTRACTOR SHALL MAKE ALL REPAIRS DUE TO DEFECTIVE WORKMANSHIP OR MATERIAL FOR THE TERM OF ONE (1) YEAR AFTER THE FINAL ACCEPTANCE DATE OF ALL CONTRACTED WORK AND SHALL CORRECT AND REPAIR PROMPTLY DURING THAT TIME ALL DEFECTIVE WORK AND MATERIAL OF WHATEVER DESCRIPTION. HOWEVER, ORDINARY WEAR AND TEAR OR DAMAGE DUE TO NEGLIGENCE OR IMPROPER OPERATION OR MAINTENANCE ON THE PART OF THE OWNER SHALL NOT BE CONSIDERED ANY OBLIGATION OF THE CONTRACTOR.</p>



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CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

SPECIFICATIONS

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PROJECT MANAGER	DESIGNER
KB	TJW

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2021052.02

C-002



DESCRIPTION
DATE
REV.

CUYAHOGA COMMUNITY COLLEGE
METRO MRC DRIVEWAY
CLEVELAND, OHIO 44115
STORMWATER POLLUTION
PREVENTION NOTES AND DETAILS

ISSUED FOR:	
PERMIT	
BID	01/27/2022
CONSTRUCTION	
RECORD	
PROJECT MANAGER	DESIGNER
KB	TJW

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2021052.02

C-010

STORM WATER POLLUTION PREVENTION NOTES

- ALL WORK SPECIFIED AS AN ODOT ITEM SHALL BE GOVERNED BY THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION HANDBOOK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POSSESS AND TO BE FAMILIAR WITH APPLICABLE SECTIONS.
- THIS CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN STORM WATER POLLUTION PREVENTION IS ENCOUNTERED, ADDITIONAL STORM WATER POLLUTION PREVENTION (SWPP) MEASURES MAY BE REQUESTED BY THE OWNER, COUNTY ENGINEER, PROJECT ENGINEER OR SOIL CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.
- ALL STORM WATER POLLUTION PREVENTION ITEMS SHALL BE INSTALLED AS SHOWN OR NOTED ON THIS SHEET.
- PLANT TEMPORARY SEEDING AND MULCHING IN ALL AREAS THAT SHALL BE INACTIVE FOR 21 DAYS OR MORE. ALL DISTURBED AND ERODED EARTH SHALL BE REGRADED AND SEEDED WITHIN 14 DAYS WITH SEEDING, AS DEFINED ABOVE AND AS SHOWN ON THE TABLE BELOW, TO ESTABLISH STABILITY AND PROVIDE SEDIMENT CONTROL, WHERE POSSIBLE. TEMPORARY SEEDING GROWTH SHALL NOT BE MOWED UNTIL IT HAS GONE TO SEED FOR 1 YEAR.

TEMPORARY SEEDING SPECIFICATIONS:

SEEDING DATES	SEED TYPE	APPLICATION RATE PER 1,000 S.F.
MARCH 1 - AUGUST 15	OATS PERENNIAL RYE GRASS OR TALL FESCUE	3# 1#
AUGUST 16 - NOVEMBER 1	RYE, WHEAT OR PERENNIAL RYE GRASS TALL FESCUE	3# 1#
AFTER NOVEMBER 1	STRAW OR HAY MULCH	2-3 BALES
SEED BED PREPARATION	LIME 10-10-10 OR 12-12-12 FERTILIZER	100# 12-15#

- PERMANENT VEGETATION SHALL BE INSTALLED WITHIN 7 DAYS AT THE COMPLETION OF ANY GRADED AREAS, WEATHER PERMITTING.
- AT SUCH TIME ROUGH GRADING OF THE SITE IS COMPLETE AND DRAINAGE DIVERTS TO INLETS, INLET SEDIMENT FILTERS SHALL BE INSTALLED AT ALL INLET STRUCTURES TO KEEP PIPING SYSTEMS FREE OF SILTATION.
- SILT BARRIERS SHALL BE INSTALLED AROUND ALL EXISTING OR NEW STORM INLETS, CATCH BASINS, YARD DRAINS. INSTALL ROCK CHECK DAMS FOR HEADWALL INLETS FOR STORM WATER POLLUTION PREVENTION.
- STORM WATER POLLUTION PREVENTION MEASURES SHALL BE INSTALLED AROUND ALL DIRT OR TOPSOIL STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS AS SHOWN ON THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL INSPECT ALL SWPP MEASURES DAILY AND REPAIR AS NECESSARY TO PREVENT EROSION. SILTATION SHALL BE REMOVED FROM AREAS WHERE FAILURES HAVE OCCURRED AND CORRECTIVE ACTION TAKEN WITHIN 24 HOURS TO MAINTAIN ALL SWPP.
- SILT BARRIERS, CONSTRUCTION ENTRANCES, AND SILT FENCES SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED AND/OR PAVING OPERATIONS ARE COMPLETE. CONTRACTOR SHALL KEEP SILT FROM ENTERING ANY STORM DRAINAGE SYSTEM. ONCE SITE HAS BEEN COMPLETELY STABILIZED, ANY SILT IN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS.
- TEMPORARY SEDIMENTATION AND STORM WATER POLLUTION PREVENTION MEASURES MUST BE INSPECTED AND LOGGED BY THE CONTRACTOR FOR INSPECTION. LOGGING SHALL BE WEEKLY AND AFTER RAIN STORMS.
- UTILITY COMPANIES MUST COMPLY WITH ALL STORM WATER POLLUTION PREVENTION MEASURES AS DEFINED ON THE STORM WATER POLLUTION PREVENTION PLANS, DETAILS AND NOTES.
- THE TOTAL AREA OF DISTURBANCE FOR THIS PROJECT IS 0.58± ACRES.
- ALL EXISTING WATER COURSES WITHIN THE PROJECT LIMITS SHALL BE TEMPORARILY PROTECTED DURING LAND CLEARING AND GRADING OPERATIONS. SOILS WITHIN 50 FEET OF SAID WATER COURSES SHALL BE STABILIZED WITHIN 2 DAYS OF THE INITIAL CLEARING / GRADING OPERATION AS SHOWN ON PLANS.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF FINAL GRADING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL SEDIMENTATION AND STORM WATER POLLUTION PREVENTION ITEMS AT ALL TIMES.
- ALL STORM WATER POLLUTION PREVENTION PRACTICES WILL BE INSTALLED BEFORE ANY OTHER EARTH MOVING OCCURS.
- THE FOLLOWING STORM WATER POLLUTION PREVENTION AND SEDIMENT CONTROL MEASURES WILL BE USED ON THIS SITE:
 - SILT FENCE
 - SILT BARRIERS
 - CONSTRUCTION ENTRANCE
 - CONCRETE WASHOUT FACILITY
- DUST CONTROL SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. IF POSSIBLE GRADING SHALL BE DONE BY PHASING. IF PHASING IS NOT AN OPTION, DUST SHALL BE CONTROLLED WITH WATER DURING EARTHWORK. AFTER EARTHWORK OPERATIONS, THE EXPOSED SOILS SHALL BE COVERED WITH STRAW OR MULCH UNTIL SEEDED.
- DUST SHALL BE CONTAINED USING WATER. OIL IS NOT TO BE USED AS A DUST SUPPRESSANT.
- ANY DISCHARGE OF PETROLEUM OR PETROLEUM PRODUCTS OF LESS THAN 25 GALLONS ONTO A PREVIOUS SURFACE SHALL BE LEGALLY REMOVED AND PROPERLY TREATED OR PROPERLY DISPOSED OF, OR OTHERWISE REMEDIATED, SO THAT NO CONTAMINATION FROM THE DISCHARGE REMAINS ON-SITE.
- IN THE EVENT OF A LARGE PETROLEUM WASTED SPILL (25 OR MORE GALLONS) CONTRACTOR MUST CONTACT THE OHIO EPA (AT 1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.

CONSTRUCTION SEQUENCE

- STAKE AND/OR FLAG LIMITS OF CLEARING.
- DURING PRECONSTRUCTION MEETING ALL EROSION & SEDIMENT CONTROL FACILITIES & PROCEDURES SHALL BE DISCUSSED.
- CLEARING & GRUBBING, AS NECESSARY, FOR INSTALLATION OF PERIMETER CONTROLS.
- INSTALL SILT FENCE PERIMETER CONTROLS AS NEEDED AND SHOWN ON PLANS.
- INSTALL CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT FACILITY, IF CONDITIONS ARE SUCH THAT MUD IS COLLECTING ON VEHICLE TIRES. THE TIRES MUST BE CLEANED BEFORE THE VEHICLES ENTER THE PUBLIC ROADWAY. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE ROADWAY MUST BE REMOVED PROMPTLY.
- CLEARING & GRUBBING THE REMAINING SITE AS NECESSARY.
- BEGIN FILLING & GRADING AS REQUIRED TO REACH SUBGRADE.
- CONSTRUCT SITE WORK INCLUDING STORM DRAINAGE FACILITIES.
- UPON INSTALLATION OF STORM DRAINAGE CATCH BASINS, INSTALL INLET PROTECTION.
- MAINTAIN EROSION & SEDIMENTATION CONTROL MEASURES UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED.
- REMOVE SEDIMENT CONTROLS.

PROJECT DESCRIPTION
THIS PROJECT SITE IS A CONCRETE RAMP AND WALK FOR THE TRI C METRO CAMPUS. THE CONCRETE RAMP WILL BE FULLY REMOVED AND REPLACED WITH A NEW ROUTING FOR THE CONCRETE WALK.

PROJECT COMPLETION STATISTICS
POTENTIAL TOTAL DISTURBED AREA: 0.58 ACRES

EXISTING LAND USE FOR THE SITE IS A CONCRETE RAMP AND WALKS, WHICH WILL REMAIN / BE MODIFIED.

PROJECT LOCATION:
LATITUDE: 41° 29' 33" N LONGITUDE: 81° 40' 02" W

WETLAND INFORMATION:
THERE ARE NO WETLANDS ON THIS SITE.

