

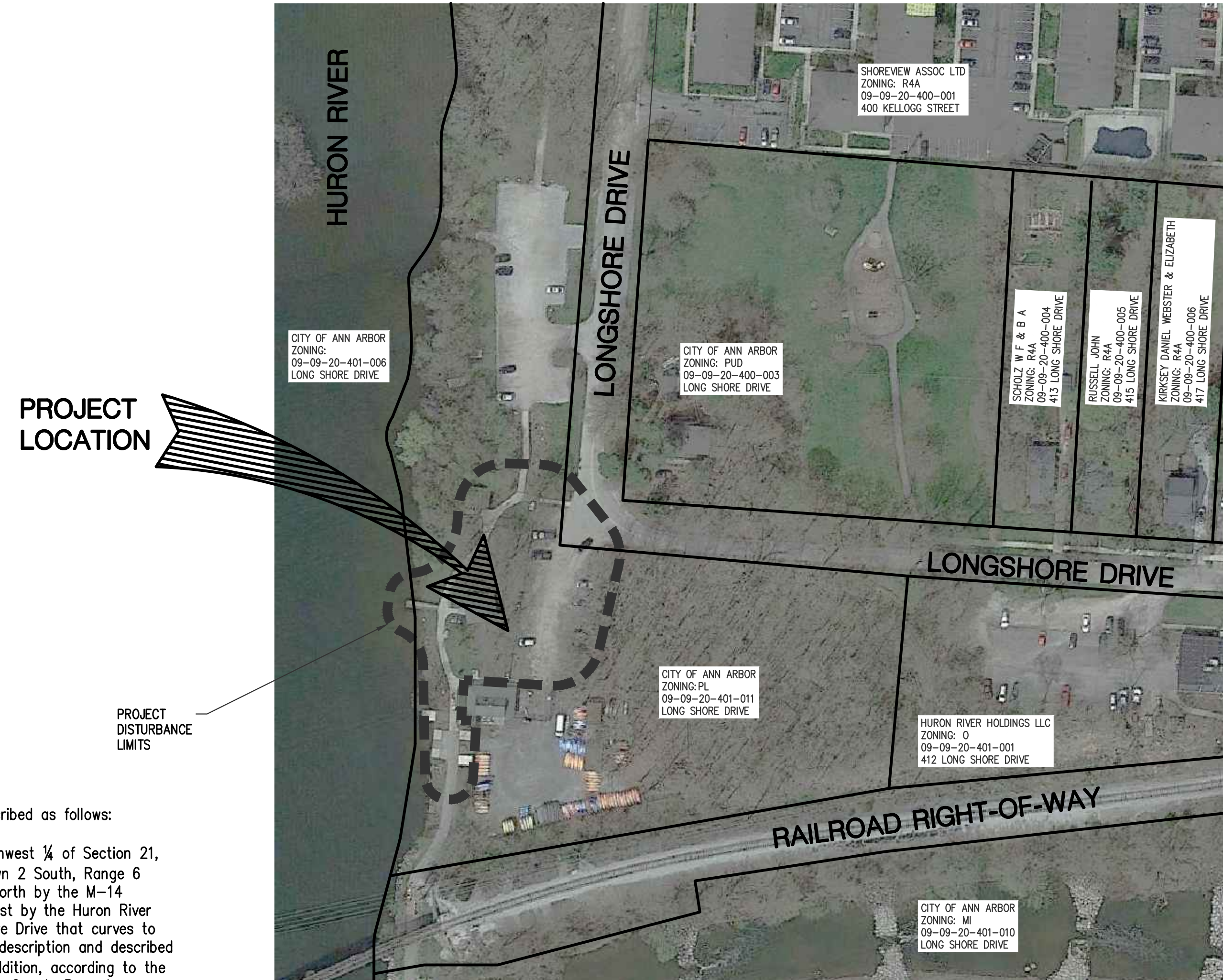
# SITE PLAN SUBMITTAL FOR CITY OF ANN ARBOR PARKS AND RECREATION ARGO PARK LIVERY RESTROOM & SITE IMPROVEMENTS CITY OF ANN ARBOR WASHTENAW COUNTY, MICHIGAN

TF19-0154 MNRTF GRANT:  
"UNIVERSAL ACCESS AND SITE IMPROVEMENTS  
AT ARGO NATURE AREA"  
**DEVELOPMENT PROGRAM SUMMARY**

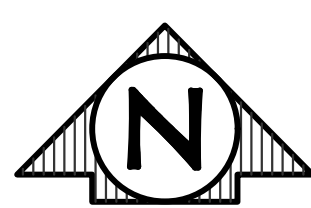
THE ARGO KAYAK LIVERY RECEIVED A GRANT BY THE MICHIGAN DEPARTMENT OF NATURAL RESOURCES TO PROVIDE INCREASED ACCESSIBILITY TO THE EXISTING DEVELOPED PARK SITE. THE PROJECT INCLUDES EXPANSION OF AN EXISTING RESTROOM, PAVING AN EXISTING GRAVEL PARKING LOT, REPLACING SIDEWALK, BOAT DOCKS AND EXISTING FISHING DOCK, ADDING AN ACCESSIBLE KAYAK LAUNCH, RAIN GARDEN, BIKE RACKS, BENCHES AND WAY FINDING SIGNAGE.

### SHEET INDEX

- 1 COVER SHEET
- 2 NOTE SHEET
- 3 LEGEND SHEET
- 4 EXISTING CONDITIONS PLAN SHEET
- 5 NATURAL FEATURES DATA SHEET
- 6 REMOVAL PLAN SHEET
- 7 SITE PLAN SHEET
- 8 UTILITY PLAN SHEET
- 9 GRADING AND SESC PLAN SHEET
- 10-11 DETAILED GRADING SHEETS
- 12 SESC KEY SHEET
- 13 LANDSCAPE PLAN SHEET
- 14-15 SITE DETAILS SHEETS
- 16 KAYAK LAUNCH DETAILS SHEET
- 17-18 BOARDWALK DETAILS SHEETS
- 19-20 SOIL BORINGS SHEET
- T1.1 ARCHITECTURAL PLANS
- A2.1
- P1.1 PLUMBING PLANS
- P2.2
- M1.1 HVAC PLAN
- E0.1- E1.2 ELECTRICAL PLANS



**ARGO LIVERY - SITE VICINITY MAP**  
NOT TO SCALE



**NOTE:**  
ZONING R4A: MULTIPLE FAMILY DWELLING  
ZONING O: OFFICE  
ZONING PUD: PLANNED UNIT DEVELOPMENT  
ZONING PL: PUBLIC LAND

### PROPERTY DESCRIPTION

**ARGO NATURE AREA**  
Land owned by the City of Ann Arbor, known as Argo Nature Area, described as follows:  
That part of the Northeast ¼ and Southeast ¼ of Section 20, the Northwest ¼ of Section 21, the Southwest ¼ of Section 16 and the Southeast ¼ of Section 17, Town 2 South, Range 6 East, City of Ann Arbor, Washtenaw County, Michigan, bounded on the North by the M-14 bridge, on the South by the Ann Arbor Railroad right of way, on the West by the Huron River and on the East by Long Shore Drive including the section of Long Shore Drive that curves to the East at its most southerly extent along a parcel included with this description and described as: Beginning at the Northwest corner of Block 2, Brown and Fuller's Addition, according to the plat thereof as recorded in Liber D of Deeds, pages 3 and 4, Washtenaw County Records; thence Westerly along the Southerly line of Long Shore Drive 30 rods for a Place of Beginning; thence Westerly 18 rods; thence Southerly parallel to the West line of Block 2, Brown and Fuller's Addition, to the Ann Arbor Railroad right of way; thence Easterly along the Northerly line of said right of way to a line parallel to and 30 rods West of the West line of said Block 2; thence Northerly to the Place of Beginning, being part of Section 20, Town 2 South, Range 6 East, City of Ann Arbor, Washtenaw County, Michigan.

Above land also described in the following deeds recorded at the Register of Deeds, Washtenaw County, Michigan: Liber 199, page 41, Liber 334, page 537, Liber 1043, page 285 - Parcels A-1 and A-2 only, Liber 1747, page 728 and Liber 2042, page 816.  
Tax Parcel Nos.: 09-09-20-401-011 and 09-09-21-221-001  
Part of Tax Parcel No. 09-09-20-101-011

**SURVEY ENGINEER**  
ROWE PSC  
540 S. SAGINAW ST.  
SUITE 200  
FLINT, MI 48502  
(810) 341-7500

**ARCHITECT**  
MITCHELL AND MOUAT ARCHITECTS  
113 S. FOURTH AVE.  
ANN ARBOR, MI 48104  
(734) 662-6070

**PROPERTY ADDRESS**  
CITY OF ANN ARBOR  
ARGO PARK  
1055 LONGSHORE DRIVE  
ANN ARBOR, MI 48105

**OWNER INFORMATION**  
CITY OF ANN ARBOR PARKS AND RECREATION SERVICES AREA  
301 E. HURON STREET  
ANN ARBOR, MI 48104  
ADAM FERCHO, PARK PLANNER & LANDSCAPE ARCHITECT,  
AFercho@a2gov.org (517) 281-7810  
HILLARY HANZEL, PARK PLANNER & LANDSCAPE ARCHITECT,  
HHanzel@a2gov.org (810) 434-3180



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
2-22-21	ISSUED FOR BIDS

REV: \_\_\_\_\_  
SHEET# **1** OF 20  
JOB No: 20C0027

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC  
ARGO PARK LIVERY**  
 ANN ARBOR, WASHTENAW COUNTY, MICHIGAN  
 COVER SHEET

**ROWE PROFESSIONAL SERVICES COMPANY**  
 The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: NOT TO SCALE

R:\Projects\200027\09\Construction Drawings\01-200027-001.dwg PLOTED: 2/23/2021 9:59 AM

**GENERAL CONSTRUCTION NOTES**

**EMERGENCY CONTACTS**

BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

**UNDERGROUND UTILITY IDENTIFICATION AND LOCATION**

THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171 OR 811) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

**PUBLIC UTILITIES**

EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES AND OWNER. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

**VERIFICATION OF UNDERGROUND UTILITIES**

THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

**UTILITY SERVICE**

UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

**MAINTAINING TRAFFIC**

LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

**SCHEDULE**

THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

**SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS**

THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

**PROTECTION OF TREES, SHRUBS, AND LANDSCAPING**

ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

**CONSTRUCTION SIGNING AND BARRICADING**

THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA. THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

**TURF ESTABLISHMENT**

ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH THREE INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

**ADA COMPLIANCE**

ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

**EARTHWORK**

THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE HIS BID ON HIS DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

THE CONTRACTOR SHALL COORDINATE WITH CITY FOR EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK. AN AREA(S) WILL BE DESIGNATED FOR STOCKPILING OR "BLENDING IN" THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

**BACKFILL AND EMBANKMENT**

BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS III AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE ENGINEER, AND PROVIDE THE ENGINEER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 12 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 12 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

**DENSITY TESTING**

THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

**WORK HOURS**

UNLESS PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS OR LIMITED BY LOCAL ORDINANCE, THE CONTRACTOR SHALL WORK WITHIN OF THE FOLLOWING TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER: MONDAY THROUGH FRIDAY 7 A.M. TO 8 P.M.

THE CONTRACTOR SHALL NOT WORK ON SUNDAYS OR HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE OWNER.

**DRAINAGE**

THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE, AS A RESULT OF THE CONTRACTOR'S WORK.

**SITE PROJECTS**

**SUBGRADE PREPARATION**

TOPSOIL, PEAT, AND ORGANIC MATERIAL SHALL BE EXCAVATED AND REMOVED.

SOFT AND YIELDING SOILS SHALL BE REMOVED OR DRIED IF THE RESULT OF EXCESSIVE MOISTURE CONTENT.

PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENT ON A SUBGRADE; THE SUBGRADE SHALL BE PROOF-ROLLED TO DETERMINE THE SUITABILITY OF THE SUBGRADE. THE CONTRACTOR SHALL DRIVE A HEAVY PIECE OF WHEELED CONSTRUCTION EQUIPMENT OVER THE SUBGRADE WHILE THE ENGINEER IS OBSERVING. THE CONSTRUCTION OF FILLS, SUBBASE, OR PAVEMENTS SHALL NOT PROCEED UNTIL THE SUBGRADE HAS BEEN DEMONSTRATED TO BE FREE OF SOFT AREAS.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE MOISTURE CONTENT OF SUBGRADE SOILS WITHIN A SUITABLE RANGE TO ALLOW FOR COMPACTION TO THE REQUIRED DENSITY. WHEN THE SOIL IS TOO DRY, THE CONTRACTOR SHALL ADD WATER. WHEN THE SOIL IS TOO WET, THE CONTRACTOR SHALL PROVIDE DRAINAGE OR AERATE THE SOIL.

THE SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT, PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENTS.

**HOT MIX ASPHALT (HMA) PAVING**

PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE SHALL BE SWEEPED TO REMOVE ALL DIRT AND DEBRIS.

A BITUMINOUS BOND COAT SHALL BE APPLIED TO PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE AND ALLOWED TO CURE PRIOR TO CONSTRUCTING THE NEW PAVEMENT COURSE.

HMA PAVEMENT SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN PRECIPITATION IS FORECAST OR THREATENING.

**SIDEWALK CONSTRUCTION**

SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT SURFACES.

EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SURFACES, SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS, OR PAVEMENTS.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE ENGINEER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC, OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**



O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC  
ARGO PARK LIVERY**

NOTE SHEET

PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV:

SHT# 2 OF 20  
JOB No: 20C0027



R:\Projects\20C0027\Org\Construction Drawings\20C0027-11.dwg

**STRUCTURE SYMBOLS**

- ◻ EXISTING CATCH BASIN IN CURB LINE
- ◼ PROPOSED CATCH BASIN IN CURB LINE
- ◉ EXISTING CATCH BASIN IN GREEN SPACE
- PROPOSED CATCH BASIN IN GREEN SPACE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- ▶ PROPOSED CULVERT END SECTION
- ) EXISTING HEADWALL
- ) PROPOSED HEADWALL
- EXISTING WATER SHUTOFF (SERVICE VALVE)
- EXISTING GATE VALVE AND BOX (STOP BOX)
- PROPOSED GATE VALVE AND BOX
- EXISTING GATE VALVE AND WELL
- PROPOSED GATE VALVE AND WELL
- ✖ EXISTING SPRINKLER HEAD
- EXISTING WATER WELL
- ◊ EXISTING FIRE HYDRANT
- ⬇ PROPOSED FIRE HYDRANT
- ▬ PROPOSED WATER MAIN FITTINGS
- EXISTING CLEAN OUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- ◻ EXISTING MONITORING WELL

**EXISTING TOPOGRAPHICAL SYMBOLS**

- ⚡ SIGN
- ⌚ STREET SIGN
- END OF PIPE
- 🌿 SWAMP OR WETLAND
- ◯ DECIDUOUS TREE
- ☀ CONIFEROUS TREE
- ♣ TREE STUMP
- ✉ MAIL BOX
- ✖ SOIL BORING
- ◊ ROCK
- METAL POST
- BUMPER BLOCK

**UTILITY SYMBOLS**

- ⊙ UTILITY POLE
- > GUY ANCHOR CABLE
- \* LIGHT POLE / ORNAMENTAL LIGHT
- ⚡ POWER LIGHT POLE
- TELEPHONE MANHOLE
- + UNDERGROUND GAS LINE MARKER
- GAS RISER
- ◊ GAS VENT
- GAS VALVE
- ⊕ RAILROAD SIGNAL
- \* METAL LIGHT POLE
- OUTLET
- ◻ CIRCUIT BREAKER PANEL
- ◻ ELECTRICAL TRANSFORMER PAD
- ⊗ ELECTRICAL TRANSFORMER RISER
- ◊ ELECTRIC METER
- ◻ TELEPHONE PEDESTAL / RISER
- ⚡ TRAFFIC SIGNAL ON POLE
- ◻ PHONE BOOTH / PAY PHONE

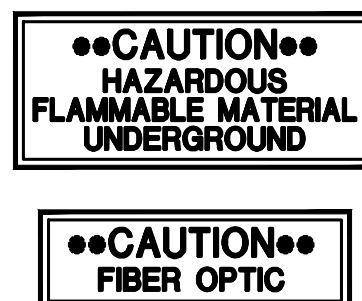
**SURVEY SYMBOLS**

- ▬ MONUMENT
- △ BENCHMARK
- △ TRAVERSE POINT
- ⊙ SECTION CORNER
- FOUND SURVEY MONUMENTATION

**MISCELLANEOUS SYMBOLS**

- EX 1812 EXISTING STORM SEWER STRUCTURE NUMBER
- EX 5236 EXISTING SANITARY SEWER STRUCTURE NUMBER
- 1 PROPOSED STORM SEWER STRUCTURE NUMBER
- A PROPOSED SANITARY SEWER STRUCTURE NUMBER
- ~ FLOW DIRECTION
- EXISTING RIP-RAP
- PROPOSED RIP-RAP

**CAUTION SYMBOLS**



USED WITH UNDERGROUND GAS & ELECTRICAL LINES

USED WITH FIBER OPTICS LINES

**PLAN VIEW LINE TYPES**

- 12" STM --- EXISTING STORM SEWER
- 12" CONC --- EXISTING CULVERT
- PROPOSED STORM SEWER LESS THAN 24"
- PROPOSED STORM SEWER 24" AND GREATER
- 12" SAN --- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- 12" WM --- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- SECTION LINE
- 60' ROW --- EXISTING RIGHT OF WAY
- 60' ROW --- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING CENTER LINE DITCH
- PROPOSED DITCH CENTERLINE
- EXISTING CENTER LINE ROADWAY
- PARCEL LINE / LOT LINE
- 0/H --- EXISTING OVERHEAD UTILITIES
- U/G ELEC --- UNDERGROUND ELECTRICAL LINE
- 6" S-MP GAS --- GAS LINE OR PETROLEUM PIPELINE
- U/G TEL --- UNDERGROUND TELEPHONE LINE
- U/G CATV --- UNDERGROUND CABLE TV LINE
- U/G FIBER OPTIC --- UNDERGROUND FIBER OPTIC
- 11+00 --- PROJECT CONTROL LINE
- TREE LINE
- BRUSH LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED SLOPE STAKE LINE
- PROPOSED SILT FENCE

**TOPOGRAPHY**

- 960 EXISTING CONTOURS MAJOR
- 958 EXISTING CONTOURS MINOR
- 960 PROPOSED CONTOUR MAJOR
- 958 PROPOSED CONTOURS MINOR

**PARCEL INFORMATION**

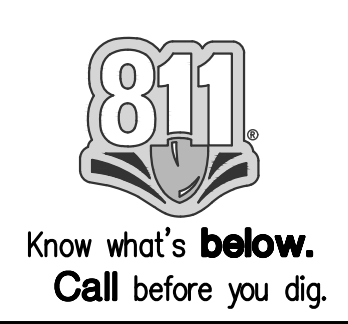
401-069 PARCEL/TAX IDENTIFICATION NUMBER  
 #5324 ADDRESS/BUSINESS NAME

**HATCHING LEGEND**

- REMOVE PAVEMENT
- REMOVE SIDEWALK
- EXISTING GRAVEL SURFACE
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- EXISTING HMA PAVEMENT
- PROPOSED HMA PAVEMENT
- PROPOSED BEACH AGGREGATE

**PROPOSED CALLOUTS**

- | TOPO CALLOUTS | PLAN VIEW |                               |
|---------------|-----------|-------------------------------|
| ADJ           | ADJ       | ADJUST STRUCTURE              |
| ADJ-X         | ADJ-X     | ADJUST STRUCTURE W/ NEW COVER |
| ADJ-B/O       | ADJ-B/O   | ADJUST STRUCTURE BY OTHERS    |
| REC           | REC       | RECONSTRUCT STRUCTURE         |
| REL           | REL       | RELOCATE                      |
| REL-B/O       | REL-B/O   | RELOCATE BY OTHERS            |
| REM           | R         | REMOVE                        |
| R&R           | R&R       | REMOVE AND REPLACE            |
| SALV          | SALV      | SALVAGE                       |
| SAVE          | S         | SAVE                          |
| ABN           | A         | ABANDON                       |
| CLR           | C         | CLEARING                      |
|               | B         | BULKHEAD                      |
|               | SR-F      | SIDEWALK RAMP TYPE            |
|               | 6         | SOIL EROSION CONTROL MEASURE  |



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**

O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

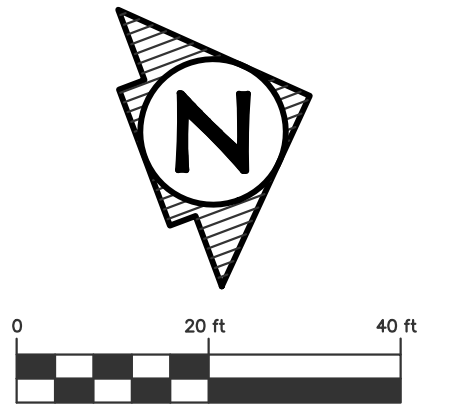
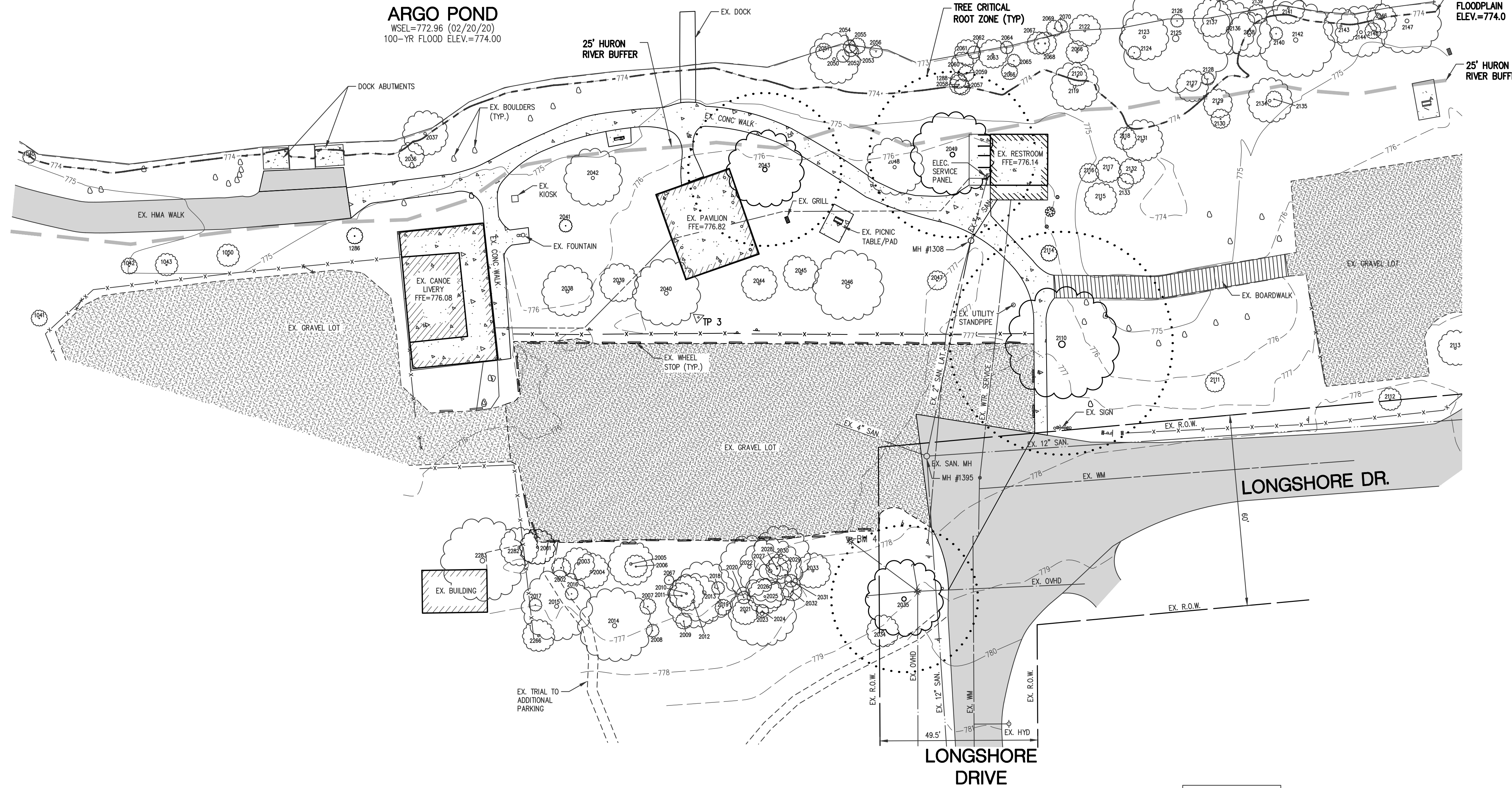
PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**

LEGEND SHEET

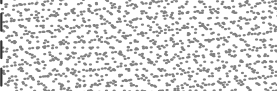


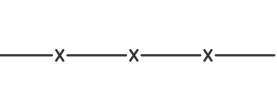
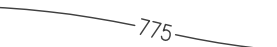
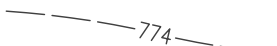

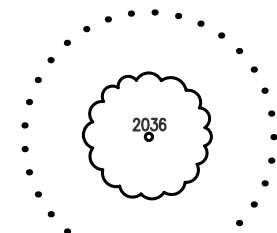
REV:  
 SHT# 3 OF 20  
 JOB No: 20C0027

R:\Projects\20C0027\0mg\Construction Drawings\SR-20C0027-LEG.dwg  
 PLOTED: 2/23/2021 8:59 AM

**HURON RIVER  
ARGO POND**  
WSEL=772.96 (02/20/20)  
100-YR FLOOD ELEV.=774.00



**LEGEND**

-  EXISTING GRAVEL SURFACE
-  EXISTING SIDEWALK
-  EXISTING HMA PAVEMENT
-  EXISTING FENCE
-  EXISTING CONTOURS MAJOR
-  EXISTING CONTOURS MINOR
-  HURON RIVER 25' BUFFER
-  LANDMARK TREE (W/CRITICAL ROOT ZONE & INVENTORY NUMBER)

**BENCHMARK DATA TABLE**

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 2	289432	13291879	780.33	SET SPIKE IN SOUTHERLY FACE OF LIGHT POLE IN THE NORTHEAST QUADRANT OF GRAVEL PARKING LOT
BM 4	289152	13291828	778.40	SET SPIKE IN WEST FACE OF LIGHT POLE IN THE NORTHEAST CORNER OF THE GAZEBO PARKING LOT

**TRAVERSE POINT DATA TABLE**

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 1	289425.4660	13291784.8590	SET ROD WITH ROWE TRAVERSE CAP, 7.5'± WEST OF WEST EDGE OF GRAVEL PARKING LOT & 45'± SOUTH OF CENTERLINE OF BOAT LAUNCH
TP 3	289132.5220	13291745.9080	SET ROD WITH ROWE TRAVERSE CAP, 8'± WEST OF WEST EDGE OF GRAVEL PARKING LOT AT GAZEBO & DUE EAST OF SOUTH FACE OF GAZEBO ROOF
TP 5	289418.8150	13291916.0900	SET ROD WITH ROWE TRAVERSE CAP, 3'± EAST OF EAST EDGE OF GRAVEL OF LONGSHORE DRIVE & 55'± NORTH OF CENTERLINE OF DRIVE TO GRAVEL PARKING LOT

**LEGEND**

-  BENCHMARK
-  TRAVERSE POINT

**NOTES:**


VERTICAL DATUM IS NAVD88  
HORIZONTAL DATUM IS MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE NAD83 (2011)  
UNITS ARE INTERNATIONAL FEET.

**EX STRUCTURE INVENTORIES**

EX 1308	RM = 776.48
4" N = 773.08	
2" SE = 776.48	
EX 1395	RM = 777.31
4" SW = 774.71	
12" N = 774.01	
12" E = 773.94	
2" W = 774.81	

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: 1" = 20'

**ROWE PROFESSIONAL SERVICES COMPANY**



The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC  
ARGO PARK LIVERY**

EXISTING CONDITIONS PLAN SHEET



**PLAN SUBMITTALS AND CHANGES**

BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV: \_\_\_\_\_  
SHT# 4 OF 20  
JOB No: 20C0027

R:\Projects\20C0027\Drawings\Construction Drawings\20C0027-EX CONDITIONS.dwg 1/15/2021 8:59 AM

Argo Canoe Livery Site for the City of Ann Arbor Parks & Recreation Services						By: Blake Strozier, ROWE PSC 20C0027	Date:
POINT #	TAG #	DIA INCHES	COMMON NAME	BOTANICAL NAME	CONDITION	NOTES	
1040	6544	4	Silver Birch	Betula pendula	Decent Condition; OK		
1041	6545	2 - 5"	Silver Birch	Betula pendula	Good Condition; OK	Multi-Stemmed	
1042	6546	5	Silver Birch	Betula pendula	Decent Condition; OK	Has growth at base of the tree	
1043	6547	3 - 7"	Paper Birch	Betula papyrifera	Decent Condition; OK	Has undergrowth; multi-stemmed	
1050	6548	2 - 7"	Gray Birch	Betula populifolia	Good Condition; OK	Has growth around the base of the tree; multi-stemmed	
1286	6556	3 - 5"	Gray Birch	Betula populifolia	Decent Condition; OK	Multi-Stemmed Tree	
1288	6535	5	Gray Birch	Betula populifolia	Decent Condition; OK	Near river edge; has some growth around base of tree	
2001	6569	2 - 11"	River Birch	Betula nigra	Good Condition; OK	Near edge of parking lot; multi-stemmed	
2002	6570	6	River Birch	Betula nigra	Decent Condition; OK	Has vines growing on the bark up the tree	
2003	6571	10	Sugar Maple	Acer saccharum	Decent Condition; OK		
2004	6572	2 - 11"	River Birch	Betula nigra	Decent Condition; OK	Gray color, has some signs of distress on the branches (broken at base)	
2005	6573	14	Silver Maple	Acer saccharinum	Good Condition; OK	Next to Birch Tree in area	
2006	6574	7	River Birch	Betula nigra	Decent Condition; OK	Has some suckers around the base of the tree	
2007	6575	5	River Birch	Betula nigra	Decent Condition; OK	Has some suckers around the base of the tree	
2008	6576	4	River Birch	Betula nigra	Decent Condition; OK	Next to dead tree;	
2009	6577	5	Black Locust	Robinia pseudocacia	OK Condition	Has some bark damage on base of tree	
2010	6578	11	Norway Maple	Acer platanoides	Good Condition; OK	Next to River Birch Tree in area	
2011	6579	8	River Birch	Betula nigra	Decent Condition; OK		
2012	6581	17	Common Cottonwood	Populus deltoides	Decent Condition; OK		
2013	6582	19	Common Cottonwood	Populus deltoides	Decent Condition; OK		
2014	6564	23	Common Cottonwood	Populus deltoides	Good Condition; OK		
2015	6567	22	Norway Maple	Acer platanoides	Decent Condition; OK	Has some suckers on tree limbs	
2016	6563	4	River Birch	Betula nigra	Decent Condition; OK		
2017	6568	4	River Birch	Betula nigra	Good Condition; OK		
2018	6584	4	River Birch	Betula nigra	OK Condition	No major growth at the base of the tree	
2019	6583	5	Black Locust	Robinia pseudocacia	Not Good Condition	Upper canopy of tree is decaying; signs of tree damage	
2020	6586	4	River Birch	Betula nigra	Decent Condition; OK		
2021	6587	8	Common Cottonwood	Populus deltoides	Good Condition; OK		
2022	6585	19	Black Walnut	Juglans nigra	Decent Condition; OK	Tree has some undergrowth at base	
2023	6588	21	Common Cottonwood	Populus deltoides	Decent Condition; OK	Has Birch Tree growing from the side of the tree	
2024	6589	4	River Birch	Betula nigra	Decent Condition; OK	Tree has some grayish/white marks on bark of the tree	
2025	6590	11	Common Cottonwood	Populus deltoides	Good Condition; OK		
2026	6596	14	Common Cottonwood	Populus deltoides	Good Condition; OK		
2027	6597	2 - 20"	Common Cottonwood	Populus deltoides	OK Condition	Multi-Stemmed	
2028	6598	7	Common Cottonwood	Populus deltoides	Decent Condition; OK	Next to Sugar Maple Tree	
2029	6599	7	Sugar Maple	Acer saccharum	Good Condition; OK		
2030	6600	18	Common Cottonwood	Populus deltoides	Decent Condition; OK	Has some growth at the base of the tree	
2031	6594	4	River Birch	Betula nigra	Decent Condition; OK	Has growth around the base of the tree	
2032	6595	6	River Birch	Betula nigra	Good Condition; OK		
2033	6593	11	River Birch	Betula nigra	Decent Condition; OK		
2034	6591	10	River Birch	Betula nigra	Decent Condition; OK	Has some suckers at base of tree	
2035	6592	24	Shagback Hickory	Carya ovata	Good Condition; OK		
2036	6555	8	Yellow Birch	Betula alleghaniensis	OK Condition	Next to river; tree is in ok condition	
2037	6554	2 - 14"	River Birch	Betula nigra	Good Condition	Tree is on bank of the river	
2038	6551	16	Gray Birch	Betula populifolia	Decent Condition; OK	Tree is in good condition	
2039	6552	12	Gray Birch	Betula populifolia	Good Condition; OK		
2040	6553	21	Silver Maple	Acer saccharinum	Decent Condition; OK		
2041	6550	4	River Birch	Betula nigra	Good Condition; OK		
2042	6549	18	Silver Maple	Acer saccharinum	Decent Condition; OK	Tree has some growth at base of tree but not a lot	
2043	6557	24	White Oak	Quercus alba	Decent Condition; OK		
2044	6562	2 - 11"	Crabapple	Malus sp.	Decent Condition; OK	Multi-Stemmed Tree	
2045	6565	11	Crabapple	Malus sp.	Decent Condition; OK		
2046	6561	22	White Oak	Quercus alba	Good Condition; OK		
2047	6560	6	River Birch	Betula nigra	Good Condition; OK		
2048	6558	18	River Birch	Betula nigra	Good Condition; OK	Tree in decent condition; has some branches that have broken	
2049	6559	26	White Oak	Quercus alba	Decent Condition; OK		
2050	6543	16	Gray Birch	Betula populifolia	Decent Condition; OK		

**KEY**  
R - TREE SCHEDULED FOR REMOVAL  
G - GRADING FOR PAVING INSIDE DRIP LINE  
LM - LAND MARK TREE (NATURAL FEATURES SECTION OF THE CITY OF ANN ARBOR DEVELOPMENT STANDARDS)

2051	6532	3 - 5"	River Birch	Betula nigra	Decent Condition; OK	Has some undergrowth at base
2052	6542	2 - 4"	River Birch	Betula nigra	Good Condition; OK	Small bark, multi-stemmed
2053	6531	2 - 4"	River Birch	Betula nigra	Good Condition; OK	Multi-Stemmed Tree
2054	6530	2 - 4"	Silver Birch	Betula pendula	Decent Condition; OK	
2055	6533	2 - 5"	Yellow Birch	Betula alleghaniensis	Decent Condition; OK	
2056	6534	2 - 4"	River Birch	Betula nigra	OK Condition	
2057	6541	5	Gray Birch	Betula populifolia	Decent Condition; OK	
2058	6540	2 - 6"	River Birch	Betula nigra	Decent Condition; OK	Multi-Stemmed
2059	6539	5	River Birch	Betula nigra	Good Condition; OK	
2060	6537	7	Silver Birch	Betula pendula	Decent Condition; OK	
2061	6538	2 - 8"	Yellow Birch	Betula alleghaniensis	Good Condition; OK	Multi-Stemmed
2062	6536	4	Silver Birch	Betula pendula	Good Condition; OK	
2063	6606	2 - 9"	River Birch	Betula nigra	Good Condition; OK	Multi-Stemmed; near river's edge
2064	6609	4	River Birch	Betula nigra	Good Condition; OK	Tree is located near edge of water
2065	6608	4	Swamp White Oak	Quercus bicolor	Decent Condition; OK	
2066	6607	5	Swamp White Oak	Quercus bicolor	Decent Condition; OK	No growth at the base of the tree
2067	6610	3 - 7"	Swamp White Oak	Quercus bicolor	Decent Condition; OK	
2068	6611	7	River Birch	Betula nigra	Good Condition; OK	
2069	6612	5	River Birch	Betula nigra	OK Condition	Tree is located near edge of water; leaning over river
2070	6613	4	River Birch	Betula nigra	Decent Condition; OK	
2110	6640	35	American Elm	Ulmus americana	Decent Condition; OK	Good Condition; has some undergrowth - near park entrance
2111	6641	6	Ornamental Pear	Pyrus calleryana	Good Condition; OK	Tree is in good condition
2112	6642	7	Red Oak	Quercus rubra	Decent Condition; OK	
2113	6643	11	Silver Maple	Acer saccharinum	Decent Condition; OK	In parking lot area; still has some leaves on the tree
2114	6639	5	Yellow Birch	Betula alleghaniensis	Decent Condition	Has some undergrowth at the base of the tree
2115	6638	7 - 10"	Swamp White Oak	Quercus bicolor	Bad Condition	tree has completely fallen over; has some smaller trees growing around it
2116	6618	6	River Birch	Betula nigra	Decent Condition; OK	Has dead tree in front of tree
2117	6619	8	River Birch	Betula nigra	Not in Good Condition	Tree appears to have grown under dead tree; physical signs of distress
2118	6620	7	River Birch	Betula nigra	Decent Condition; OK	
2119	6617	15	Norway Maple	Acer platanoides	Good Condition; OK	
2120	6616	6	Norway Maple	Acer platanoides	Decent Condition; OK	Has fallen tree on north side of tree
2121	6614	7	Swamp White Oak	Quercus bicolor	Decent Condition; OK	Has some growth around the base of the tree
2122	6615	3 - 10"	River Birch	Betula nigra	OK Condition	Multi-Stemmed; has broken branches and trees at base of tree
2123	6622	3 - 15"	River Birch	Betula nigra	Not in Good Condition	Lots of undergrowth; not in good condition
2124	6621	4	River Birch	Betula nigra	Bad Condition	Has lots of growth around the base of the tree
2125	6623	35	River Birch	Betula nigra	Bad Condition	Undergrowth and dead trees are at the base of the tree
2126	6624	4	River Birch	Betula nigra	Decent Condition	On the bank of the river; has some growth at base of tree
2127	6629	10	Bur Oak	Quercus macrocarpa	Good Condition; OK	Tree has dead branches and some dead tree material around base
2128	6625	2 - 4"	River Birch	Betula nigra	Decent Condition	Multi-Stemmed
2129	6630	9	River Birch	Betula nigra	OK Condition	Has fallen old trees and branches around the base of the tree
2130	6631	6	Paper Birch	Betula papyrifera	Decent Condition; OK	Has lots of undergrowth and dead trees at base of tree
2131	6635	13	Norway Maple	Acer platanoides	Good Condition; OK	Has suckers and fallen limbs around the tree
2132	6636	8	Paper Birch	Betula papyrifera	Bad Condition	Has lots of suckers at the base of the tree
2133	6637	5	Paper Birch	Betula papyrifera	Not in Good Condition	Tree is growing around larger tree that has been uprooted
2134	6626	14	Sugar Maple	Acer saccharum	Decent Condition; OK	Tree is leaning to one side
2135	6627	5	River Birch	Betula nigra	Good Condition; OK	
2136	6628	17	White Oak	Quercus alba	Decent Condition; OK	
2137	6605	12	River Birch	Betula nigra	Decent Condition; OK	
2138	6603	3 - 14"	Gray Birch	Betula populifolia	Decent Condition; OK	Multi-Stemmed Tree
2139	6604	2 - 6"	River Birch	Betula nigra	Good Condition; OK	Multi-Stemmed tree; on bark of tree there is minor growth
2140	6602	4	River Birch	Betula nigra	Good Condition; OK	
2141	6601	10	River Birch	Betula nigra	Good Condition; OK	
2142	228	3 - 24"	Silver Maple	Acer saccharinum	Decent Condition; OK	Does has some growth around the base of the tree; multi-stemmed
2143	247	11	Sugar Maple	Acer saccharum	Decent Condition	
2144	297	16	Silver Maple	Acer saccharinum	Good Condition; OK	
2145	298	5	Silver Birch	Betula pendula	Decent Condition	Has some growth at the base of the tree
2146	299	9	Silver Maple	Acer saccharinum	Decent Condition; OK	Tree is leaning to one side; has some damage
2147	300	21	Black Walnut	Juglans nigra	Not in Good Condition	Back of tree has been split; exposed - tree appears in distress
2266	6566	10	Black Walnut	Juglans nigra	Decent Condition; OK	
2267	6580	3	River Birch	Betula nigra	Good Condition; OK	



Know what's below.  
Call before you dig.