FIRST AND SUBSEQUENT RECEIVING STREAM:
INITIAL RECEIVING WATER IS STORM SEWERS AND THE SUBSEQUENT RECEIVING WATER IS THE CUYAHOGA RIVER.

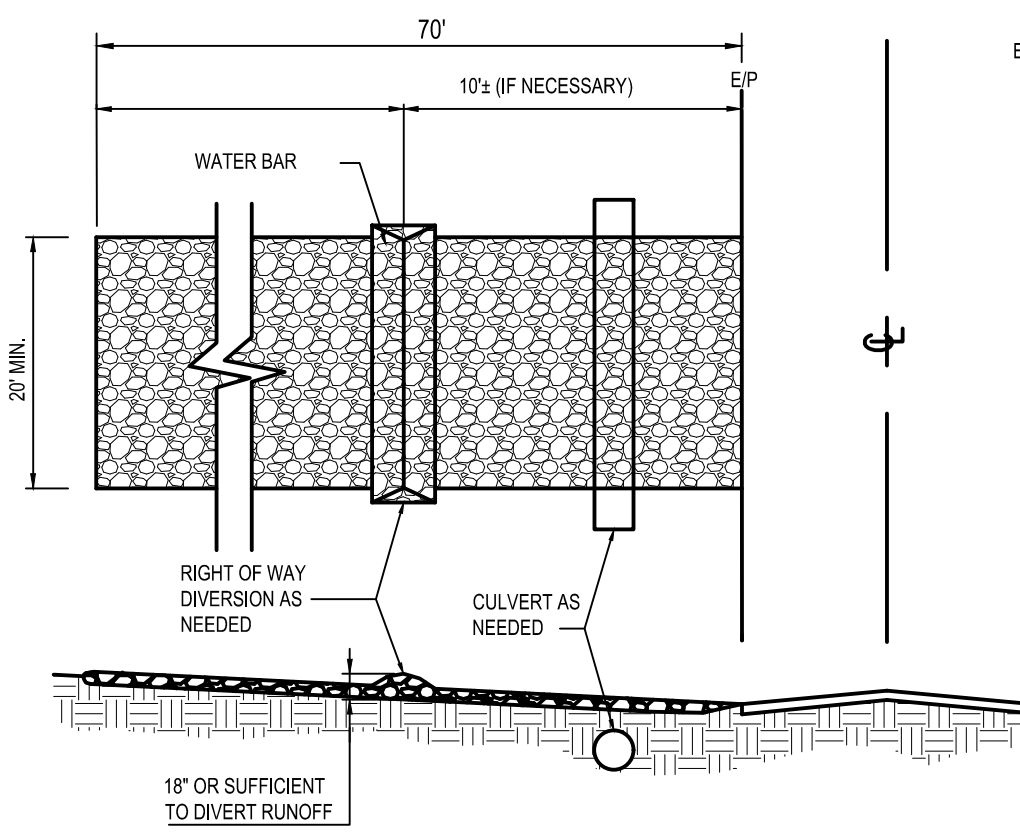
ANTICIPATED TIMING:
CONSTRUCTION BEGIN: SEPTEMBER, 2021
CONSTRUCTION COMPLETE: OCTOBER, 2021

CONTACTOR: T.B.D.
CONTACT: _____
PHONE NUMBER: _____

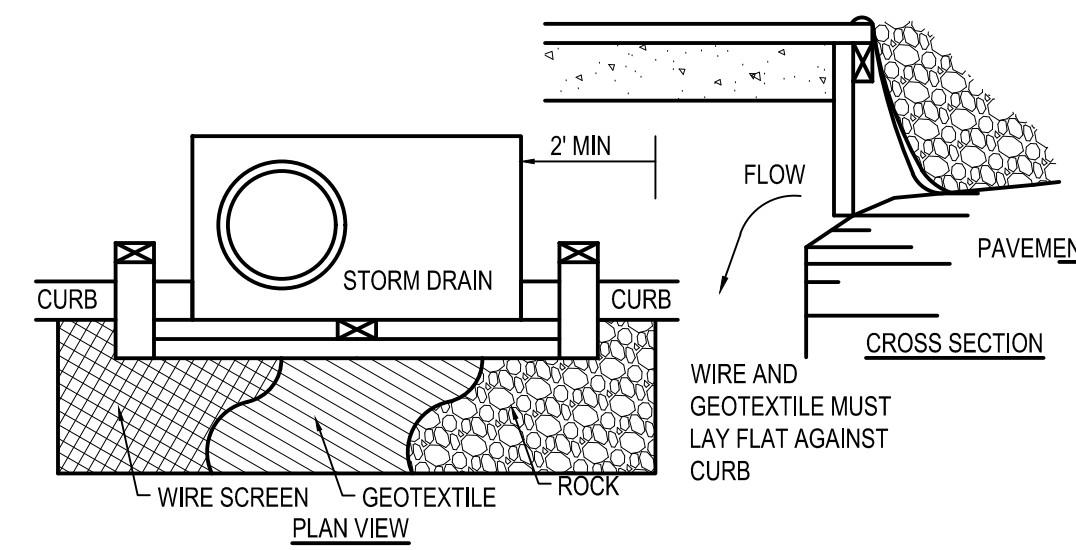
CONTRACTOR SHALL MAINTAIN A CONSTRUCTION LOG DOCUMENTING ALL GRADING AND STABILIZATION ACTIVITIES.

CONSTRUCTION ENTRANCE NOTES

- STONE SIZE - NO. 2 STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- THE CONSTRUCTION ENTRANCE SHALL COINCIDE WITH THE PROPOSED DRIVE AS SHOWN ON THE PLAN.
- PAVEMENT THICKNESS - STONE LAYER SHALL BE 6" THICK FOR STANDARD DUTY ACTIVITY AND 10" THICK FOR HEAVY DUTY ACTIVITY.
- DRIVEWAY WIDTH - THE ENTRANCE SHALL BE AT LEAST 20' WIDE. CONTRACTOR SHALL ENSURE ALL VEHICLES UTILIZE THE CONSTRUCTION ENTRANCE UNTIL PAVEMENT IS IN PLACE.
- BEDDING-A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE SPECIFICATIONS SHOWN BELOW.
- CULVERT-A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND, MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SHALL BE RESTRICTED FROM MUDDY AREAS.
- THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

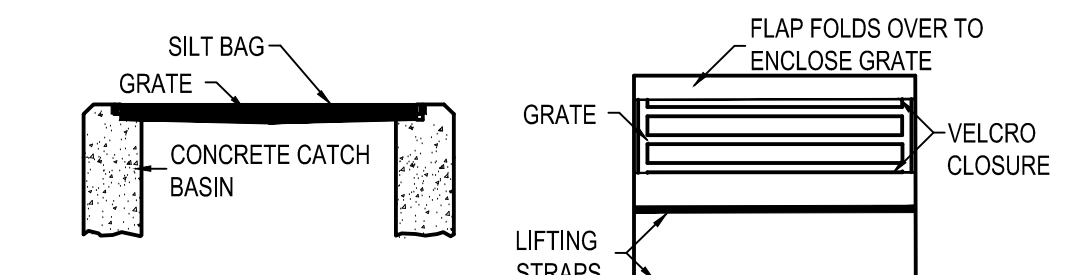


A3 TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
- CONSTRUCT A WOODEN FRAME OF 2-BY-4-IN. CONSTRUCTION-GRADE LUMBER. THE END SPACERS SHALL BE A MINIMUM OF 1 FT. BEYOND BOTH ENDS OF THE THROAT OPENING. THE ANCHORS SHALL BE NAILED TO 2-BY-4-IN. STAKES DRIVEN ON THE OPPOSITE SIDE OF THE CURB.
- THE WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC AND STONE. IT SHALL BE A CONTINUOUS PIECE WITH A MINIMUM WIDTH OF 30 IN. AND 4 FT. LONGER THAN THE THROAT LENGTH OF THE INLET, 2 FT. ON EACH SIDE.
- GEOTEXTILE CLOTH SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WIRE MESH.
- THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2-BY-4-IN. FRAME.
- TWO-INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE CLOTH.
- THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE STONE AND/OR GEOTEXTILE REPLACED WHEN CLOGGED WITH SEDIMENT.

C4 CURB INLET PROTECTION
N.T.S.



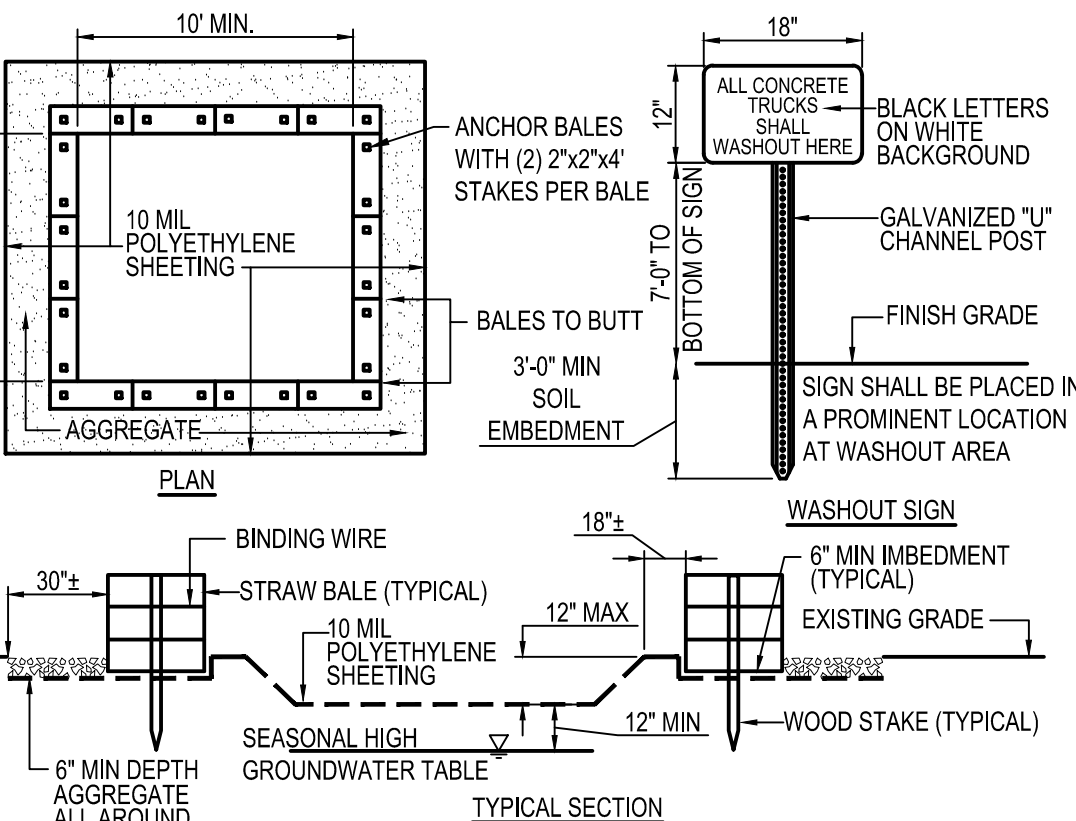
- INSTALLATION:**
- STAND THE GRATE ON END.
 - PLACE THE SILT BAG OVER THE GRATE.
 - ROLL THE GRATE OVER SO THAT THE OPEN END IS UP.
 - PULL UP THE BAG.
 - TUCK THE FLAP IN.
 - PRESS THE VELCRO STRAPS TOGETHER.
 - BE SURE THAT THE END OF THE GRATE IS COMPLETELY COVERED BY THE FLAP OR THE SILT BAG WILL NOT WORK PROPERLY.
 - HOLDING THE HANDLES, CAREFULLY PLACE THE SILT BAG WITH THE GRATE INSERTED INTO THE CATCH BASIN FRAME.

MAINTENANCE:
TO ENSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OR STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR. REMOVE FINE MATERIAL FROM INSIDE SILT BAG AS NEEDED. DISPOSE OF SILT BAG NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

INLET INSPECTION:
TO INSPECT INLET, REMOVE SILT BAG WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE SILT BAG BACK INTO GRATE FRAME.

NOTE:
PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE SILT BAG MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE.

B4 SILT BAG PROTECTION
N.T.S.



- NOTES:**
- CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
 - CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
 - WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
 - WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
 - ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
 - AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

A4 CONCRETE WASHOUT AREA
N.T.S.

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFFP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (MFFP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	3/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

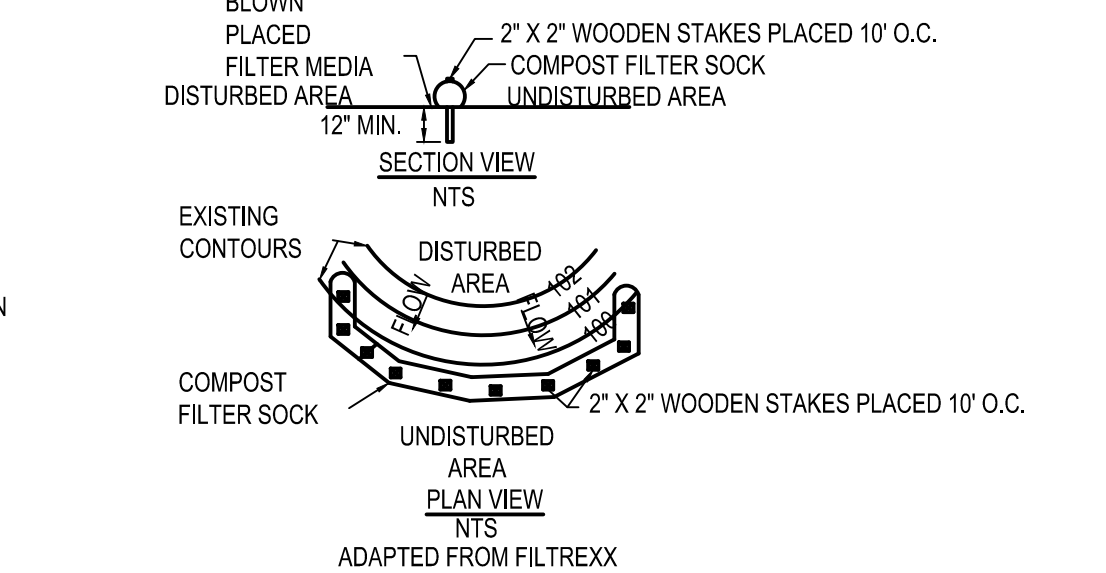
TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND FUSION-WELDED JUNCTURES
OUTER FILTRATION MESH	3/4" X 3/4" MAX. APERTURE SIZE COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER & NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)
	3/16" MAX. APERTURE SIZE

COMPOST SOCKS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS

COMPOST SHALL MEET THE FOLLOWING STANDARDS:

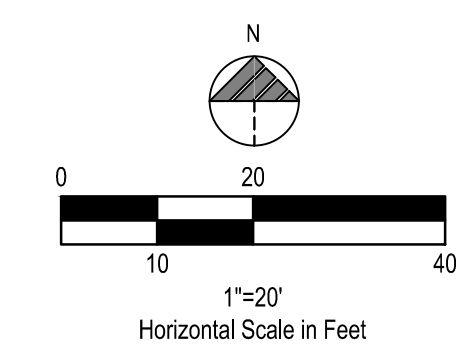
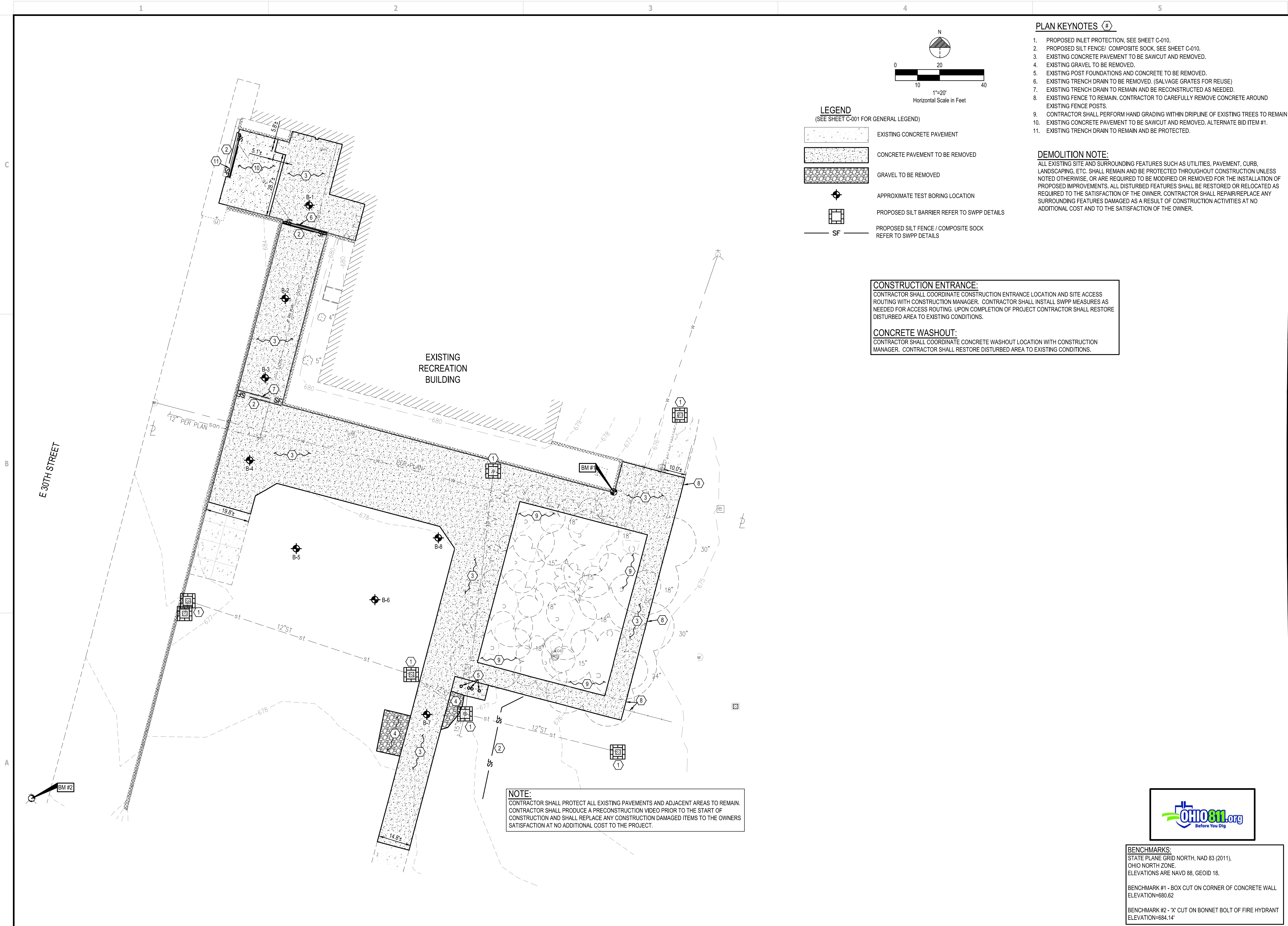
ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 gS MAXIMUM



- ADAPTED FROM FILTREXX
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 4 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT.
 - TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
 - SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH 1/2 INCH STORM RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 - UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

A5 COMPOST FILTER SOCK
N.T.S.