**PLAN SUBMITTALS AND CHANGES**

**BIDDING DOCUMENTS**

DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV:

SHT# 5 OF 20  
JOB No: 20C0027

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

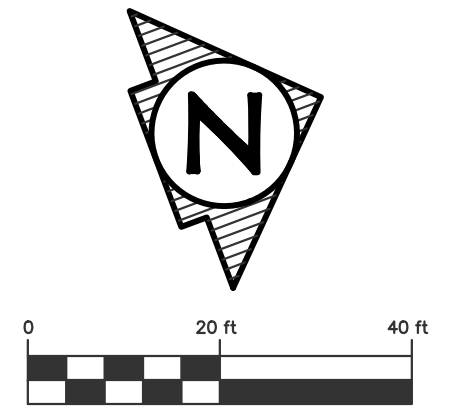
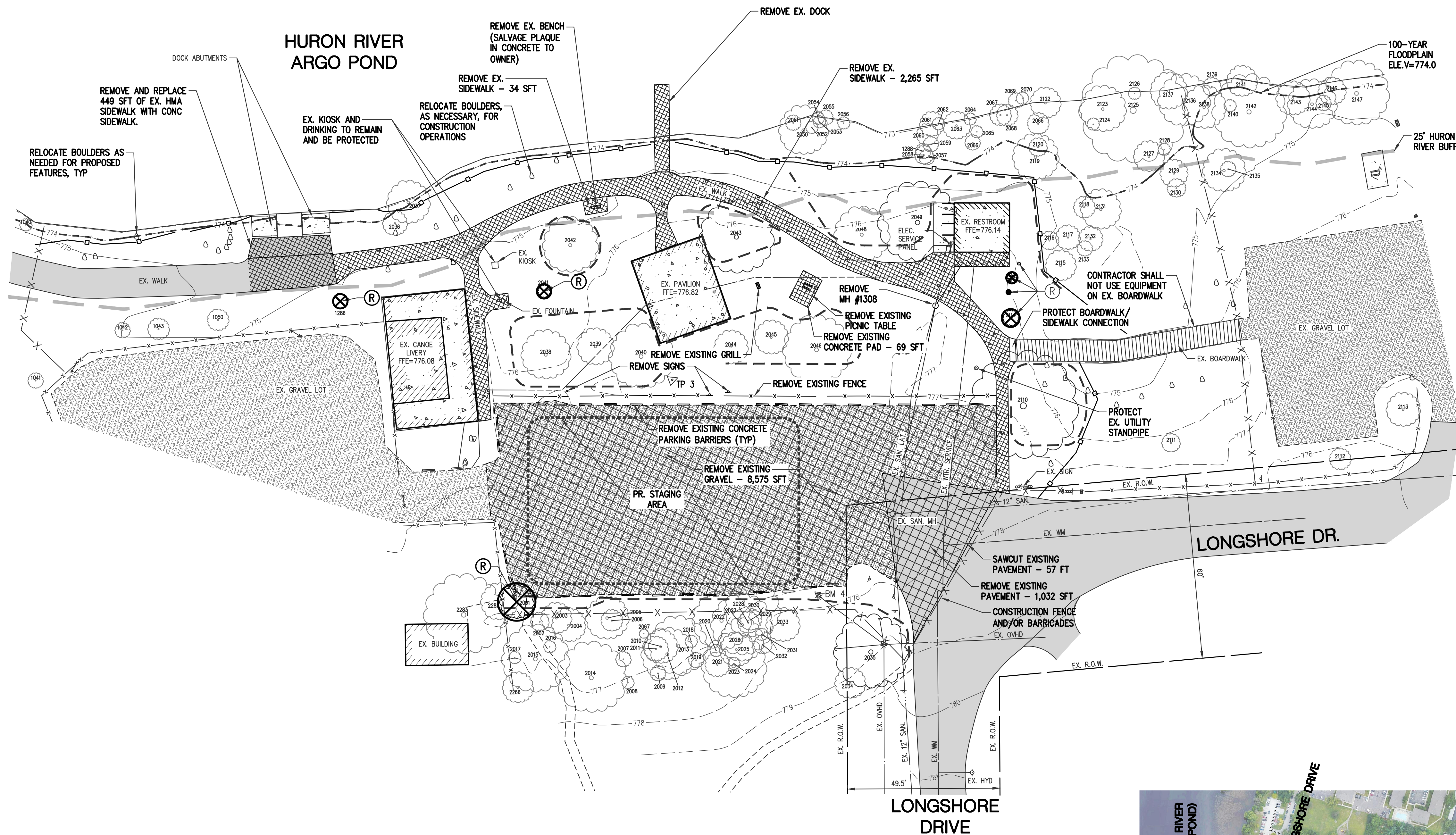
**ROWE PROFESSIONAL SERVICES COMPANY**



The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC ARGO PARK LIVERY**

NATURAL FEATURES DATA SHEET



**LEGEND**

- REMOVE PAVEMENT
- REMOVE SIDEWALK
- EXISTING GRAVEL SURFACE
- EXISTING SIDEWALK
- EXISTING HMA PAVEMENT
- PROPOSED CONSTRUCTION FENCE
- EXISTING FENCE
- EXISTING CONTOURS MAJOR
- EXISTING CONTOURS MINOR
- PROPOSED SILT FENCE
- PR. TREE PROTECTION FENCE
- REMOVE TREE
- HURON RIVER 25' BUFFER
- 100-YEAR FLOODPLAIN
- FEMA FLOODWAY
- LANDMARK TREE (W/CRITICAL ROOT ZONE & INVENTORY NUMBER)

**REMOVAL NOTES:**

1. TREES & ROOT ZONES SHALL BE PROTECTED WITH TREE PROTECTION FENCE BY CONTRACTOR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL HAND DIG AND HAVE NO CONSTRUCTION TRAFFIC OR STORAGE OF MATERIALS UNDER TREE DRIPLINE UNLESS APPROVED BY ENGINEER.
2. GRAVEL SURFACES SCHEDULED FOR REMOVAL IN PROPOSED AREAS SHALL BE REMOVED TO AN ADEQUATE DEPTH TO ESTABLISH HMA PAVEMENT PROFILE, INCLUDING SUBBASE.
3. GRAVEL SURFACES SCHEDULED FOR REMOVAL IN PROPOSED TURF RESTORATION AREA SHALL BE REMOVED TO THE DEPTH OF NATIVE SOIL TO PROPERLY ESTABLISH TURF.
4. SEE NOTES SHEET (SHEET #2) FOR ADDITIONAL NOTES.

**LEGEND TRAFFIC CONTROL NOTES**

- ① PLACE TYPE III BARRICADES, "ARGO LIVERY PARK CONSTRUCTION" (R11-2) AND "SIDEWALK CLOSED" (R9-9). SEE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC.
- ALL SIGN LOCATIONS TO BE APPROVED BY ENGINEER/OWNER.
- ② M4-9A (STRAIGHT)
- ③ M4-9A (RIGHT)
- ④ M4-9A (LEFT)



**PEDESTRIAN DETOUR PLAN**

**PLAN SUBMITTALS AND CHANGES**

BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 20'

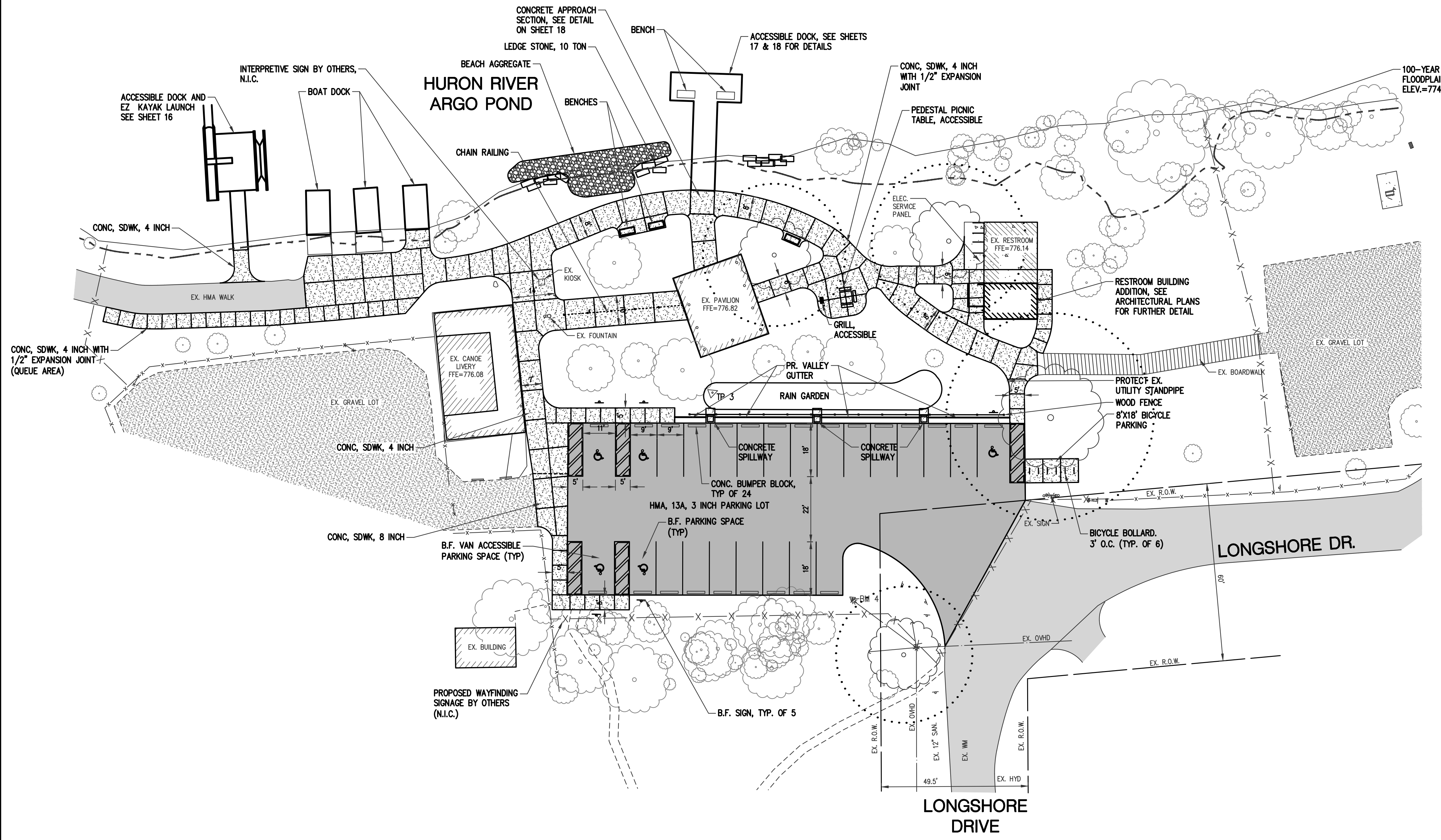
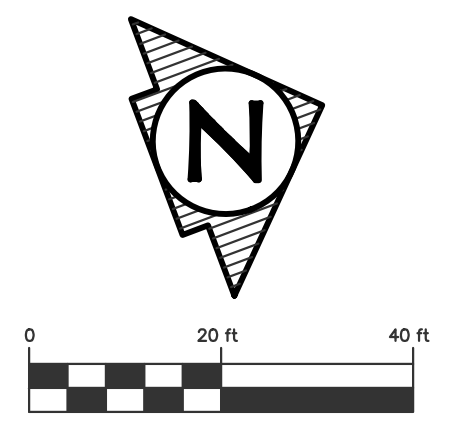
**ROWE PROFESSIONAL SERVICES COMPANY**  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 REMOVAL PLAN SHEET

REV: \_\_\_\_\_  
 SHT# 6 OF 20  
 JOB No: 20C0027

R:\Projects\20C0027\Argo\Construction Drawings\20C0027-6R.dwg



- LEGEND**
- EXISTING GRAVEL SURFACE
  - EXISTING SIDEWALK
  - PROPOSED SIDEWALK
  - EXISTING HMA PAVEMENT
  - PROPOSED HMA PAVEMENT
  - PROPOSED BEACH AGGREGATE
  - EXISTING FENCE
  - PROPOSED FENCE
  - PROPOSED LEDGESTONE
  - PROPOSED CONSTRUCTION FENCE

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 20'

**ROWE PROFESSIONAL SERVICES COMPANY**  
  
 The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

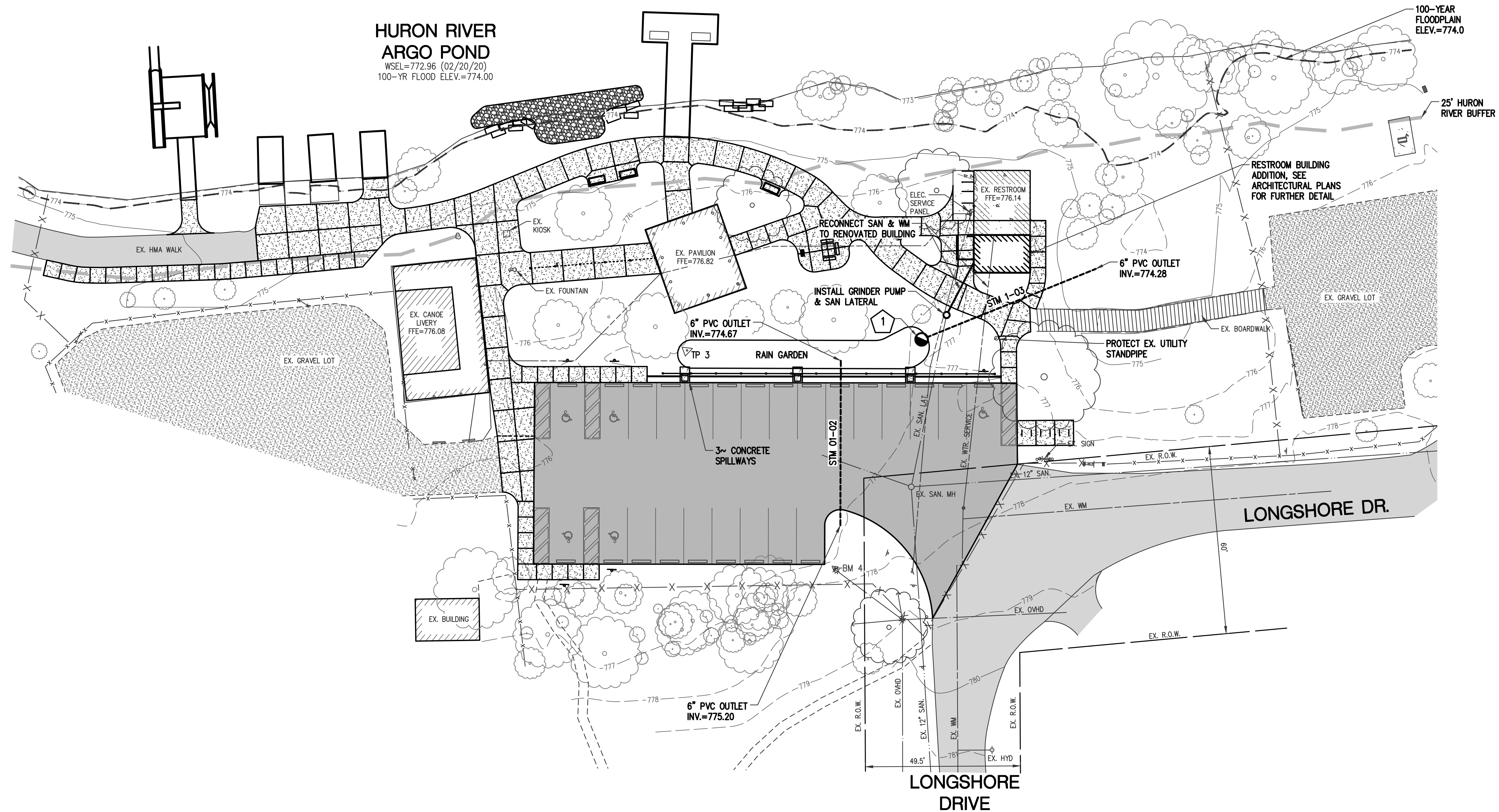
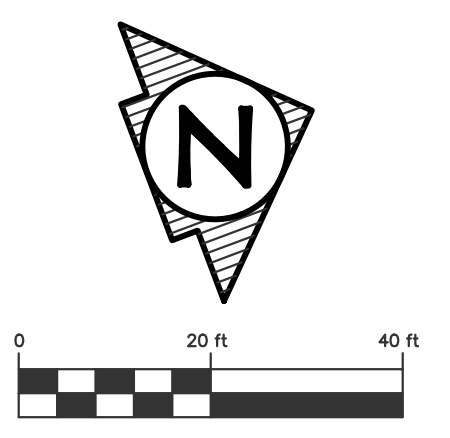
PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 SITE PLAN SHEET



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV: \_\_\_\_\_  
 SHT# 7 OF 20  
 JOB No: 20C0027

R:\Projects\20C0027\Map\Construction Drawings\20C0027-PLAN.dwg 15:00 AM



**LEGEND**

	EXISTING GRAVEL SURFACE
	EXISTING SIDEWALK
	PROPOSED SIDEWALK
	PROPOSED BEACH AGGREGATE
	EXISTING HMA PAVEMENT
	PROPOSED HMA PAVEMENT
	EXISTING SANITARY SEWER
	PROPOSED SANITARY LATERAL
	PROPOSED WATER SERVICE
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING CONTOURS MAJOR
	EXISTING CONTOURS MINOR
	HURON RIVER 25' BUFFER
	PROPOSED CONSTRUCTION FENCE

- GRINDER STATION CONSTRUCTION NOTES**
1. THE PROPOSED GRINDER STATION SHALL BE AN ENVIRONMENT ONE DUPLEX GRINDER PUMP STATION, MODEL DH152 (DEPTH TO BE DETERMINED), OR APPROVED EQUAL. THE STATION SHALL BE DESIGNED TO HANDLE ALL FLOW THE PROPOSED BATH HOUSE (SIX TOILETS AND SIX SINKS). THE STATION SHALL BE EQUIPPED WITH A DUPLEX PLUS ALARM PANEL BY ENVIRONMENT ONE.
  2. THE CONTRACTOR SHALL INSTALL THE STATION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL INSTALL A CONCRETE BALLAST AROUND THE STATION TO PREVENT FLOATING.
  3. THE CONTROL PANEL SHALL BE AN ENVIRONMENT ONE PROTECT PLUS ALARM PANEL WITH A NEMA 4X ENCLOSURE.
  4. THE CONTRACTOR SHALL PROVIDE A 240 VOLT SINGLE PHASE POWER SOURCE TO THE CONTROL PANEL. A MINIMUM OF A 30 AMP BREAKER WILL NEED TO BE PROVIDED. THE CONTROL PANEL SHALL BE MOUNTED IN A LOCATION THAT HAS A CLEAR LINE OF SIGHT TO THE PUMP STATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE WIRING CONFIGURATION REQUIRED BY THE MANUFACTURER.
  5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE GRINDER PUMP STATION AND MAKING ALL REQUIRED CONNECTIONS.
  6. THE MANUFACTURER'S REPRESENTATIVE IS JOE MOORE (DUBOIS COOPER ASSOCIATES, INC.). HIS PHONE NUMBER IS (734) 455-6700.
  7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION / SIZING WITH THE MANUFACTURER. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF SHOP DRAWINGS FOR REVIEW / APPROVAL PRIOR TO RELEASING EQUIPMENT FOR FABRICATION.

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	NORTHING	EASTING
1	6"	G	RIM=775.25	6" 774.50 N (PR)	289203.93	13291768.87

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 1-03	6"	Storm Sewer, Cl A, 6 inch, Tr Det	60'	0.37%	30'	30'
STM 01-02	6"	Storm Sewer, Cl A, 6 inch, Tr Det	53'	1.00%	0'	53'

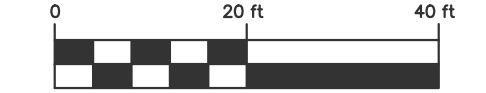


PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 20'  
**ROWE PROFESSIONAL SERVICES COMPANY**  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com  
 The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502  
 PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 UTILITY PLAN SHEET  
 REV: \_\_\_\_\_  
 SH# 8 OF 20  
 JOB No: 20C0027

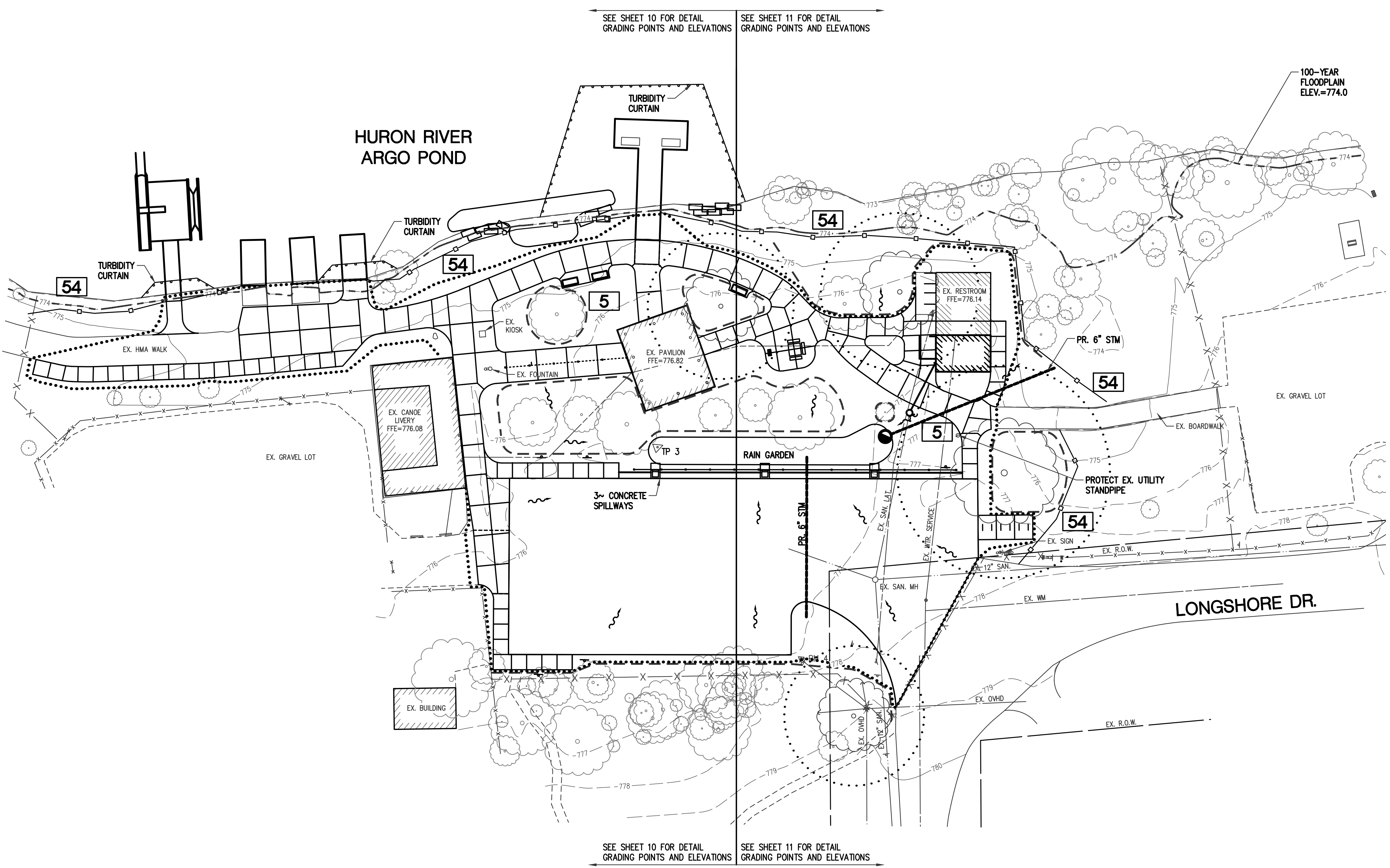
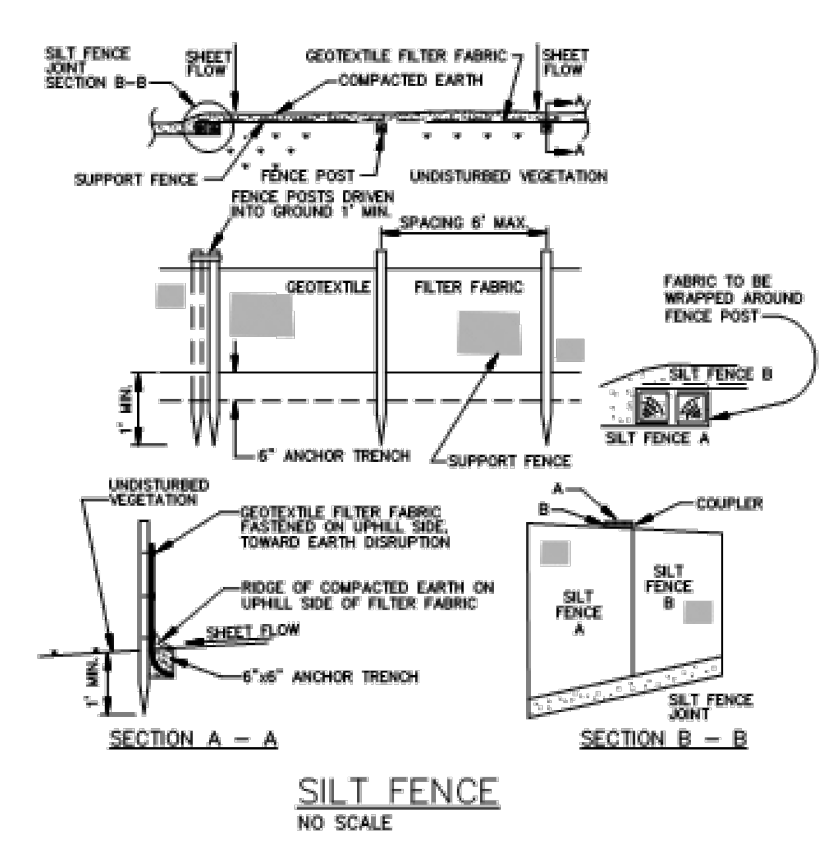
R:\Projects\200027\0mg\Construction Drawings\81-20C0027-UTILITY.dwg PLOT: 2/23/2021 10:30 AM





**LEGEND**

- PROPOSED STORM
- EXISTING FENCE
- PROPOSED FENCE
- PROPOSED SILT FENCE
- PROPOSED TURBIDITY CURTAIN
- EXISTING CONTOURS MAJOR
- EXISTING CONTOURS MINOR
- PROPOSED CONTOUR
- PR. TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- STORM TRIBUTARY AREA LIMITS
- DRAINAGE FLOW DIRECTION
- HURON RIVER 25' BUFFER
- LANDMARK TREE (W/CRITICAL ROOT ZONE & INVENTORY NUMBER)



- D. GRADING NOTES**
- TREES & ROOT ZONES SHALL BE PROTECTED BY CONTRACTOR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL HAND DIG AND LIMIT CONSTRUCTION TRAFFIC WITHIN TREE DRIPLINE.
  - ALL DISTURBED AREAS WITHIN LIMITS OF DISTURBANCE AND PROPOSED LANDSCAPE AREAS SHALL BE RESTORED WITH A MINIMUM OF THREE (3) INCHES OF TOPSOIL AND THEN SOD OR SEED/FERTILIZE/MULCH PER THE PLAN. PROVIDE SOD OR SEED AND EROSION CONTROL BLANKETS ON ALL SLOPES 3:1 OR STEEPER.
  - SEE NOTES SHEET (SHEET #2) FOR ADDITIONAL NOTES.