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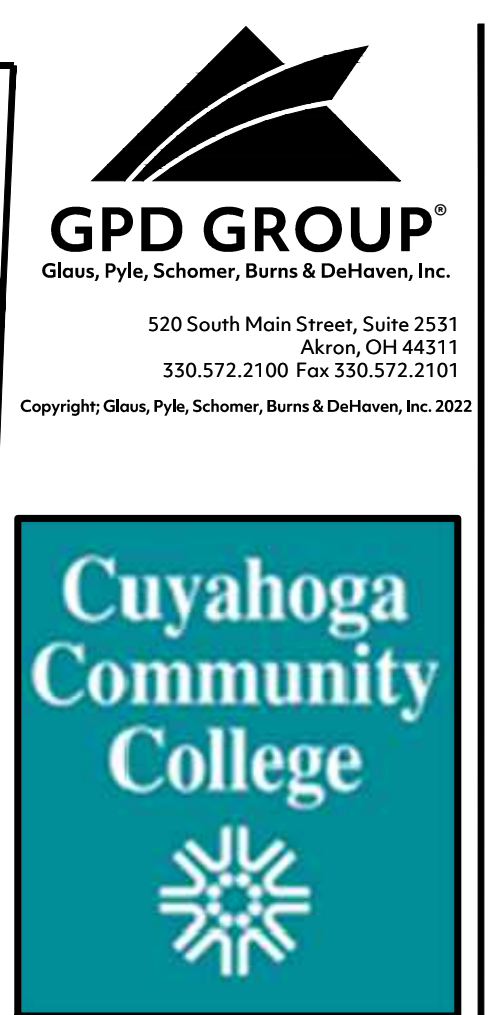
- LEGEND**
 (SEE SHEET C-001 FOR GENERAL LEGEND)
- EXISTING CONCRETE PAVEMENT
 - CONCRETE PAVEMENT TO BE REMOVED
 - GRAVEL TO BE REMOVED
 - APPROXIMATE TEST BORING LOCATION
 - PROPOSED SILT BARRIER REFER TO SWPP DETAILS
 - PROPOSED SILT FENCE / COMPOSITE SOCK REFER TO SWPP DETAILS

CONSTRUCTION ENTRANCE:
 CONTRACTOR SHALL COORDINATE CONSTRUCTION ENTRANCE LOCATION AND SITE ACCESS ROUTING WITH CONSTRUCTION MANAGER. CONTRACTOR SHALL INSTALL SWPP MEASURES AS NEEDED FOR ACCESS ROUTING. UPON COMPLETION OF PROJECT CONTRACTOR SHALL RESTORE DISTURBED AREA TO EXISTING CONDITIONS.

CONCRETE WASHOUT:
 CONTRACTOR SHALL COORDINATE CONCRETE WASHOUT LOCATION WITH CONSTRUCTION MANAGER. CONTRACTOR SHALL RESTORE DISTURBED AREA TO EXISTING CONDITIONS.

- PLAN KEYNOTES (#)**
1. PROPOSED INLET PROTECTION, SEE SHEET C-010.
 2. PROPOSED SILT FENCE / COMPOSITE SOCK, SEE SHEET C-010.
 3. EXISTING CONCRETE PAVEMENT TO BE SAWCUT AND REMOVED.
 4. EXISTING GRAVEL TO BE REMOVED.
 5. EXISTING POST FOUNDATIONS AND CONCRETE TO BE REMOVED.
 6. EXISTING TRENCH DRAIN TO BE REMOVED. (SALVAGE GRATES FOR REUSE)
 7. EXISTING TRENCH DRAIN TO REMAIN AND BE RECONSTRUCTED AS NEEDED.
 8. EXISTING FENCE TO REMAIN. CONTRACTOR TO CAREFULLY REMOVE CONCRETE AROUND EXISTING FENCE POSTS.
 9. CONTRACTOR SHALL PERFORM HAND GRADING WITHIN DRIPLINE OF EXISTING TREES TO REMAIN
 10. EXISTING CONCRETE PAVEMENT TO BE SAWCUT AND REMOVED. ALTERNATE BID ITEM #1.
 11. EXISTING TRENCH DRAIN TO REMAIN AND BE PROTECTED.

DEMOLITION NOTE:
 ALL EXISTING SITE AND SURROUNDING FEATURES SUCH AS UTILITIES, PAVEMENT, CURB, LANDSCAPING, ETC. SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION UNLESS NOTED OTHERWISE, OR ARE REQUIRED TO BE MODIFIED OR REMOVED FOR THE INSTALLATION OF PROPOSED IMPROVEMENTS. ALL DISTURBED FEATURES SHALL BE RESTORED OR RELOCATED AS REQUIRED TO THE SATISFACTION OF THE OWNER. CONTRACTOR SHALL REPAIR/REPLACE ANY SURROUNDING FEATURES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.



REV.	DATE	DESCRIPTION

CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

**EXISTING CONDITIONS, SWPP
 AND DEMOLITION PLAN**

ISSUED FOR:	
PERMIT	
BID	01/27/2022
CONSTRUCTION	
RECORD	
PROJECT MANAGER	DESIGNER
KB	TJW

JOB NO.
2021052.02

C-101



BENCHMARKS:
 STATE PLANE GRID NORTH, NAD 83 (2011),
 OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 88, GEOID 18.

BENCHMARK #1 - BOX CUT ON CORNER OF CONCRETE WALL
 ELEVATION=680.62

BENCHMARK #2 - 'X' CUT ON BONNET BOLT OF FIRE HYDRANT
 ELEVATION=684.14'



BENCHMARKS:
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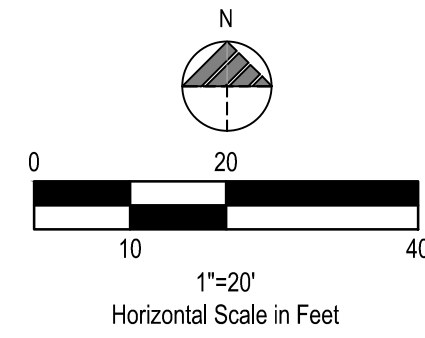
BENCHMARK #1 - BOX CUT ON CORNER OF CONCRETE WALL
 ELEVATION=680.62

BENCHMARK #2 - 'X' CUT ON BONNET BOLT OF FIRE HYDRANT
 ELEVATION=684.14'

BASE BID:	
• EXISTING CONCRETE PAVEMENT REMOVED	13,576 SF
• EXISTING GRAVEL REMOVED	305 SF
• EXISTING POST FOUNDATION REMOVED	4 EA
• EXISTING TRENCH DRAIN REMOVED	1 EA
• INLET PROTECTION	7 EA
• SILT FENCE/ COMPOSITE SOCK	200 LF
• PROPOSED CONCRETE PAVEMENT	6,727 SF
• PROPOSED CONCRETE WALK	1,634 SF
• EX TRENCH DRAIN RECONSTRUCTED AS NEEDED	1 EA
• PROPOSED TRENCH DRAIN	1 EA
• UTILITIES ADJUSTED TO GRADE	3 EA
• PROPOSED FROST SLAB	3 EA
• PROPOSED TOPSOIL AND SEED	10,971 SF

ALTERNATE BID ITEM #1	
• EXISTING CONCRETE PAVEMENT REMOVED	750 SF
• PROPOSED CONCRETE PAVEMENT	750 SF

ESTIMATED GENERAL PLAN QUANTITIES - CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY MATERIALS AND QUANTITIES TO COMPLETE THE INTENDED PROPOSED WORK.



LEGEND
 (SEE SHEET C-001 FOR GENERAL LEGEND)

- PROPOSED CONCRETE
- CONSTRUCTION KEYNOTE
- APPURTENANCES
- PROPOSED EXPANSION JOINT. CONTRACTOR TO SUPPLY SHOP DRAWING FOR FINAL LOCATIONS.
- INTENDED CONCRETE JOINT. CONTRACTOR TO SUPPLY SHOP DRAWING FOR FINAL LOCATIONS.

SHEET NOTES

- ALL ACCESSIBLE AREAS AND PATHWAYS SHALL COMPLY WITH ADA STANDARDS AND SPECIFICATIONS.
- PAVING WORK WHICH EXPOSES EXISTING BASE MATERIAL OR THE SUBGRADE SHALL BE DONE DURING DRY PERIOD. CONTRACTOR SHALL NOT EXCESSIVELY OPERATE WHEELED EQUIPMENT / VEHICLES OVER EXPOSED SUBGRADE AREAS.
- UTILITY STRUCTURES AND MANHOLES IN THE AREA SHALL BE ADJUSTED/RESET AS NECESSARY.

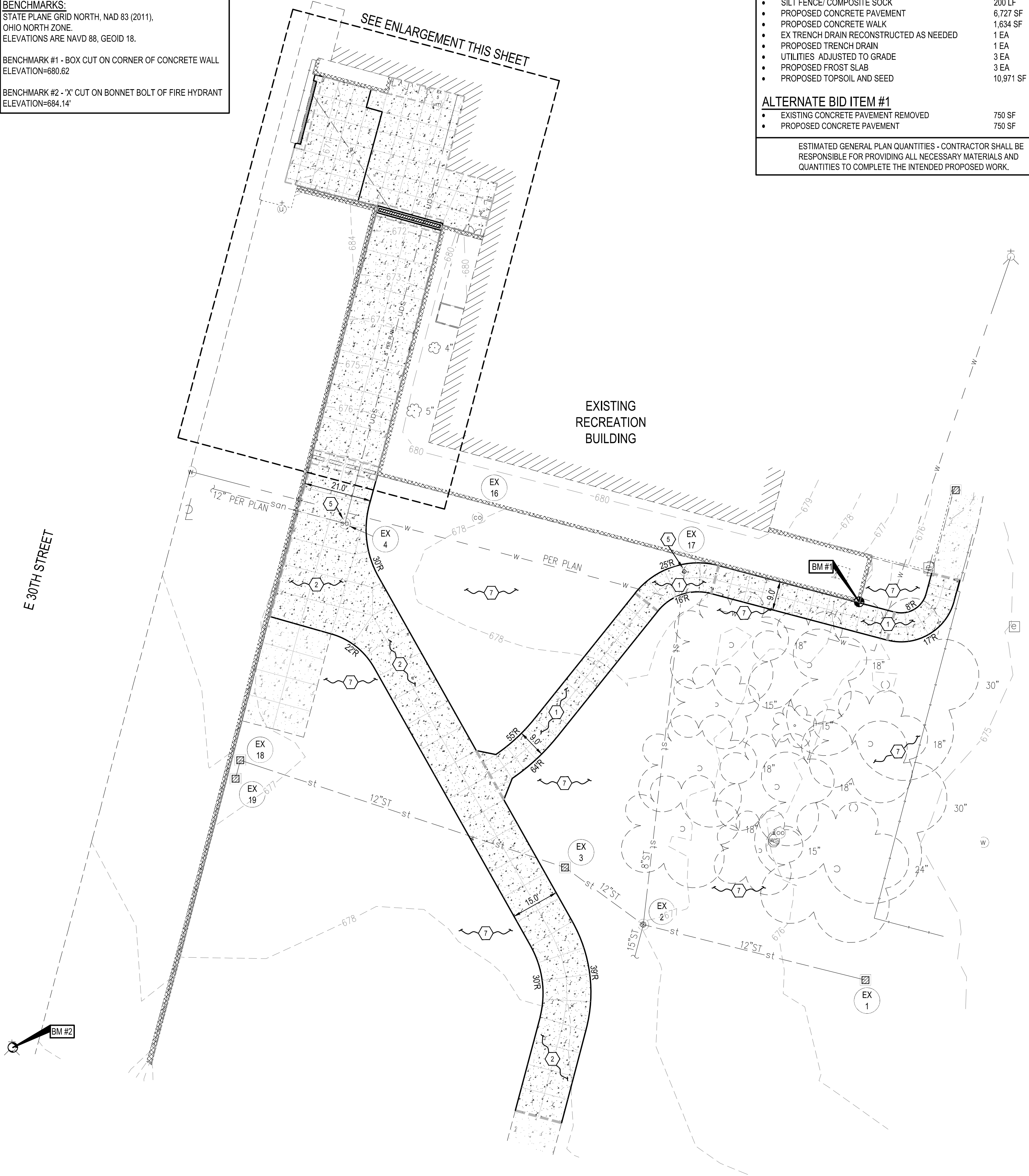
PLAN KEYNOTES (A)

- PROPOSED CONCRETE WALK WITH MICRO FIBER PER CONCRETE NOTES/ SPECIFICATIONS, SEE SHEET C-501.
- PROPOSED 6" P.C.C. PAVEMENT WITH MACRO FIBER PER CONCRETE NOTES/ SPECIFICATIONS OVER 6" CRUSHED AGGREGATE, SEE SHEET C-501.
- PROPOSED FROST SLAB, SEE SHEET C-501. SEE SITE PLAN FOR SIZE.
- EXISTING TRENCH DRAIN TO BE RECONSTRUCTED AS NEEDED.
- EXISTING UTILITY TO BE ADJUSTED TO GRADE.
- PROPOSED 6" P.C.C. PAVEMENT WITH MACRO FIBER PER CONCRETE NOTES/ SPECIFICATIONS OVER 6" CRUSHED AGGREGATE, SEE SHEET C-501. ALTERNATE BID ITEM #1.
- CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED AREAS. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO DRAINAGE INLETS THROUGHOUT.

SEE ENLARGEMENT THIS SHEET

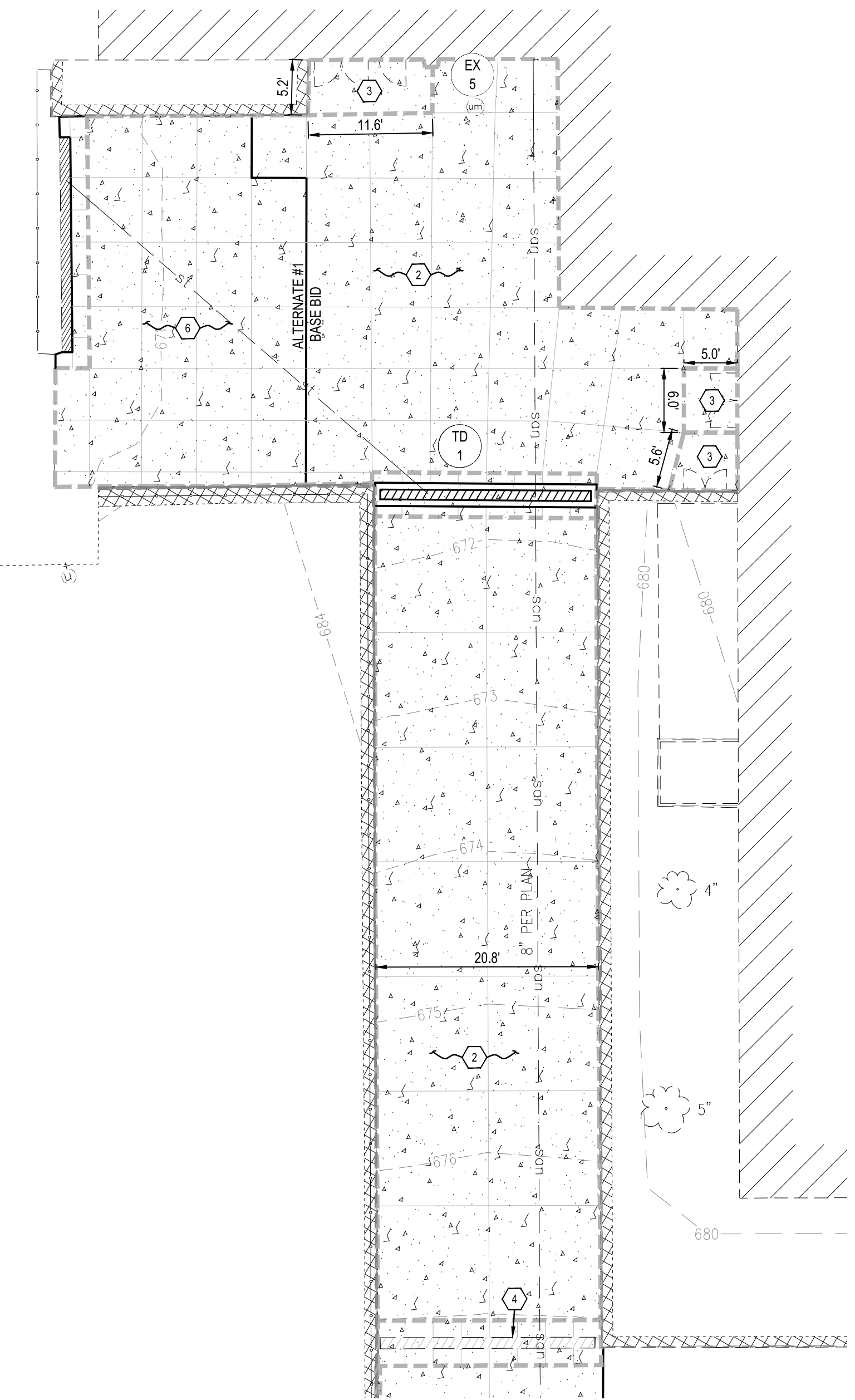
EXISTING RECREATION BUILDING

E 30TH STREET



PROPOSED STRUCTURES	
STRUCT. ID	STRUCTURE DETAILS
TD 1	PROP. TRENCH DRAIN (SEE SHEET C-501) RIM=671.47 BOTTOM INV. = 669.97 EX. VERTICAL PIPE = 668.89

EXISTING STRUCTURES	
STRUCT. ID	STRUCTURE DETAILS
EX 1	EXISTING CATCH BASIN RIM=675.05 INV. 4" (N)=671.65 INV. 4" (W)=671.15 INV. 12" (W,E)=670.65
EX 2	EXISTING CATCH BASIN RIM=676.96 INV. 8" (N)=669.96 INV. 12" (E,W)=669.86 INV. 15" (S)=669.56
EX 3	EXISTING CATCH BASIN RIM=677.36 INV. 12" (W)=672.86 INV. 12" (E)=671.66
EX 4	EXISTING SANITARY MANHOLE RIM=677.45 INV. 8" (N)=660.55 INV. 8" (NE)=660.35 INV. 12" (W)=660.45
EX 5	EXISTING MANHOLE RIM=671.67 INV. 6" (NE)=667.87 INV. 12" (N)=668.87
EX 16	EXISTING CLEANOUT RIM=677.91 BOTTOM = 673.01
EX 17	EXISTING CLEANOUT RIM=678.10 BOTTOM = 675.70
EX 18	EXISTING CATCH BASIN RIM=676.55 INV. 12" (S)=673.85 INV. 12" (E)=673.75
EX 19	EXISTING CATCH BASIN RIM=676.62 INV. 12" (N)=673.92



A5 ENLARGEMENT
 1" = 10'



REV.	DATE	DESCRIPTION

CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

SITE AND UTILITY PLAN

ISSUED FOR:	
PERMIT	01/27/2022
CONSTRUCTION	
RECORD	

PROJECT MANAGER	DESIGNER
KB	TJW

JOB NO.
 2021052.02

C-111



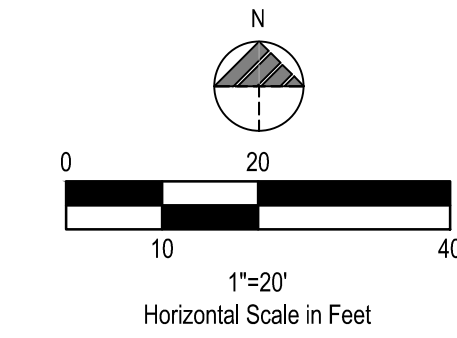
BENCHMARKS:
 STATE PLANE GRID NORTH, NAD 83 (2011),
 OHIO NORTH ZONE.
 ELEVATIONS ARE NAVD 88, GEOID 18.