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 20'

**ROWE PROFESSIONAL SERVICES COMPANY**  
  
 The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 GRADING AND SESC PLAN SHEET

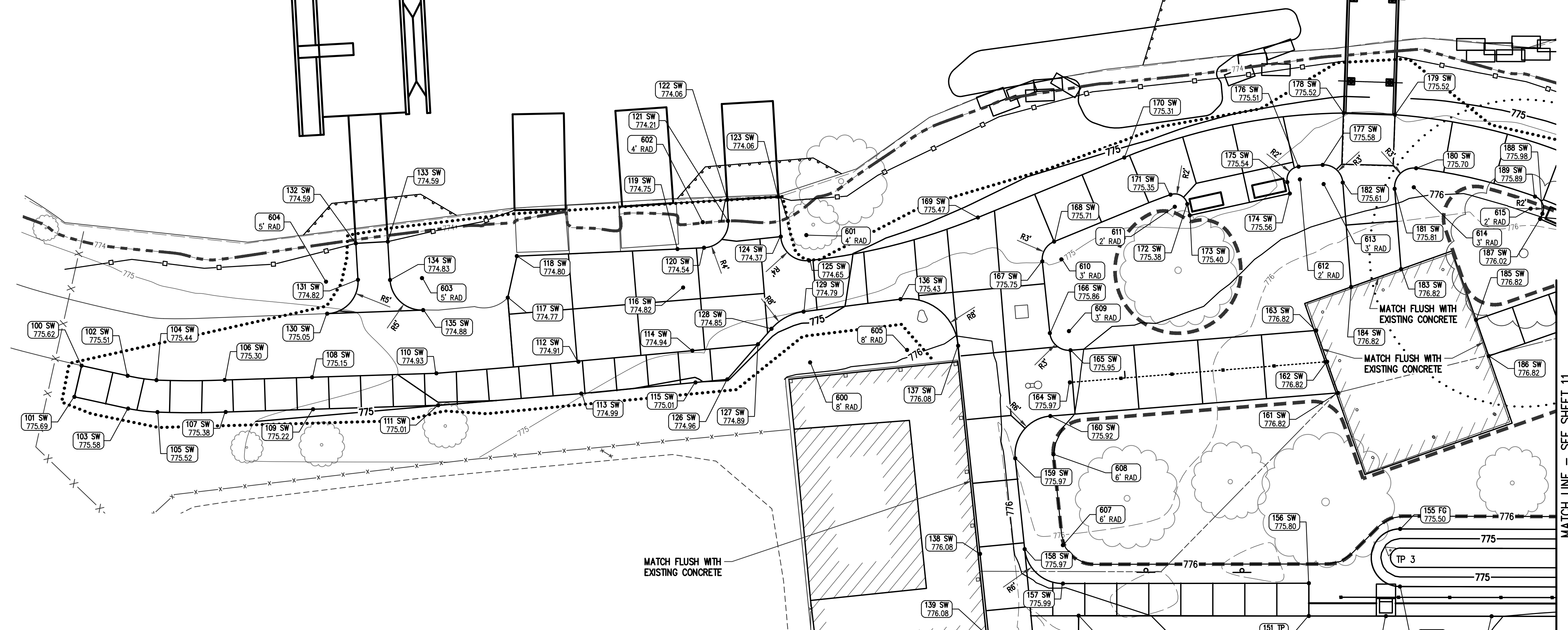
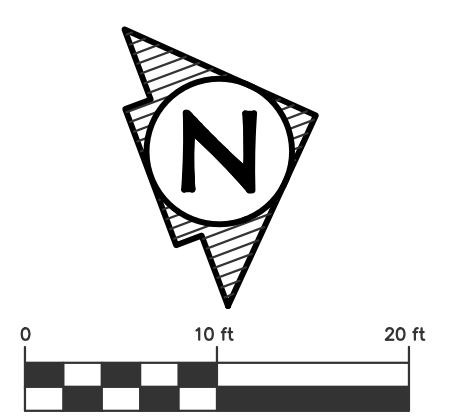


PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV: \_\_\_\_\_  
 SHT# 9 OF 20  
 JOB No: 20C0027

R:\Projects\20C0027\Argo\Construction Drawings\20C0027-090.dwg  
 PLOTTED: 7/23/2021 10:00 AM

HURON RIVER  
ARGO POND



GRADING TABLE					GRADING TABLE					GRADING TABLE					RADIUS POINTS			
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING	POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING	POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING	POINT	DESCRIPTION	NORTHING	EASTING
100	SW=775.62	MATCH EXISTING	288951.16	13291647.25	130	SW=775.05	MATCH EXISTING, SPRING POINT	288989.94	13291653.08	160	SW=775.92	SPRING POINT	289090.13	13291707.66	600	8' RADIUS PT	289057.92	13291686.66
101	SW=775.69	MATCH EXISTING	288948.40	13291651.42	131	SW=774.82	SPRING POINT	288996.30	13291649.81	161	SW=776.82	MATCH EXISTING	289133.49	13291720.01	601	4' RADIUS PT	289064.34	13291667.82
102	SW=775.51	MATCH EXISTING	288957.34	13291651.25	132	SW=774.59	AT DOCK	288997.98	13291644.37	162	SW=776.82	MATCH EXISTING	289133.61	13291714.85	602	4' RADIUS PT	289049.90	13291660.26
103	SW=775.58	SPRING POINT	288955.61	13291656.07	133	SW=774.59	AT DOCK	289002.75	13291645.86	163	SW=776.82	MATCH EXISTING	289133.72	13291709.68	603	5' RADIUS PT	289005.76	13291655.07
104	SW=775.44	MATCH EXISTING	288961.32	13291653.47	134	SW=774.83	SPRING POINT	289000.98	13291651.60	164	SW=775.97	END OF FENCE	289094.84	13291703.80	604	5' RADIUS PT	288991.52	13291648.34
105	SW=775.52	SPRING POINT	288959.72	13291658.20	135	SW=774.88	MATCH EXISTING, SPRING POINT	289004.18	13291657.82	165	SW=775.95	SPRING POINT	289096.69	13291699.13	605	8' RADIUS PT	289072.79	13291690.14
106	SW=775.30	MATCH EXISTING	288971.31	13291657.18	136	SW=775.43	SPRING POINT	289074.62	13291682.35	166	SW=775.86	SPRING POINT	289094.60	13291695.49	606	5' RADIUS PT	289059.72	13291772.32
107	SW=775.38	MATCH EXISTING	288969.70	13291661.92	137	SW=776.08	SPRING POINT	289080.49	13291692.32	167	SW=775.75	SPRING POINT	289097.43	13291684.58	607	6' RADIUS PT	289084.90	13291727.24
108	SW=775.15	MATCH EXISTING	288984.24	13291661.56	138	SW=776.08	SPRING POINT	289072.30	13291723.97	168	SW=775.71	SPRING POINT	289100.24	13291682.33	608	6' RADIUS PT	289088.49	13291713.43
109	SW=775.22	MATCH EXISTING	288982.64	13291666.30	139	SW=776.06		289069.05	13291736.54	169	SW=775.47	SPRING POINT	289090.41	13291674.83	609	3' RADIUS PT	289097.51	13291696.24
110	SW=774.93	MATCH EXISTING	289002.65	13291667.79	140	SW=776.21		289066.20	13291750.25	170	SW=775.31	SPRING POINT	289115.11	13291673.87	610	3' RADIUS PT	289100.33	13291685.33
111	SW=775.01		289001.16	13291672.57	141	SW=776.37	SPRING POINT	289061.50	13291767.65	171	SW=775.35	SPRING POINT	289119.84	13291681.84	611	2' RADIUS PT	289119.80	13291683.84
112	SW=774.91	MATCH EXISTING	289024.06	13291673.87	142	SW=776.33	SPRING POINT	289064.39	13291774.10	172	SW=775.38	SPRING POINT	289121.78	13291684.12	612	2' RADIUS PT	289138.60	13291686.68
113	SW=774.99		289022.74	13291678.69	143	SW=776.45		289056.23	13291795.53	173	SW=775.40	BENCH PAD	289121.52	13291685.93	613	3' RADIUS PT	289142.82	13291688.67
114	SW=774.94	MATCH EXISTING	289041.35	13291678.48	144	SW=776.32		289080.58	13291804.68	174	SW=775.56	BENCH PAD	289137.36	13291688.20	614	3' RADIUS PT	289155.84	13291694.07
115	SW=775.01		289040.06	13291683.31	145	TP=776.19	PARKING LOT MIDPOINT	289111.63	13291811.01	175	SW=775.54	SPRING POINT	289137.62	13291686.40	615	2' RADIUS PT	289171.77	13291703.59
116	SW=774.82	MATCH EXISTING	289043.44	13291668.75	146	TP=776.24	FLUSH WITH TP	289082.34	13291800.00	176	SW=775.51	SPRING POINT	289140.12	13291684.75				
117	SW=774.77	MATCH EXISTING	289017.24	13291660.62	147	TP=776.35		289062.69	13291792.62	177	SW=775.58	SPRING POINT	289143.73	13291685.81				
118	SW=774.80		289020.84	13291655.05	148	TP=776.26	PARKING LOT MIDPOINT	289069.07	13291775.88	178	TP=775.52	SPRING POINT AT DOCK	289149.66	13291679.38				
119	SW=774.75		289044.72	13291662.80	149	TP=776.14		289077.23	13291754.46	179	SW=775.52	SPRING POINT AT DOCK	289157.06	13291682.42				
120	SW=774.54	SPRING POINT	289048.68	13291664.07	150	TP=776.06		289083.35	13291738.42	180	SW=775.70	SPRING POINT	289157.22	13291691.41				
121	SW=774.94	SPRING POINT	289053.66	13291661.45	151	TP=775.88	FLUSH WITH TP	289117.00	13291751.07	181	SW=775.81	SPRING POINT	289152.95	13291693.25				
122	SW=774.06	AT DOCK	289054.72	13291658.32	152	CB=775.82		289128.28	13291755.30	182	SW=776.61	SPRING POINT	289145.71	13291689.49				
123	SW=774.06	AT DOCK	289062.36	13291660.70	153	FG=775.50	SPRING POINT, RAIN GARDEN	289131.96	13291751.74	183	SW=776.82	MATCH EXISTING	289149.49	13291705.35				
124	SW=774.37	SPRING POINT	289060.52	13291666.84	154	TP=775.98	PARKING LOT MIDPOINT	289143.73	13291761.11	184	SW=776.82	MATCH EXISTING	289141.21	13291705.22				
125	SW=774.65	SPRING POINT	289063.36	13291671.70	155	FG=775.50	SPRING POINT, RAIN GARDEN	289135.13	13291743.32	185	SW=776.82	MATCH EXISTING	289157.69	13291716.88				
126	SW=774.96		289044.89	13291684.60	156	SW=775.80		289118.81	13291746.27	186	SW=776.82	MATCH EXISTING	289157.56	13291722.88				
127	SW=774.89		289051.30	13291681.14	157	SW=775.99	SPRING POINT	289082.81	13291732.86	187	SW=776.02	BENCH PAD	289172.58	13291705.63				
128	SW=774.85	SPRING POINT	289054.12	13291679.62	158	SW=775.97	SPRING POINT	289079.09	13291725.73	188	SW=775.98	SPRING POINT	289173.21	13291704.98				
129	SW=774.79	SPRING POINT	289059.75	13291678.87	159	SW=775.97	SPRING POINT	289082.68	13291711.92	189	SW=775.89	SPRING POINT	289173.06	13291702.07				

GRADING TABLE LEGEND

- FG = FINISH GRADE
- TP = TOP OF PAVEMENT
- SW = TOP OF SIDEWALK
- CB = CATCH BASIN



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 10'

**ROWE PROFESSIONAL SERVICES COMPANY**  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

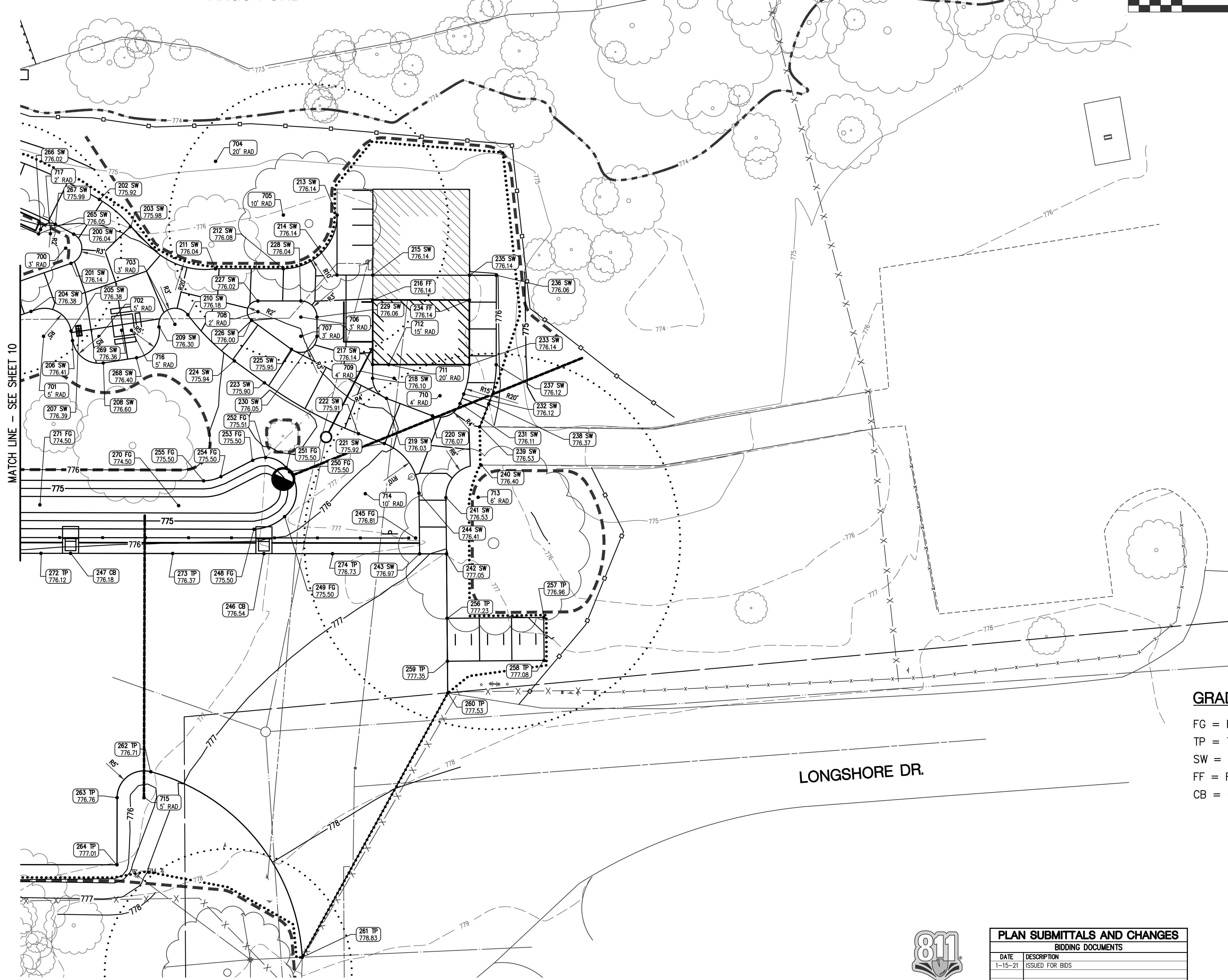
The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 DETAILED GRADING 1

REV:  
 SH# 10 of 20  
 JOB No: 20C0027

P:\Projects\2020027\Argo\Construction Drawings\81-20C0027-000.dwg

HURON RIVER  
ARGO POND



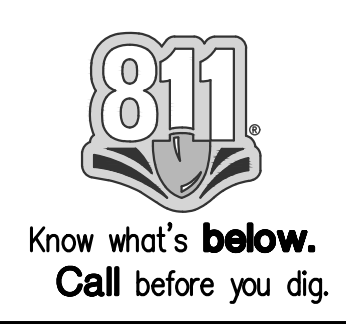
RADIUS POINTS			
POINT	DESCRIPTION	NORTHING	EASTING
700	3' RADIUS PT	289181.05	13291714.40
701	5' RADIUS PT	289171.44	13291728.33
702	5' RADIUS PT	289181.11	13291731.98
703	3' RADIUS PT	289195.13	13291734.81
704	20' RADIUS PT	289212.85	13291709.03
705	10' RADIUS PT	289221.18	13291722.83
706	3' RADIUS PT	289217.57	13291741.77
707	3' RADIUS PT	289216.31	13291745.11
708	2' RADIUS PT	289210.43	13291738.02
709	4' RADIUS PT	289229.83	13291758.53
710	4' RADIUS PT	289236.69	13291764.57
711	20' RADIUS PT	289229.79	13291755.79
712	15' RADIUS PT	289229.79	13291755.79
713	6' RADIUS PT	289236.71	13291784.78
714	10' RADIUS PT	289217.27	13291776.78
715	5' RADIUS PT	289158.83	13291815.38
716	5' RADIUS PT	289187.16	13291733.03
717	2' RADIUS PT	289179.32	13291710.89

GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
200	SW=776.04	SPRING POINT	289183.36	13291712.48
201	SW=776.14	SPRING POINT	289180.99	13291717.40
202	SW=775.92	SPRING POINT	289190.11	13291708.09
203	SW=775.98	SPRING POINT	289193.73	13291714.88
204	SW=776.38	SPRING POINT	289170.86	13291723.17
205	SW=776.38	SPRING POINT	289176.58	13291729.20
206	SW=776.41	SPRING POINT	289176.21	13291730.98
207	SW=776.39	GRILL	289177.96	13291729.67
208	SW=776.60	SPRING POINT	289180.10	13291736.88
209	SW=776.30	SPRING POINT	289192.18	13291734.23
210	SW=776.18	SPRING POINT	289198.01	13291733.99
211	SW=776.04	SPRING POINT	289205.84	13291727.76
212	SW=776.08	SPRING POINT	289217.67	13291732.19
213	SW=776.14	SPRING POINT, MATCH EXISTING	289230.54	13291726.35
214	SW=776.14		289226.61	13291736.79
215	SW=776.14		289232.85	13291739.14
216	FF=776.14		289231.22	13291743.46
217	SW=776.14	AT BUILDING	289226.98	13291754.74
218	SW=776.10	SPRING POINT	289226.08	13291757.13
219	SW=776.03	SPRING POINT	289227.19	13291761.54
220	SW=776.07	SPRING POINT	289234.05	13291767.57
221	SW=775.92	SPRING POINT	289223.87	13291769.27
222	SW=775.91	SPRING POINT	289220.00	13291765.87
223	SW=775.90	SPRING POINT	289206.93	13291750.87
224	SW=775.94	SPRING POINT	289203.10	13291745.08
225	SW=775.95	SPRING POINT	289213.82	13291746.78
226	SW=776.00	SPRING POINT	289208.76	13291739.13
227	SW=776.02	SPRING POINT	289211.13	13291736.15
228	SW=776.04	SPRING POINT	289218.62	13291738.96
229	SW=776.06	SPRING POINT	289220.38	13291742.82
230	SW=776.05	SPRING POINT	289219.12	13291746.17
231	SW=776.11	SPRING POINT	289239.67	13291767.24
232	SW=776.12	SPRING POINT	289240.95	13291765.82
233	SW=776.14	SPRING POINT	289243.83	13291761.07
234	FF=776.14		289248.07	13291749.79
235	SW=776.14	AT BUILDING	289249.69	13291745.47
236	SW=776.06		289254.37	13291747.23
237	SW=776.12	SPRING POINT	289248.51	13291762.83
238	SW=776.37	SPRING POINT	289244.66	13291769.16
239	SW=776.53	SPRING POINT	289241.59	13291772.58
240	SW=776.40	SPRING POINT, MATCH EXISTING	289239.32	13291779.35
241	SW=776.53	SPRING POINT	289231.07	13291782.74
242	SW=777.05		289227.51	13291792.58
243	SW=776.97		289222.83	13291790.82
244	SW=776.41	SPRING POINT	289226.67	13291780.19
245	FG=776.81	END OF FENCE	289223.15	13291787.81
246	CB=776.54		289195.68	13291780.62
247	CB=776.18		289161.98	13291767.96
248	FG=775.50	SPRING POINT, RAIN GARDEN	289195.55	13291775.74
249	FG=775.50	SPRING POINT, RAIN GARDEN	289201.71	13291775.52
250	FG=775.50	SPRING POINT, RAIN GARDEN	289205.48	13291768.01
251	FG=775.50	SPRING POINT, RAIN GARDEN	289205.17	13291767.05
252	FG=775.51	SPRING POINT, RAIN GARDEN	289202.25	13291763.97
253	FG=775.50	SPRING POINT, RAIN GARDEN	289199.82	13291763.61
254	FG=775.50	SPRING POINT, RAIN GARDEN	289193.21	13291764.40
255	FG=775.50	SPRING POINT, RAIN GARDEN	289189.92	13291763.99
256	TP=777.23	BIKE PARKING PAD	289223.40	13291803.86
257	TP=776.96	BIKE PARKING PAD	289240.31	13291810.02
258	TP=777.08	BIKE PARKING PAD	289237.57	13291817.54
259	TP=777.35	BIKE PARKING PAD	289220.66	13291811.38
260	TP=777.53	SPRING POINT, MATCH EXISTING	289218.62	13291816.96
261	TP=778.83	SPRING POINT, MATCH EXISTING	289176.00	13291853.55
262	TP=776.71	SPRING POINT	289161.72	13291811.31
263	TP=776.76	SPRING POINT	289154.15	13291813.63
264	TP=777.01	PARKING LOT AT LONGSHORE	289149.75	13291825.33
265	SW=776.05	BENCH PAD	289177.26	13291710.14
266	SW=776.02	SPRING POINT	289177.88	13291709.50
267	SW=775.99	SPRING POINT	289180.80	13291709.54
268	SW=776.40	SPRING POINT	289186.27	13291738.15
269	SW=776.38	TABLE	289185.45	13291732.38
270	FG=774.50	RAIN GARDEN	289183.94	13291766.68
271	FG=774.50	RAIN GARDEN	289159.80	13291757.50
272	TP=776.12	EDGE OF PAVT AT CURB	289156.82	13291766.03
273	TP=776.37	EDGE OF PAVT AT CURB	289179.77	13291774.65
274	TP=776.73	EDGE OF PAVT AT CURB	289207.64	13291785.12

**GRADING TABLE LEGEND**

- FG = FINISH GRADE
- TP = TOP OF PAVEMENT
- SW = TOP OF SIDEWALK
- FF = FINISH FLOOR
- CB = CATCH BASIN

PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS



PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: 1" = 10'  
**ROWE PROFESSIONAL SERVICES COMPANY**  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com  
 PREPARED FOR:  
**CITY OF ANN ARBOR PARKS & REC ARGO PARK LIVERY**  
 DETAILED GRADING 2  
 REV: \_\_\_\_\_  
 SHEET # 11 OF 20  
 JOB No: 20C0027

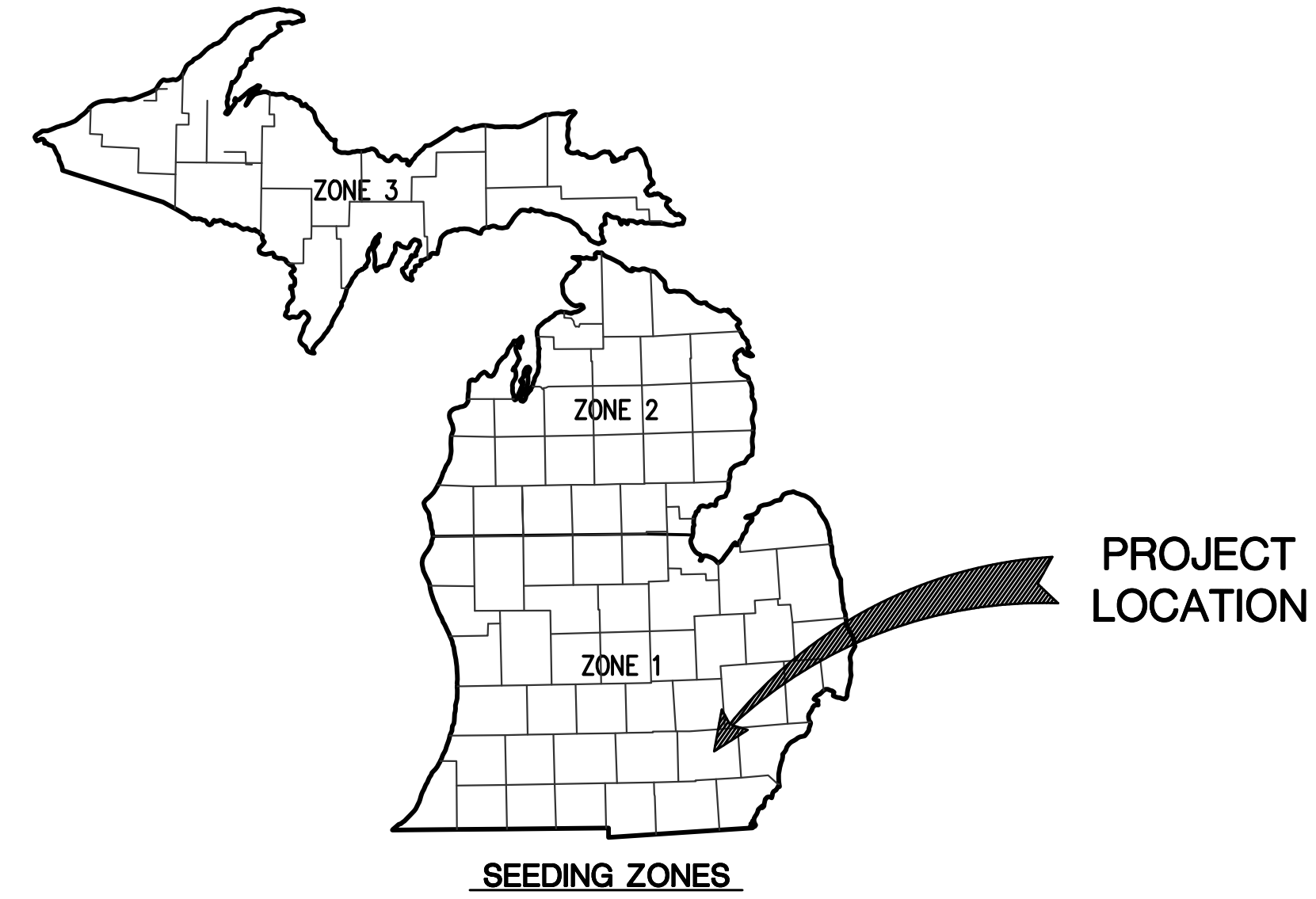
R:\Projects\20C0027\Drawings\20C0027-000.dwg  
 PLOTED: 2/23/2021 10:01 AM

# MICHIGAN UNIFIED KEYING SYSTEM

## SOIL EROSION SEDIMENTATION CONTROL MEASURES

\* INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	PROBLEM AREAS						
			A	B	C	D	E	F	G
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.	*				*	*	
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES CAUSE EROSION PROBLEMS.	*				*	*	*
3	GRUBBING OMITTED	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE, DISCOURAGES EQUIPMENT ENTRANCE.	*				*	*	*
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL. SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF.	*	*	*		*	*	*
5	SEEDING	INEXPENSIVE AND VERY EFFECTIVE. STABILIZES SOIL, TENDS TO MINIMIZE EROSION. PROMPTS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*		*	*	*
6	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER. EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY. EASY TO PLACE. MAY BE REPAIRED IF DAMAGED. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*		*	*	*
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS. MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION. MULCH SHOULD BE APPLIED. SHOULD INCLUDE PREPARED TOPSOIL BED.	*				*	*	*
8	SODDING	PROVIDES IMMEDIATE PROTECTION. CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH. EASY TO PLACE. MAY BE REPAIRED IF DAMAGED. SHOULD INCLUDE PREPARED TOPSOIL BED.	*		*		*	*	*
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF. REDUCES VOLUME OF RUNOFF ON SLOPES.	*	*					*
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS. PREVENTS SOIL FROM IMPACT OF FALLING RAIN. PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES.	*				*	*	
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES. HELDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES.	*				*		
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION.	*				*		
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH. REDUCES EROSION. PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE.	*					*	
20	BERM & DITCH	DIRTENS WATER TO A PREPARED DRAINAGEWAY. MAY BE USED AT INTERVALS ACROSS SLOPE TO INCREASE EFFECTIVE SLOPE LENGTH.	*					*	*
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE. INTERCEPTS AND DIRTENS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS. SLOWS RUNOFF AND COLLECTS SEDIMENT.	*	*					*
33	SEDIMENT TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS. TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW. CAN BE CLEANED AND EXPANDED AS NEEDED.		*	*				
34	SEDIMENT BASIN	TRAPS SEDIMENT. REDUCES RUNOFF AT NON-CROSSING RATES. CONTROLS RUNOFF AT SYSTEM OUTLETS. CAN BE VEGGAL MAINTAINED.		*	*	*			
35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF. CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION. USE CATCH BASINS TO COLLECT SEDIMENT.						*	*
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER SCREEN OVER INLET.						*	*
37	SOD FILTER	INEXPENSIVE AND EASY TO CONSTRUCT. PROVIDES IMMEDIATE PROTECTION. PROTECTS AREAS AROUND INLETS FROM EROSION.					*		
38	STRAW BALE FILTER	INEXPENSIVE AND EASY TO CONSTRUCT. CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT. MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY.					*		*
39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE. EASY TO CONSTRUCT. FILTERS SEDIMENT FROM RUNOFF.					*		*
40	INLET SEDIMENT TRAP	EASY TO SHAPE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.					*		
43	CULVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET. KEEPS CULVERT CLEAN AND FREE FLOWING. MAY BE CONSTRUCTED OF LUMBER OR LOGS.		*					*
54	SILT FENCE	USES DEGRADABLE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.			*				*



**PERMANENT SEEDING GUIDE**

	APR	MAY	JUN	JUL	AUG	SEP	OCT	
IRRIGATED AND/OR MULCH WITHOUT IRRIGATION OR MULCH								ZONE 1
BRIGATED AND/OR MULCHED WITHOUT IRRIGATION OR MULCH								ZONE 2
IRRIGATED AND/OR MULCHED WITHOUT IRRIGATION OR MULCH								ZONE 3

- SOIL EROSION & SEDIMENTATION CONTROL**
- DEVELOPER/PROPERTY OWNER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES.
  - CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
  - BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED AND APPROVED AT TIME OF PLAN REVIEW. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
  - CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
  - THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE DEVELOPER WITHIN 24 HOURS.
  - TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE DEVELOPER UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.
  - ALL TEMPORARY SOIL EROSION CONTROL MEASURES MUST BE REMOVED FROM ROAD RIGHT-OF-WAY AREAS PRIOR TO ACCEPTANCE OF STREETS FOR ROUTINE MAINTENANCE.
  - VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF THE CONSTRUCTION GUARANTEE BY THE DESIGNATED SOIL EROSION SEDIMENTATION CONTROL AGENT.

**TEMPORARY SEEDING GUIDE**

ZONE 1												
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT					
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS												
SUDANGRASS												
RYE OR PERENNIAL RYE												
WHEAT												

ZONE 2												
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT					
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS												
SUDANGRASS												
RYE OR PERENNIAL RYE												
WHEAT												

ZONE 3												
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT					
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS												
SUDANGRASS												
RYE OR PERENNIAL RYE												
WHEAT												

**CONSTRUCTION SEQUENCE**

- EXCAVATION AND STOCKPILING OF SOIL.
- IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES.
- PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
- PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

**SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE**

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SEDIMENT CONTROL												
TEMP. CONTROL MEASURES												
STORM FACILITIES												
TEMP. CONSTRUCTION ROADS												
SITE CONSTRUCTION												
PERM. CONTROL MEASURES												
FINISH GRADING												



**PLAN SUBMITTALS AND CHANGES**

BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**

O: (810) 341-7500  
 F: (810) 341-7573  
 WWW.ROWEPS.COM

The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

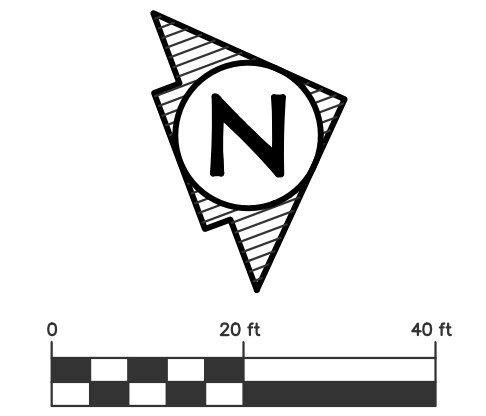
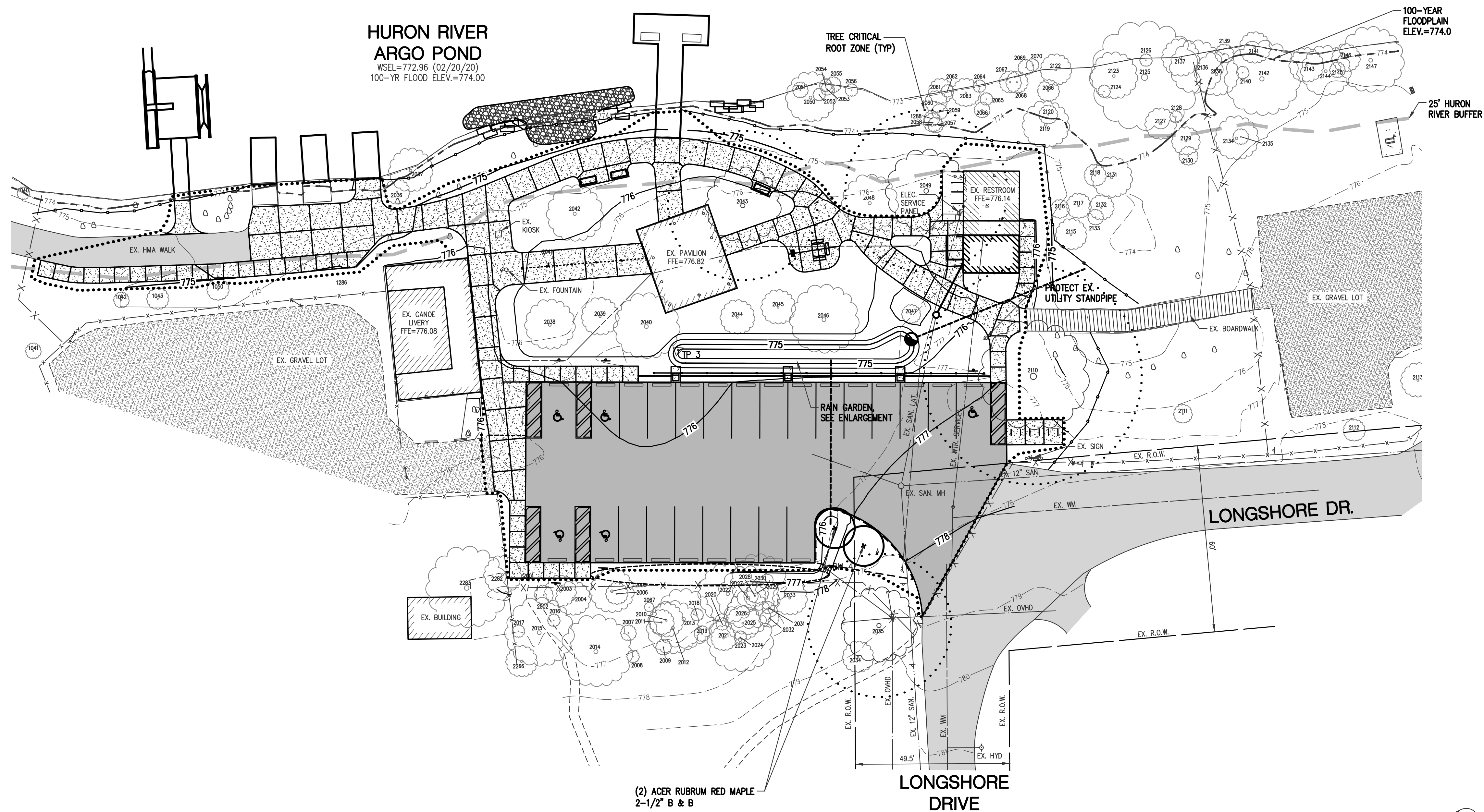
PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**

SESC KEY SHEET

REV: \_\_\_\_\_

SHT# 12 OF 20  
 JOB No: 20C0027

R:\Projects\20C0027\0mg\Construction Drawings\01-20C0027-SSC.dwg



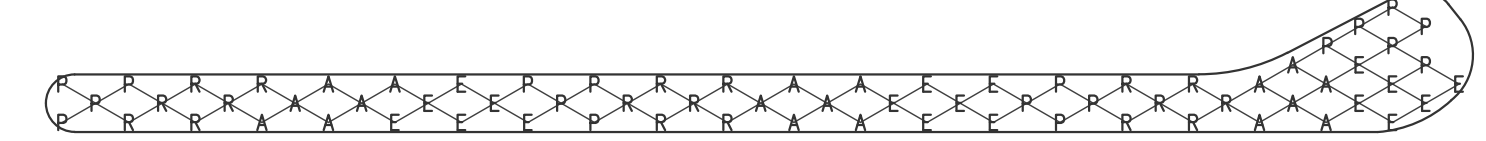
**LEGEND**

	EXISTING GRAVEL SURFACE
	EXISTING SIDEWALK
	PROPOSED SIDEWALK
	PROPOSED BEACH AGGREGATE
	EXISTING HMA PAVEMENT
	PROPOSED HMA PAVEMENT
	EXISTING FENCE
	PROPOSED FENCE
	PROPOSED SILT FENCE
	LIMITS OF DISTURBANCE
	EXISTING CONTOURS MAJOR
	EXISTING CONTOURS MINOR
	PROPOSED CONTOUR MAJOR
	PROPOSED CONTOURS MINOR
	HURON RIVER 25' BUFFER
	PROPOSED TREE ACER RUBRUM, RED MAPLE
	PROPOSED CONSTRUCTION FENCE

**LANDSCAPE NOTES**

- TREES & ROOT ZONES SHALL BE PROTECTED BY CONTRACTOR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL HAND DIG AND LIMIT CONSTRUCTION TRAFFIC WITHIN TREE DRILLPIECE.
- ALL DISEASED, DAMAGED OR DEAD MATERIAL SHOWN ON THE SITE PLAN AS PROPOSED PLANTINGS SHALL BE REPLACED BY THE END OF THE FOLLOWING GROWING SEASON AS A CONTINUING OBLIGATION FOR THE DURATION OF THE SITE PLAN.
- ALL DISTURBED AREAS WITHIN LIMITS OF DISTURBANCE AND PROPOSED LANDSCAPE AREAS SHALL BE RESTORED WITH A MINIMUM OF THREE (3) INCHES OF TOPSOIL AND THEN SOD OR SEED/FERTILIZE/MULCH PER THE PLAN. PROVIDE SEED AND EROSION CONTROL BLANKETS ON ALL SLOPES.
- SEED MIXES AND FERTILIZER:
  - LAWNS:
    - 15% RUGBY KENTUCKY BLUEGRASS
    - 10% PARK KENTUCKY BLUEGRASS
    - 40% RUBY CREEPING RED FESCUE
    - 15% PENNIFINE PERENNIAL RYEGRASS
    - 20% SCALDIS HARD FESCUE
- SEE NOTES SHEET (SHEET #2) FOR ADDITIONAL NOTES.
- PLANT MATERIALS SHALL BE INSTALLED AS DETAILED. TREES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THE CITY OF ANN ARBOR PARKS AND RECREATION DEPARTMENT AND AS SHOWN ON THE TREE PLANTING DETAIL.
- APPLICATIONS OF FERTILIZER BEYOND THE INITIAL TOPSOIL AND SEEDING SHALL BE A FERTILIZER WITH NO PHOSPHORUS.
- ANY TREE SPECIES DEVIATIONS FROM THE APPROVED SITE PLAN MUST FIRST BE APPROVED IN WRITING BY THE CITY OF ANN ARBOR PRIOR TO INSTALLATION.
- ALL COMPACTED SUBGRADE SOILS IN PROPOSED LANDSCAPE AREA SHALL BE TILLED TO A MINIMUM 12-INCH DEPTH PRIOR TO PLACEMENT OF TOPSOIL, GEOTEXTILE FABRIC, OR OTHER PLANTING MEDIA AS SPECIFIED.