BENCHMARK #1 - BOX CUT ON CORNER OF CONCRETE WALL
 ELEVATION=680.62

BENCHMARK #2 - 'X' CUT ON BONNET BOLT OF FIRE HYDRANT
 ELEVATION=684.14'

SHEET NOTES

1. ALL ACCESSIBLE AREAS AND PATHWAYS MUST COMPLY WITH ADA STANDARDS AND SPECIFICATIONS.
2. FINISHED PAVEMENT SLOPES LOCATED WITHIN ACCESSIBLE PATHS SHALL NOT EXCEED 2% SLOPE CROSS SLOPES. TRANSITION SLOPES FOR THE SITE SHALL NOT EXCEED 5% SLOPE. UNLESS APPROVED BY THE CONSTRUCTION MANAGER.
3. PAVING WORK WHICH EXPOSES EXISTING BASE MATERIAL OR THE SUBGRADE SHALL BE DONE DURING DRY PERIOD. CONTRACTOR SHALL NOT EXCESSIVELY OPERATE WHEELED EQUIPMENT / VEHICLES OVER EXPOSED SUBGRADE AREAS.
4. UTILITY STRUCTURES AND MANHOLES IN THE AREA SHALL BE ADJUSTED/RESET AS NECESSARY.



LEGEND

- (SEE SHEET C-001 FOR GENERAL LEGEND)
- 000 PROPOSED CONTOUR
 - XXX.XX± EXISTING SPOT ELEVATION/ MATCH EXISTING GRADE
 - XXX.XX± PROPOSED ELEVATION @ FINISHED GROUND ELEVATION
 - 0.0% PROPOSED DRAINAGE SLOPE & DIRECTION



REV.	DATE	DESCRIPTION

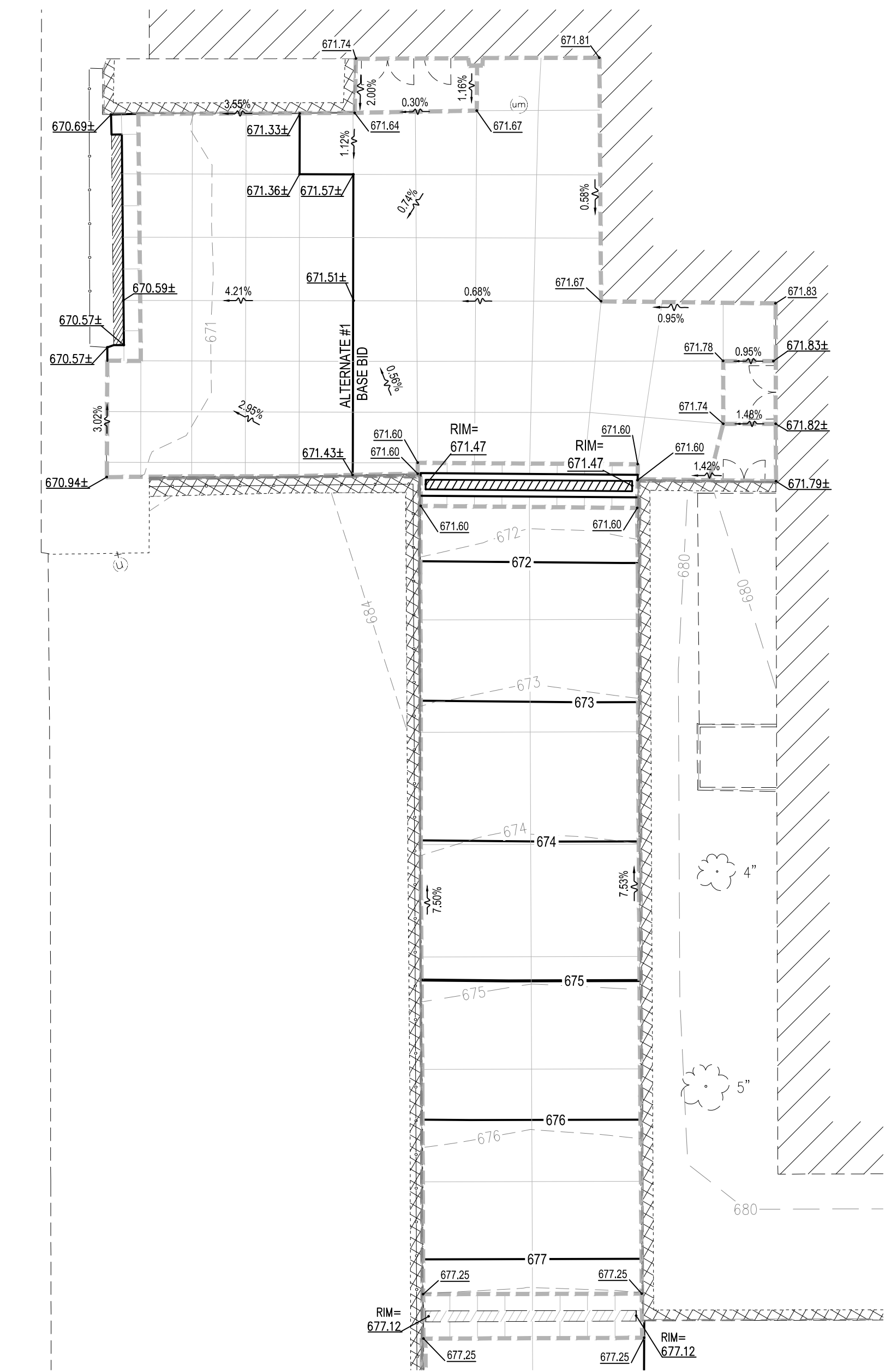
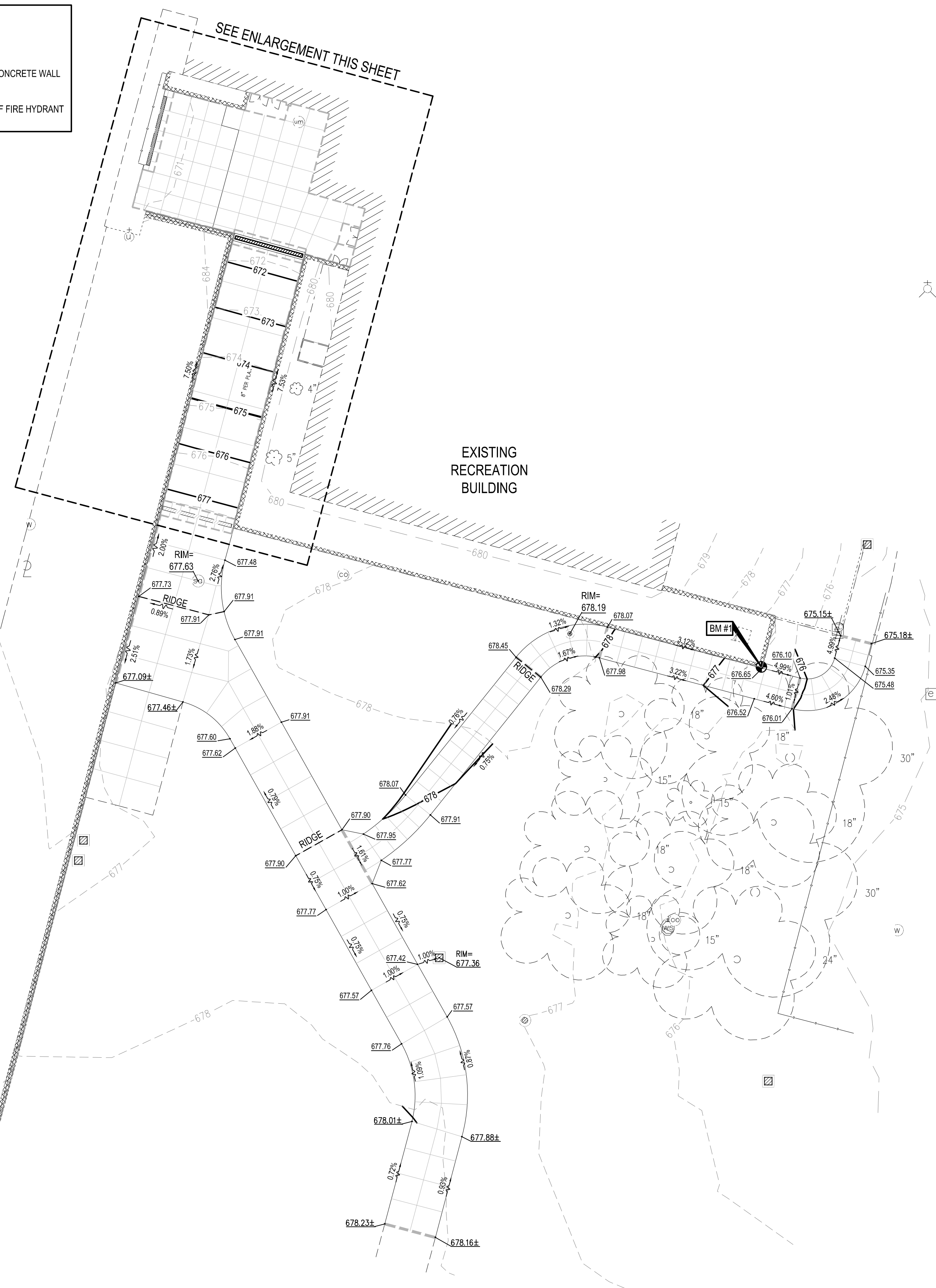
CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

GRADING PLAN

ISSUED FOR:	
PERMIT	
BID	01/27/2022
CONSTRUCTION	
RECORD	
PROJECT MANAGER	DESIGNER
KB	TJW

JOB NO.
2021052.02

C-121



A5 ENLARGEMENT
 1" = 10'