(2) ACER RUBRUM RED MAPLE  
2-1/2" B & B



**RAIN GARDEN PLANT LIST**

BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
A - ASTERACEAE ASTER	ASTER SPP.	18	1-GAL
E - ECHINACEA PURPUREA	PURPLE CONEFLOWER	18	1-GAL
P - PANICUM VIRGATUM	SWITCH GRASS	18	1-GAL
R - RUDBECKIA HIRTA	BLACK EYED SUSAN	18	1-GAL

TRIANGULAR SPACING PATTERN  
SPACING: 24" O.C.  
PLANTING AREA: 250 SFT.  
TOTAL PLANTS: 72

**RAIN GARDEN PLANTING ENLARGEMENT**

SCALE: 1" = 10'



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: 1" = 20'

**ROWE PROFESSIONAL SERVICES COMPANY**

O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

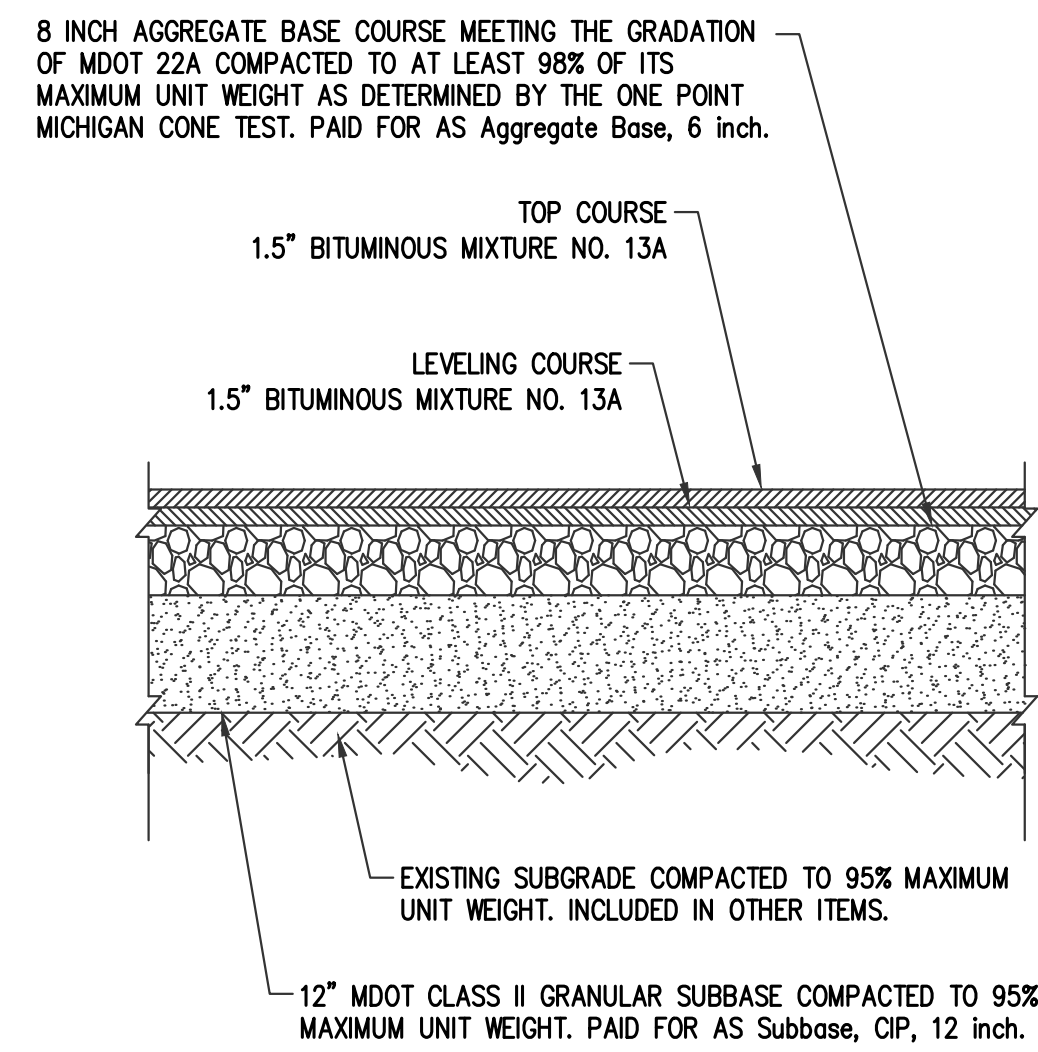
The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC  
ARGO PARK LIVERY**

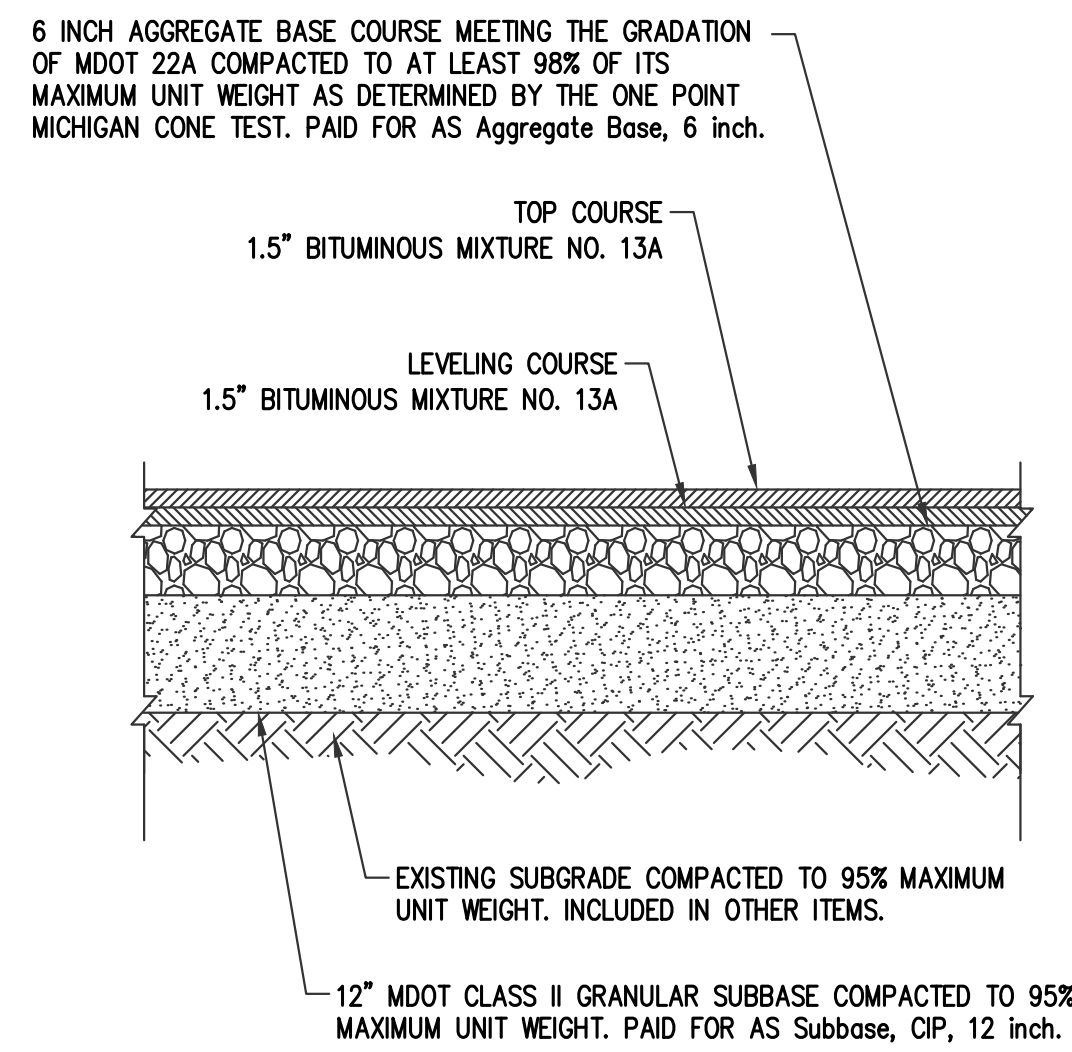
LANDSCAPE PLAN SHEET

REV: \_\_\_\_\_  
SHT# 13 OF 20  
JOB No: 20C0027

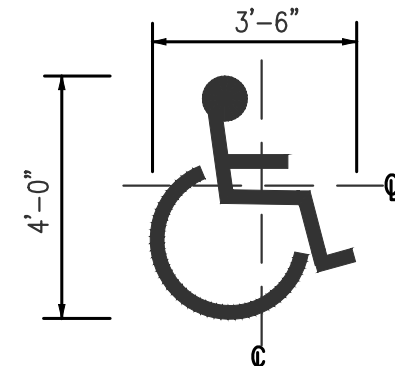
R:\Projects\20C0027\03\Construction Drawings\20C0027-LSDFE.dwg PLOTED: 7/23/2021 11:50:11 AM



**ASPHALT IN ROW - SECTION**  
NOT TO SCALE

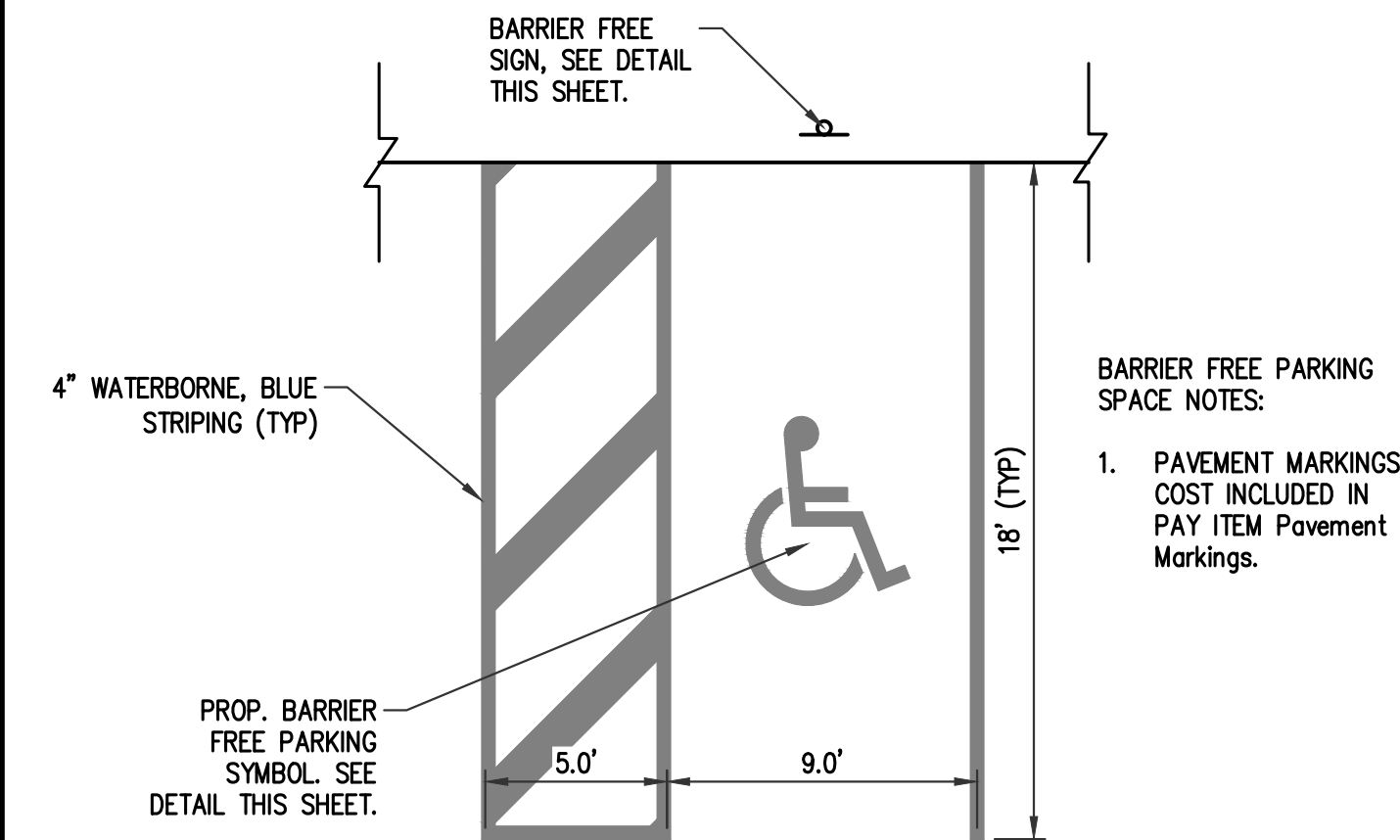


**ASPHALT PARKING - SECTION**  
NOT TO SCALE

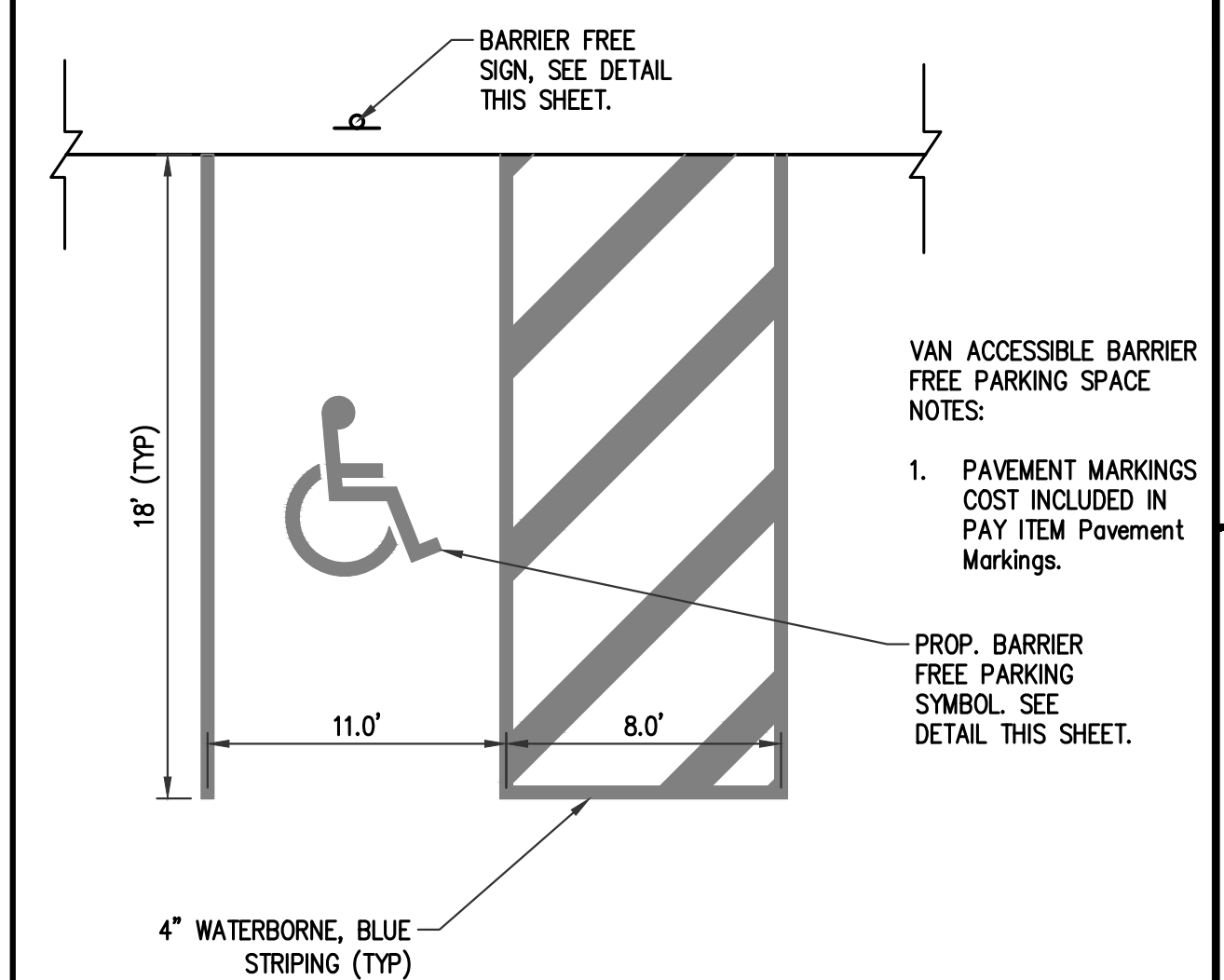


- BARRIER FREE PARKING SYMBOL NOTES:**
1. SYMBOL SHALL BE APPLIED AT A WIDTH OF 4"
  2. MATERIAL SHALL BE BLUE WATERBORNE
  3. CENTERLINE OF SYMBOL SHALL BE PARALLEL TO PARKING STALL STRIPE AND IN CENTER OF STALL.
  4. PAVEMENT MARKING SYMBOL COST INCLUDED IN PAY ITEM Pavement Markings.

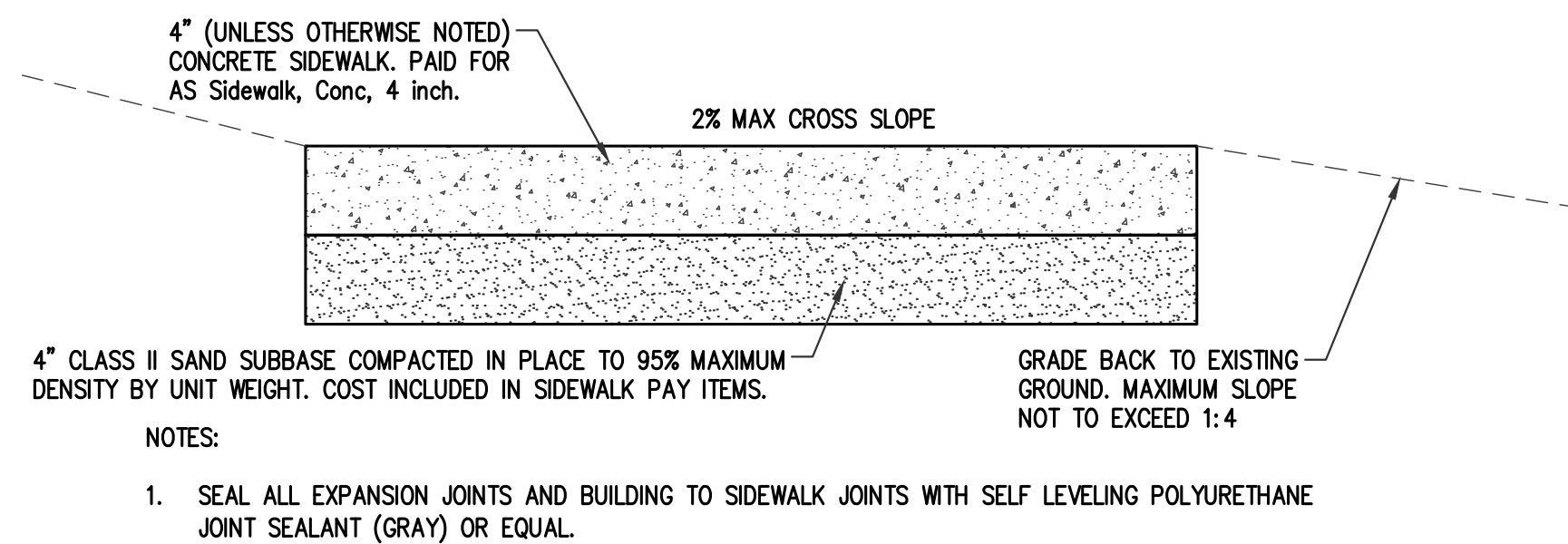
**BARRIER FREE SYMBOL**  
NOT TO SCALE



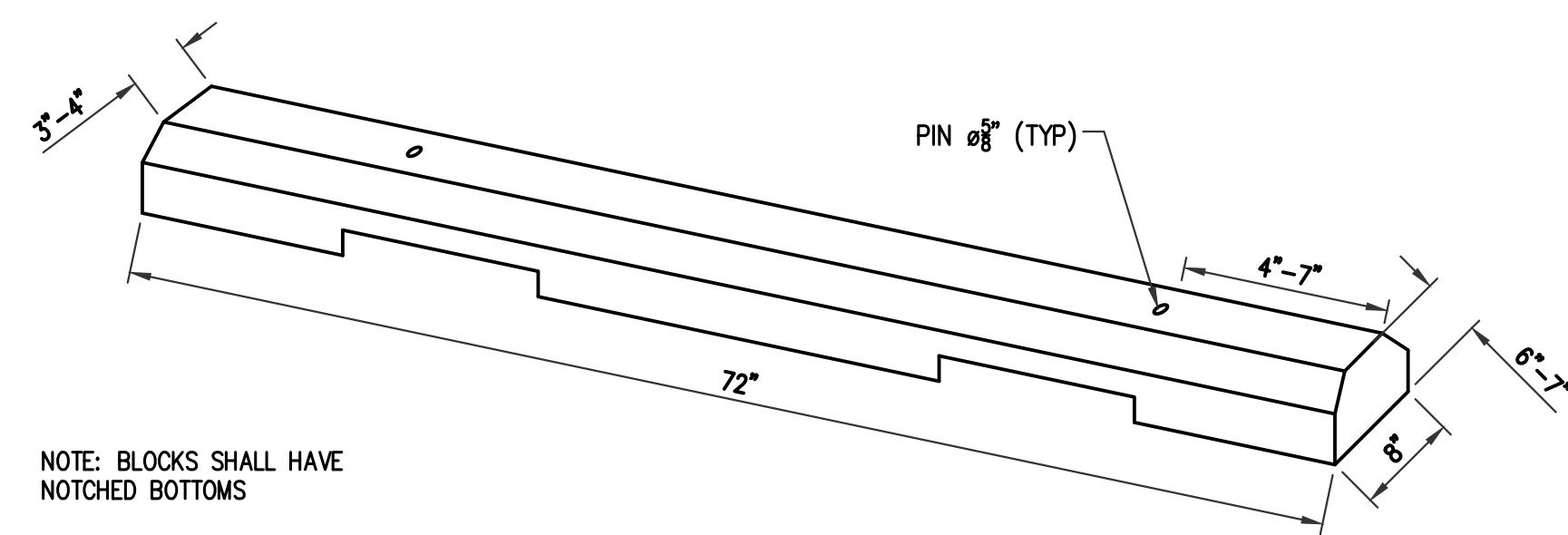
**BARRIER FREE PARKING SPACE**  
NOT TO SCALE



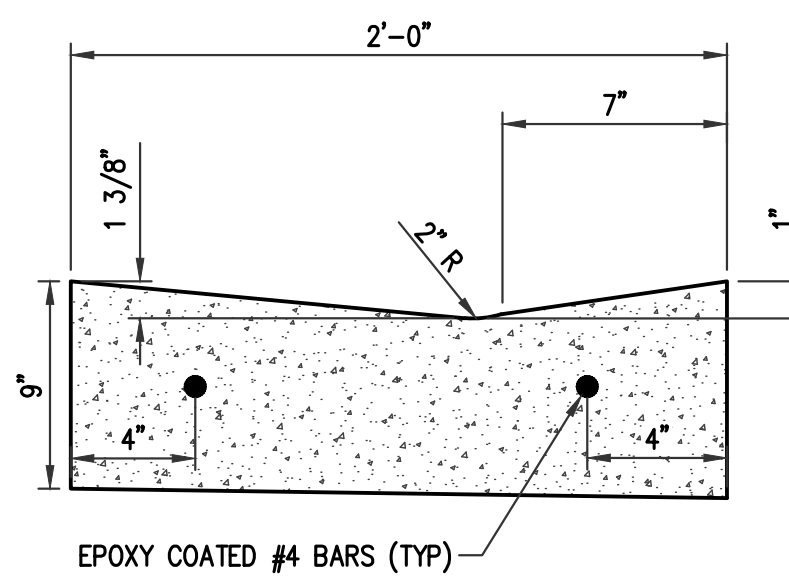
**VAN ACCESSIBLE BARRIER FREE PARKING SPACE**  
NOT TO SCALE



**CONCRETE SIDEWALK - SECTION**  
NOT TO SCALE



**CONCRETE BUMPER BLOCK**  
NOT TO SCALE



**VALLEY CURB DETAIL**  
NOT TO SCALE



**RESERVED PARKING**

BARRIER FREE SIGN  
MDOT R7-8  
NO SCALE

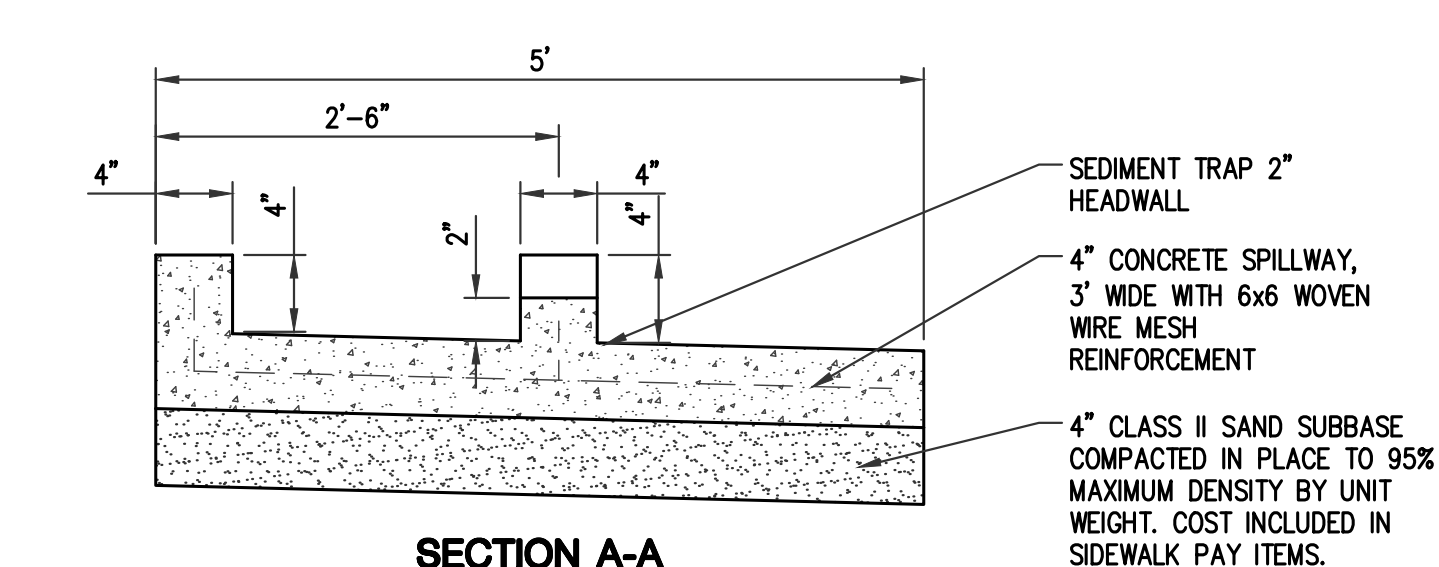
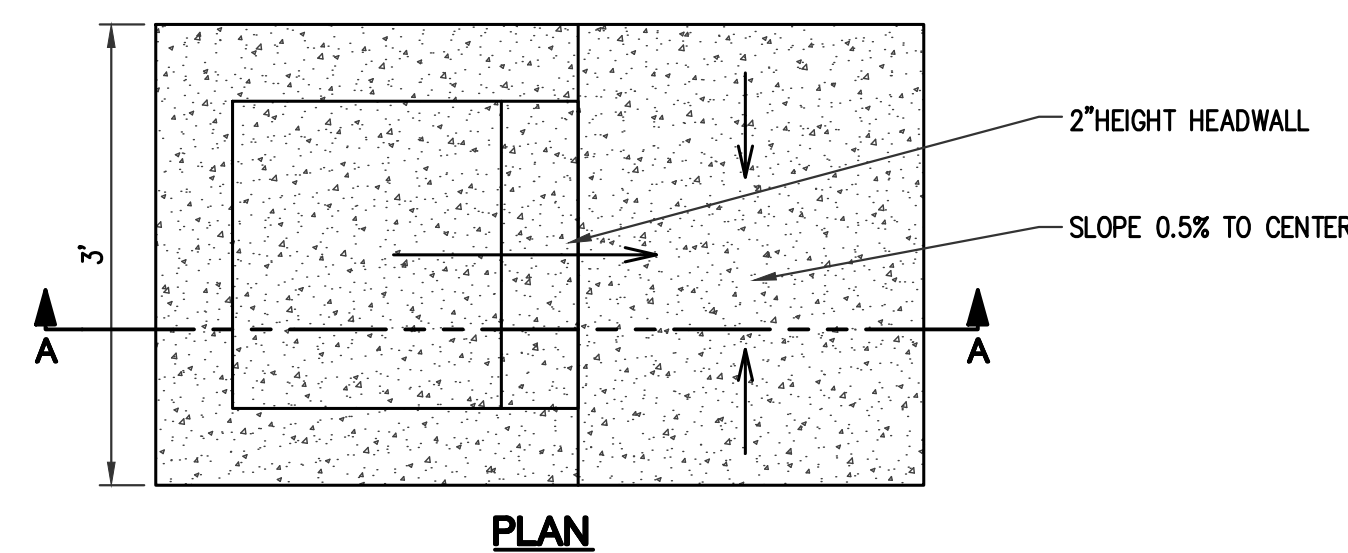


**VAN ACCESSIBLE**

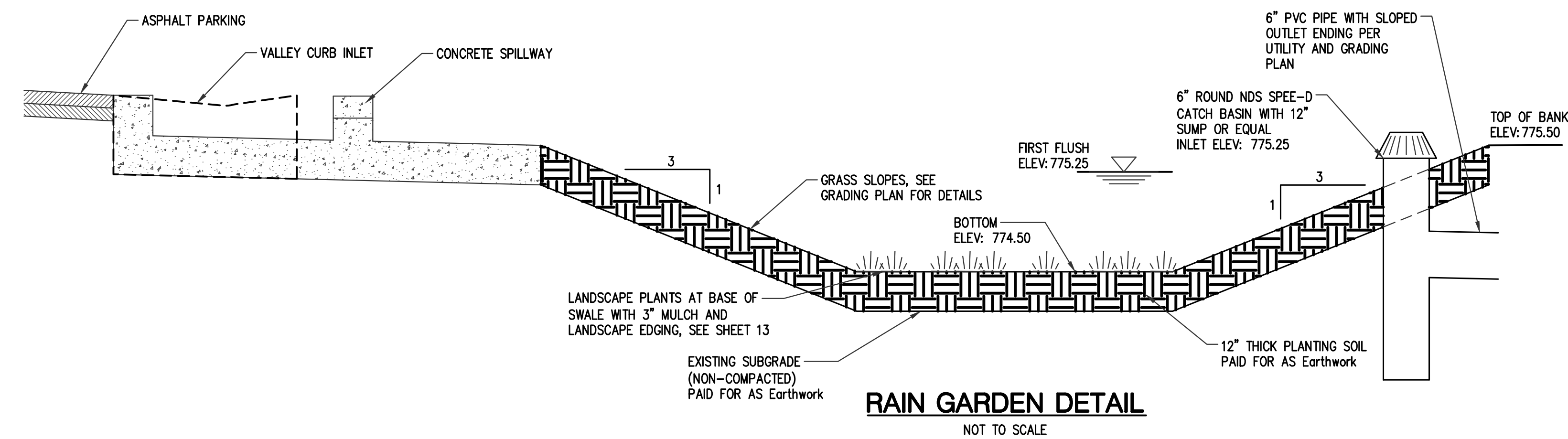
BARRIER FREE VAN ACCESSIBLE SIGN  
MDOT R7-8P  
NO SCALE

- BARRIER FREE PARKING SIGNAGE NOTES:**
1. ALL SIGNS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  2. ALL BARRIER FREE PARKING SIGNS SHALL ON 3LB STEEL POST.
  3. SIGNS COST INCLUDED IN PAY ITEM Permanent Traffic Signs.

**BARRIER FREE SIGN**  
NOT TO SCALE



**CONCRETE SPILLWAY DETAIL**  
NOT TO SCALE



**RAIN GARDEN DETAIL**  
NOT TO SCALE

**PLAN SUBMITTALS AND CHANGES**

**BIDDING DOCUMENTS**

DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

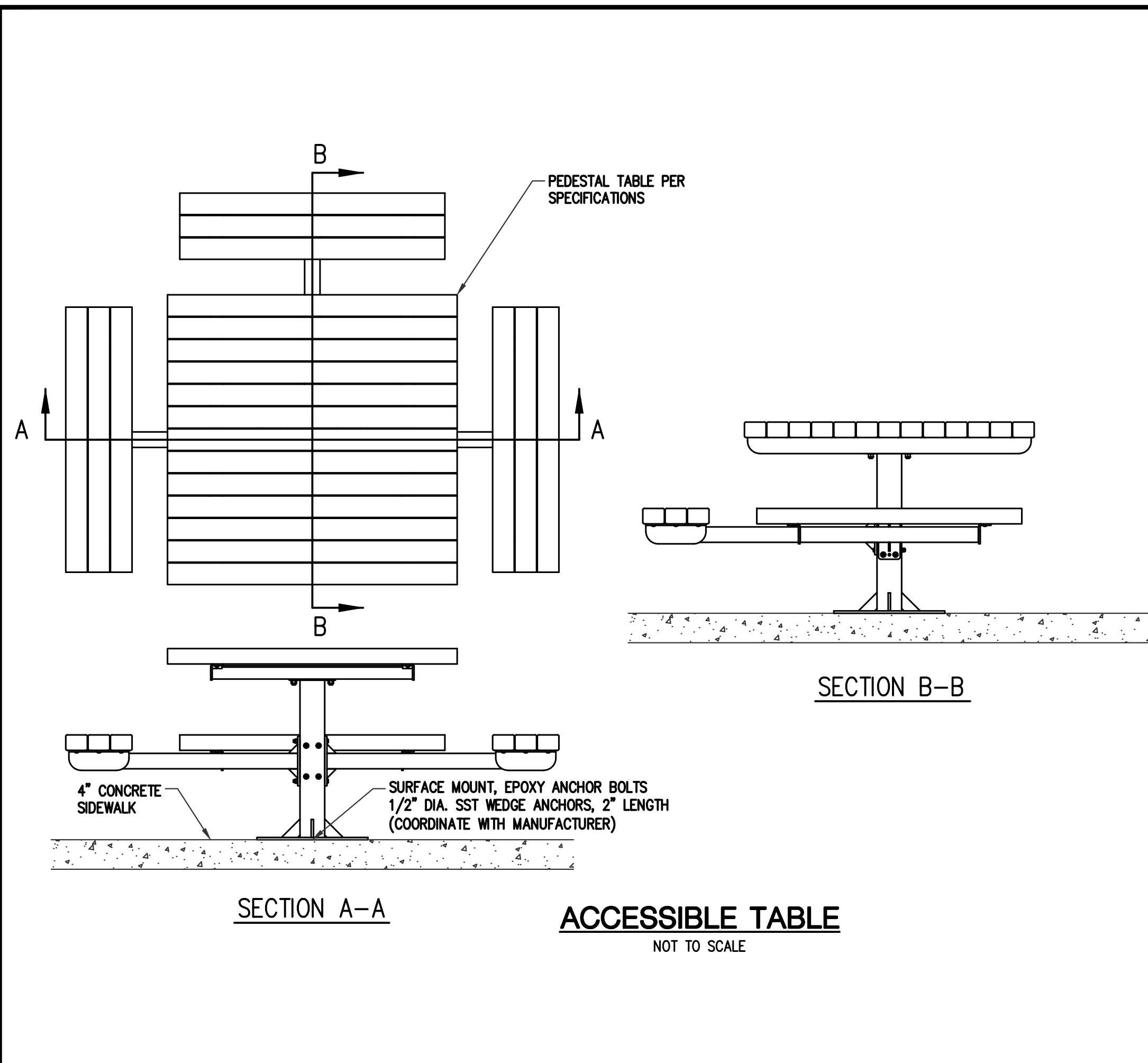
**ROWE PROFESSIONAL SERVICES COMPANY**  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC ARGO PARK LIVERY**  
SITE DETAILS SHEET