REV.	DATE	DESCRIPTION

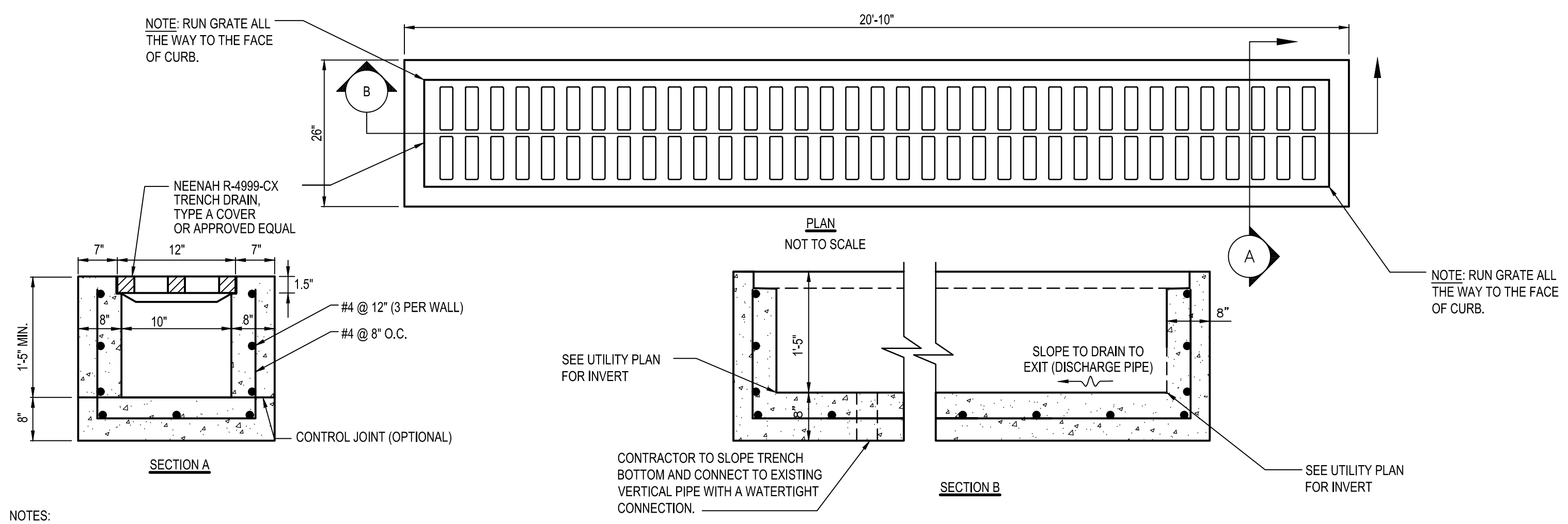
CUYAHOGA COMMUNITY COLLEGE
 METRO MRC DRIVEWAY
 CLEVELAND, OHIO 44115

DETAILS

ISSUED FOR:	
PERMIT	01/27/2022
CONSTRUCTION	
RECORD	
PROJECT MANAGER	DESIGNER
KB	TJW

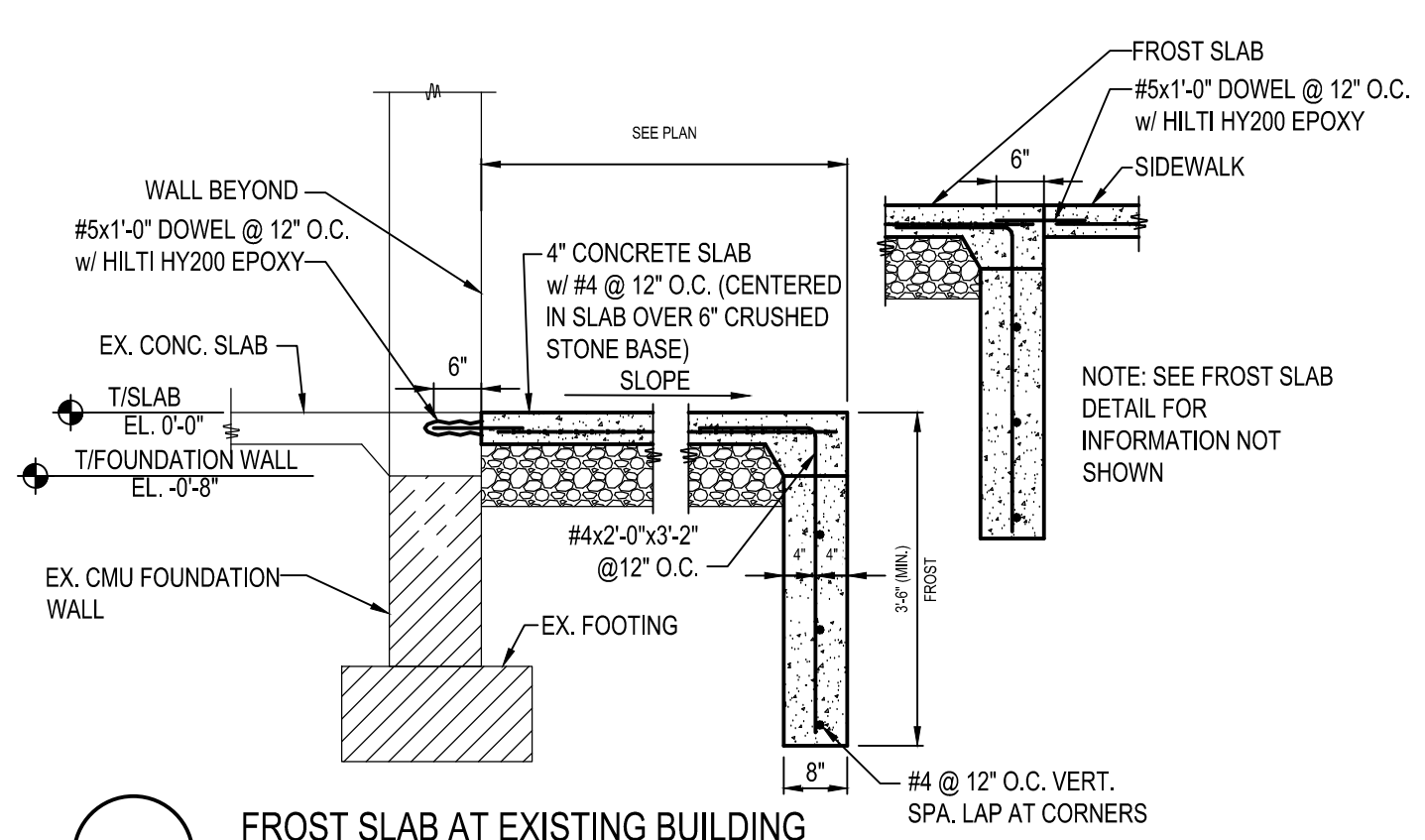
JOB NO.
2021052.02

C-501

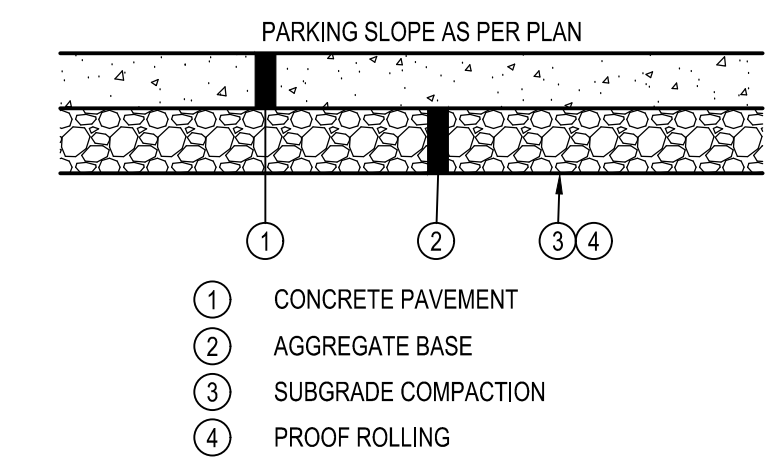


- NOTES:
1. PRE MANUFACTURED UNIT MAYBE UTILIZED OF EQUAL SIZE, CAPACITIES, AND CONFIGURATION.
 2. CONTRACTOR MAY REUSE EXISTING GRATE IF STRUCTURAL SOUND.

C3 TRENCH DETAIL
 N.T.S.

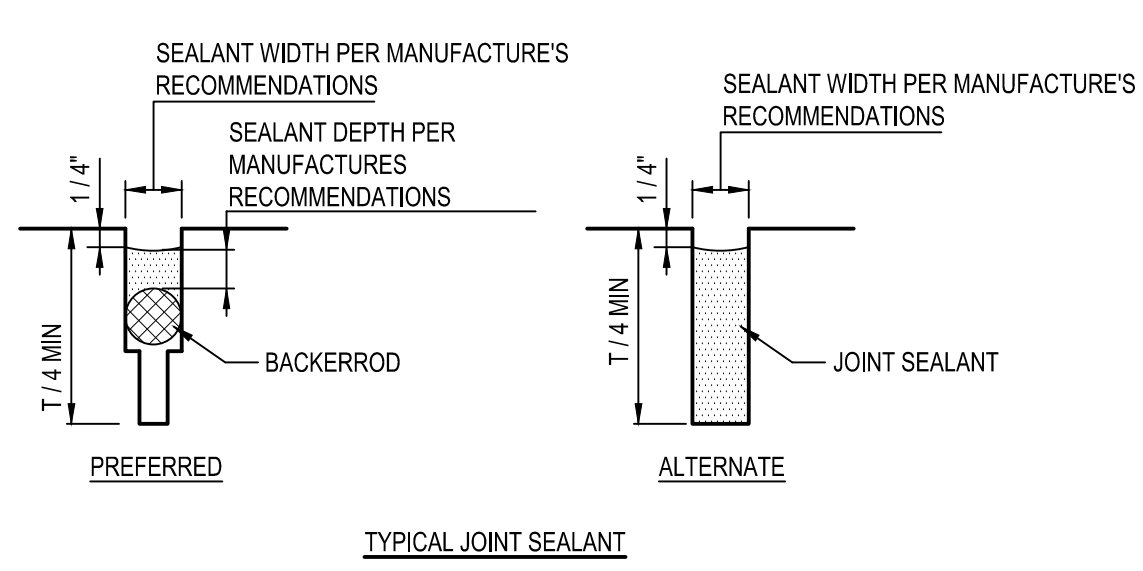
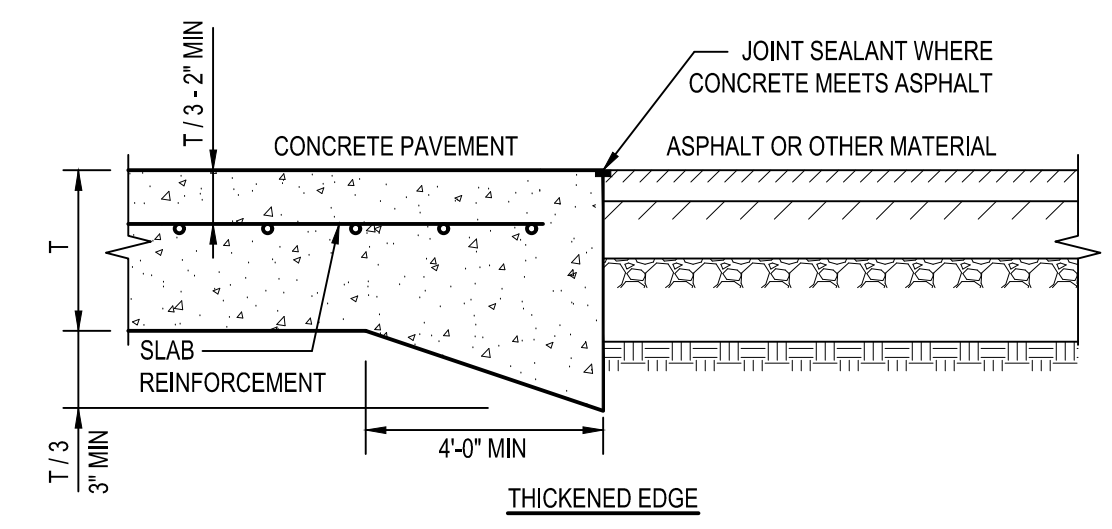
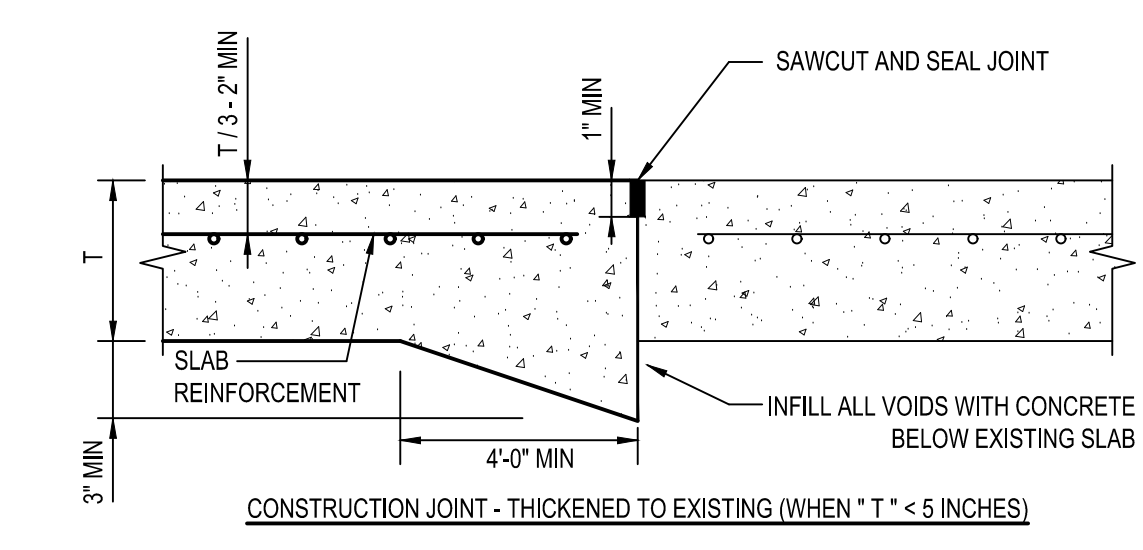


B3 FROST SLAB AT EXISTING BUILDING
 N.T.S.

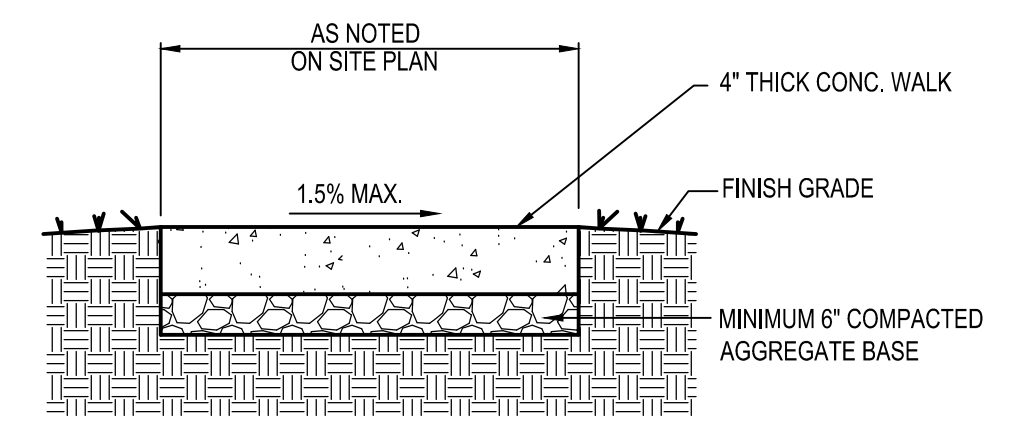
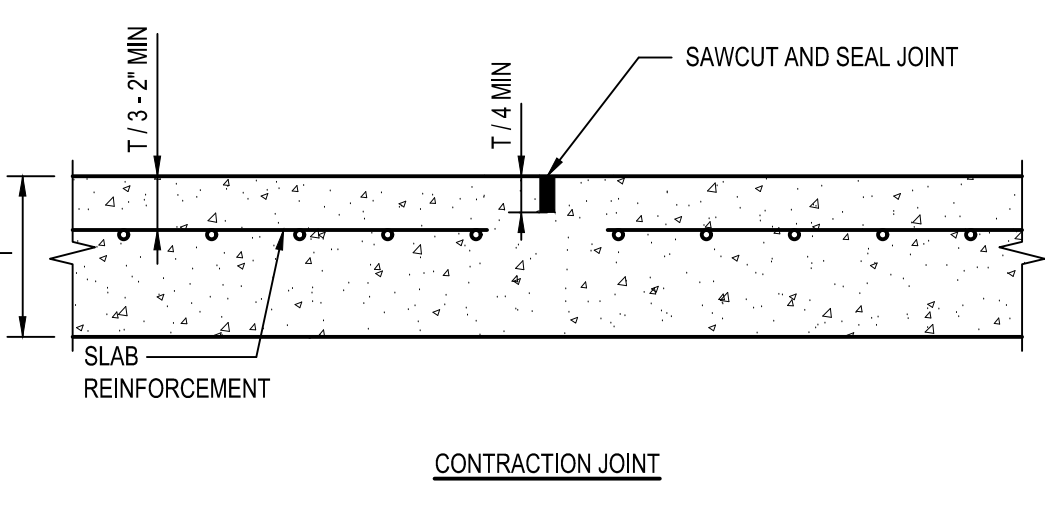
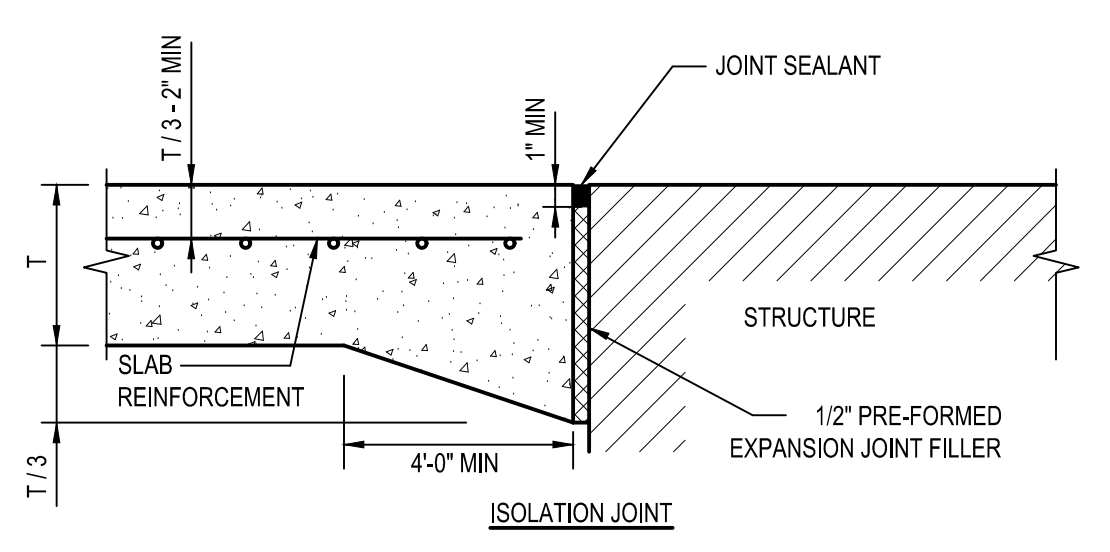


- NOTES:
1. CONTRACTOR SHALL INSTALL 1/2" PRE-FORMED EXPANSION JOINT MATERIAL AND JOINT SEALER WHERE PAVEMENT ABUTS BUILDING, WALLS, AND OTHER RIGID STRUCTURES.
 2. APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT. APPLY CONCRETE SEALANT CONFORMING TO ASTM D6690 WHERE PROPOSED CONCRETE MEETS EXISTING CONCRETE.
 3. SEE SITE PLAN FOR PAVEMENT THICKNESSES AND REINFORCEMENT.
 4. CONCRETE PAVEMENT SHALL HAVE CONTROL JOINTS PER CONCRETE NOTES SHEET C-001.

B5 TYPICAL CONCRETE PAVEMENT SECTION
 N.T.S.



A1 JOINTING DETAILS
 N.T.S.



- NOTES:
1. CONTRACTOR SHALL INSTALL 1/2" PRE-FORMED EXPANSION JOINT MATERIAL AND JOINT SEALER WHERE PAVEMENT ABUTS BUILDING, WALLS, AND OTHER RIGID STRUCTURES.
 2. SEE CONCRETE NOTES SHEET C-001.

A5 CONCRETE WALK
 N.T.S.