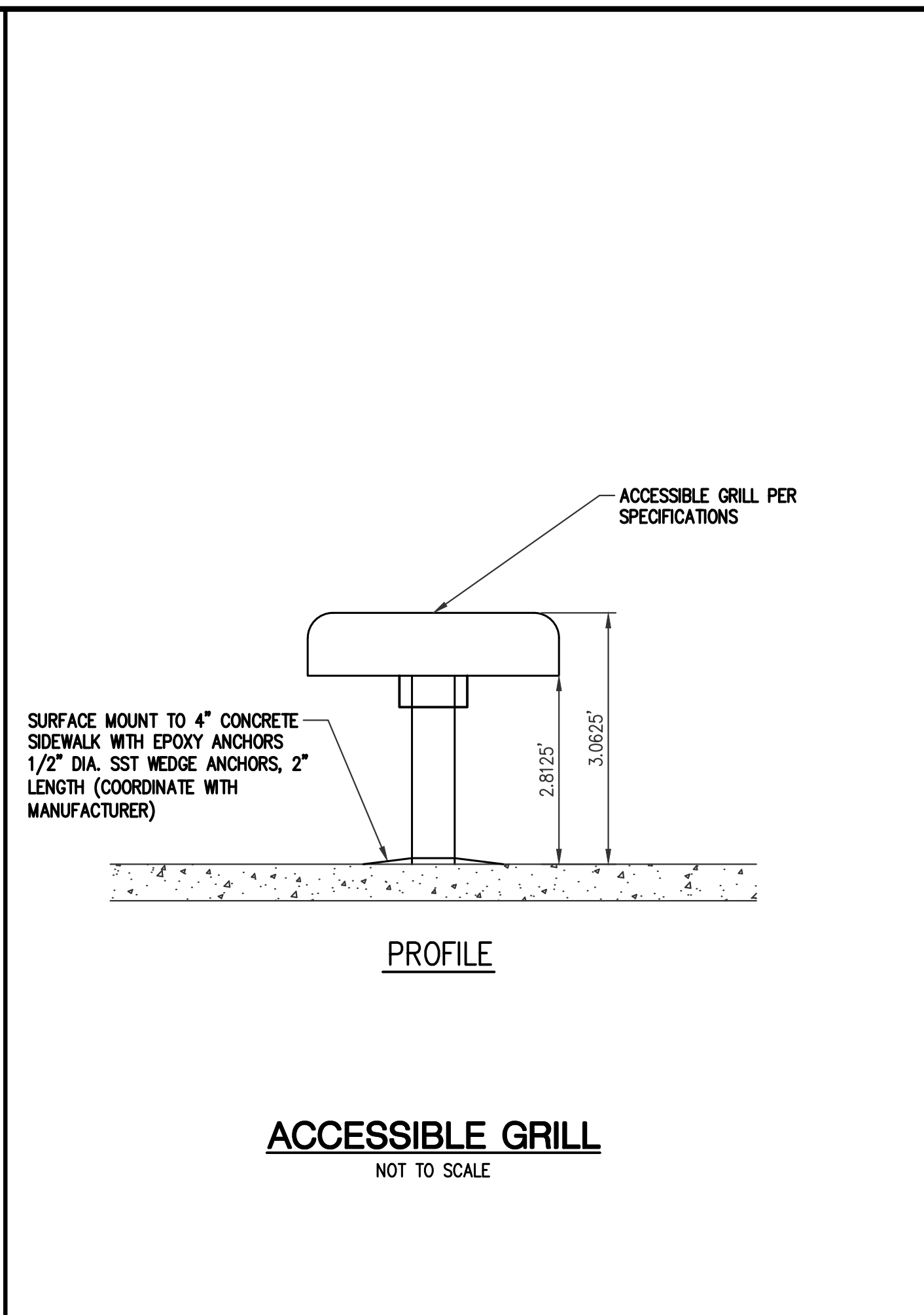
REV: SH# 14 OF 20  
JOB No: 20C0027





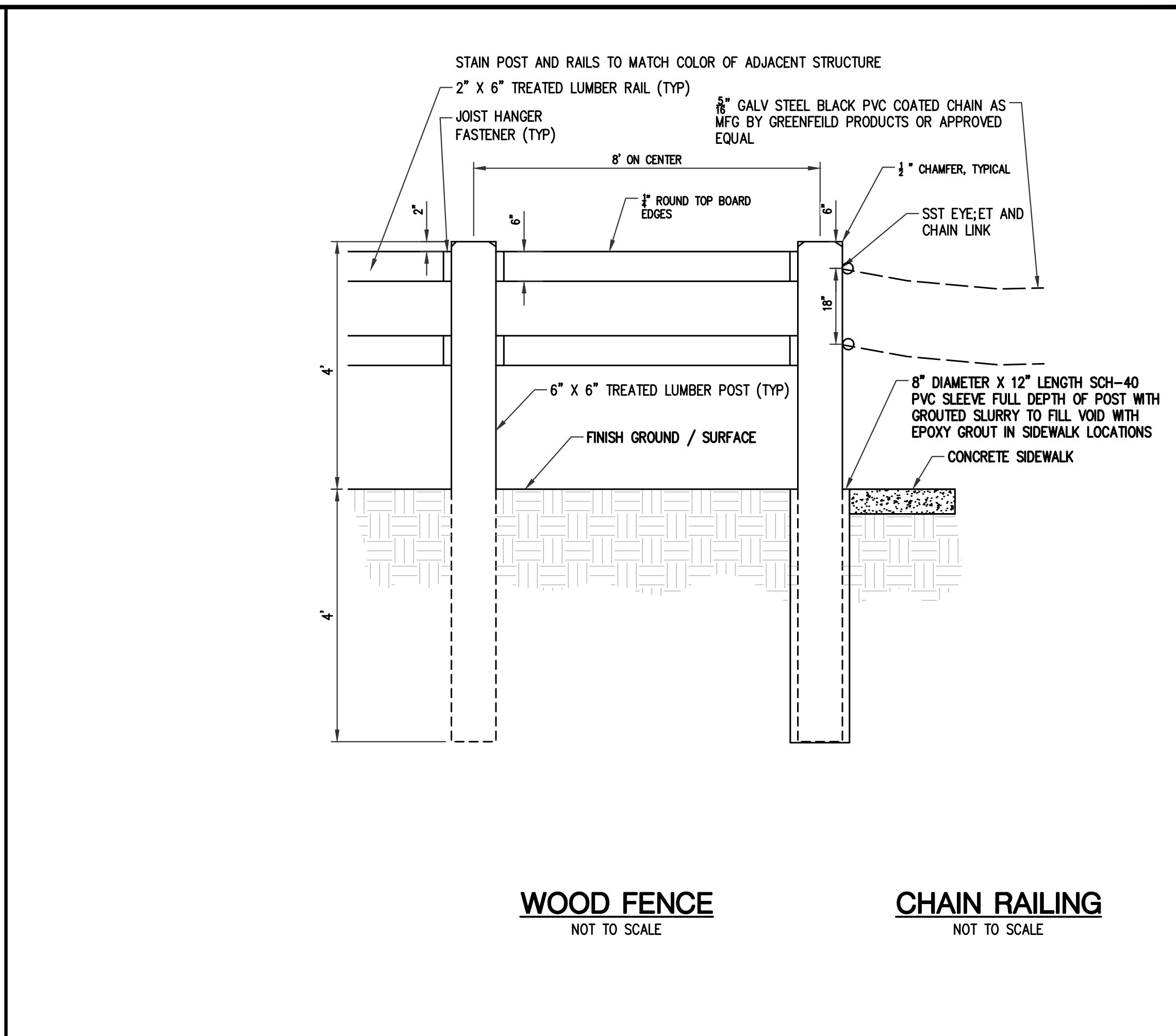
SECTION A-A

**ACCESSIBLE TABLE**  
NOT TO SCALE



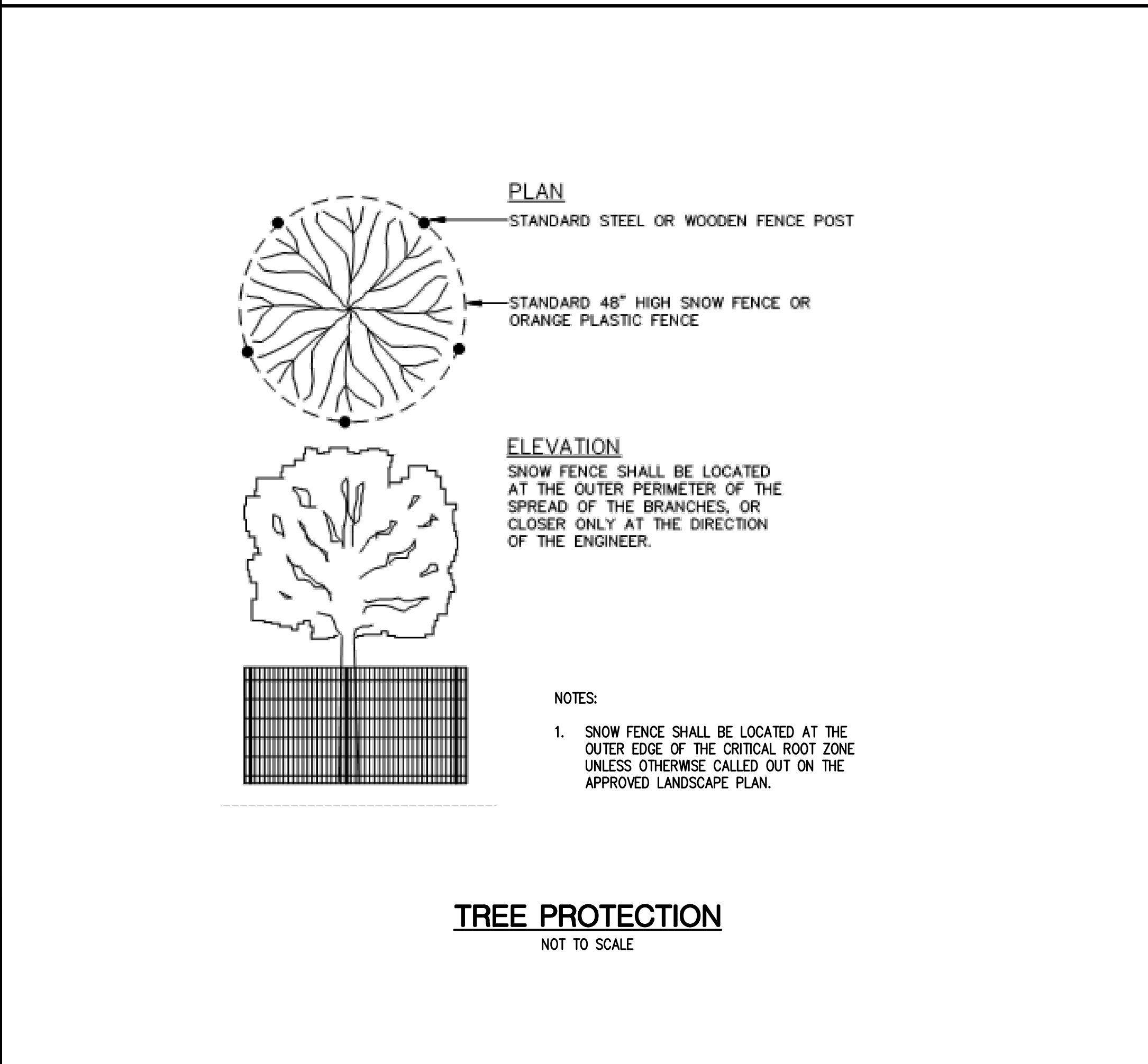
PROFILE

**ACCESSIBLE GRILL**  
NOT TO SCALE

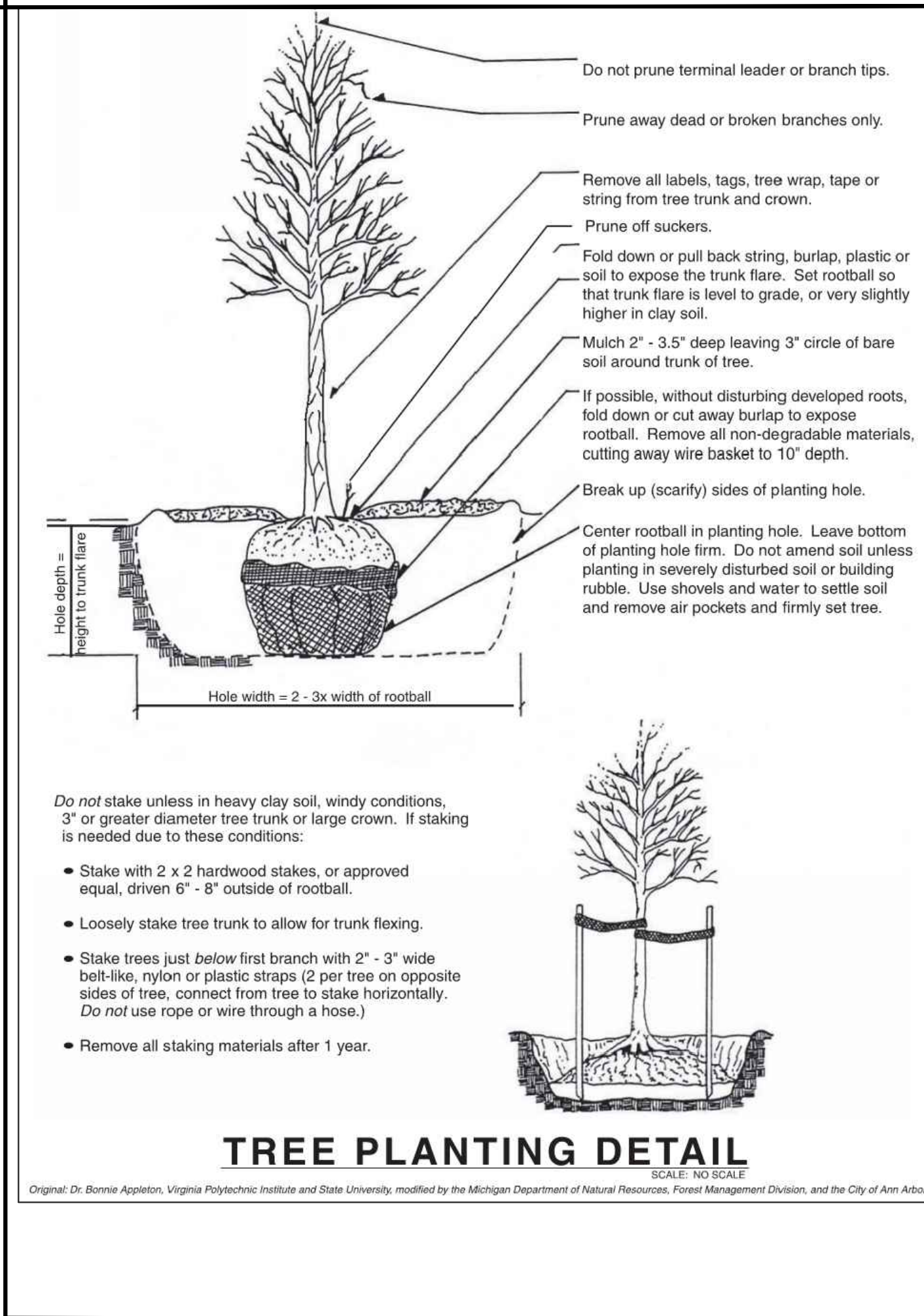


**WOOD FENCE**  
NOT TO SCALE

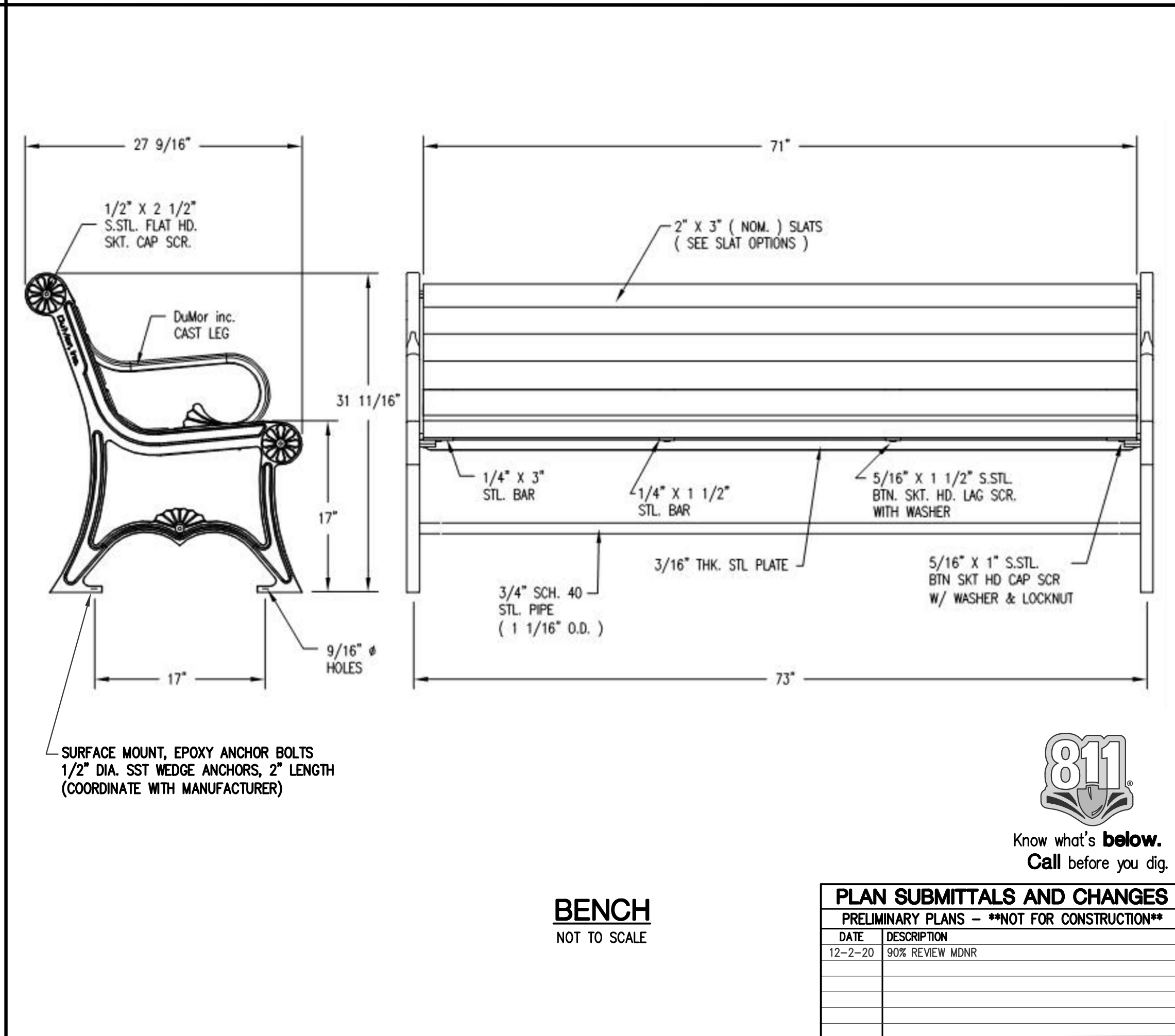
**CHAIN RAILING**  
NOT TO SCALE



**TREE PROTECTION**  
NOT TO SCALE



**TREE PLANTING DETAIL**  
SCALE: NO SCALE



**BENCH**  
NOT TO SCALE

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW  
 SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**

SITE DETAILS SHEET

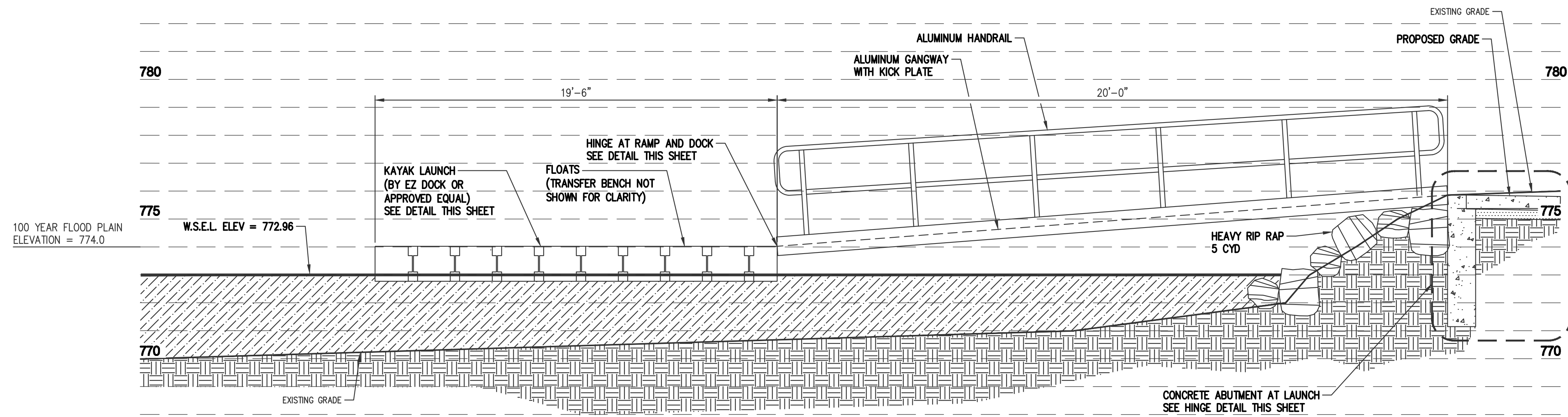
811  
 Know what's below.  
 Call before you dig.

PLAN SUBMITTALS AND CHANGES	
PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION
12-2-20	90% REVIEW MONR

REV:

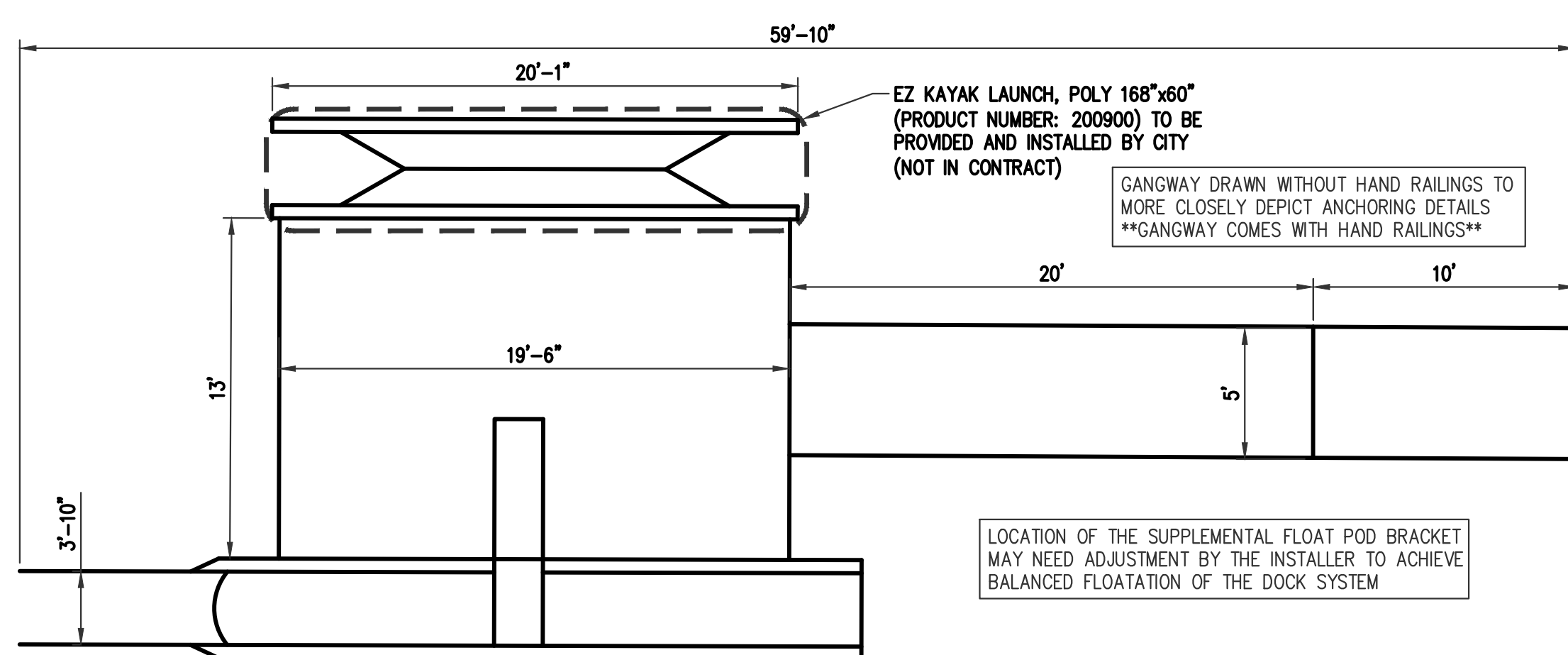
SHT# 15 OF 20  
 JOB No: 20C0027

R:\Projects\200027\0mg\Construction Drawings\811-200027-01E.dwg  
 PLOTED: 7/23/2021 10:01 AM

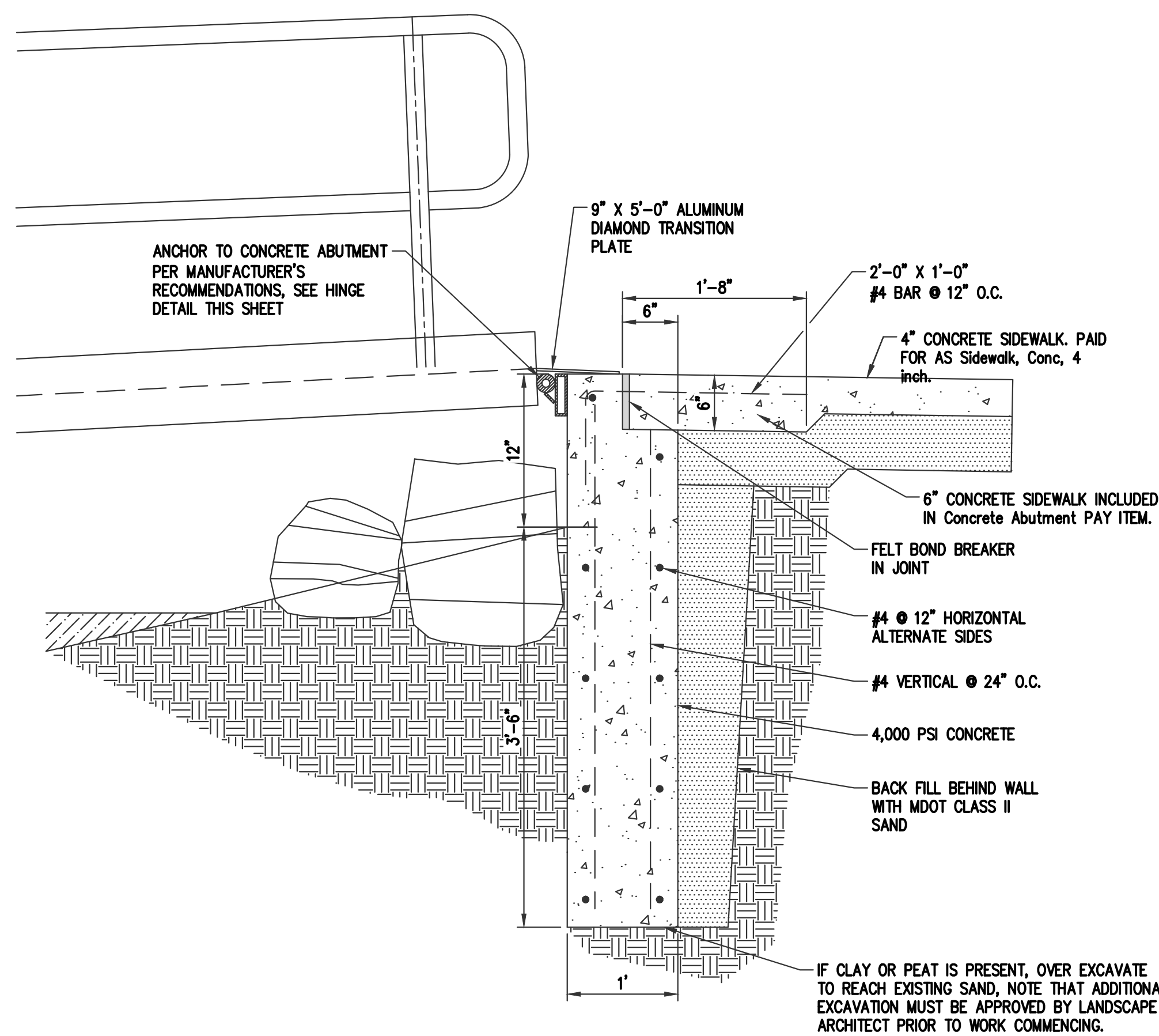


**KAYAK LAUNCH SECTION**  
NOT TO SCALE

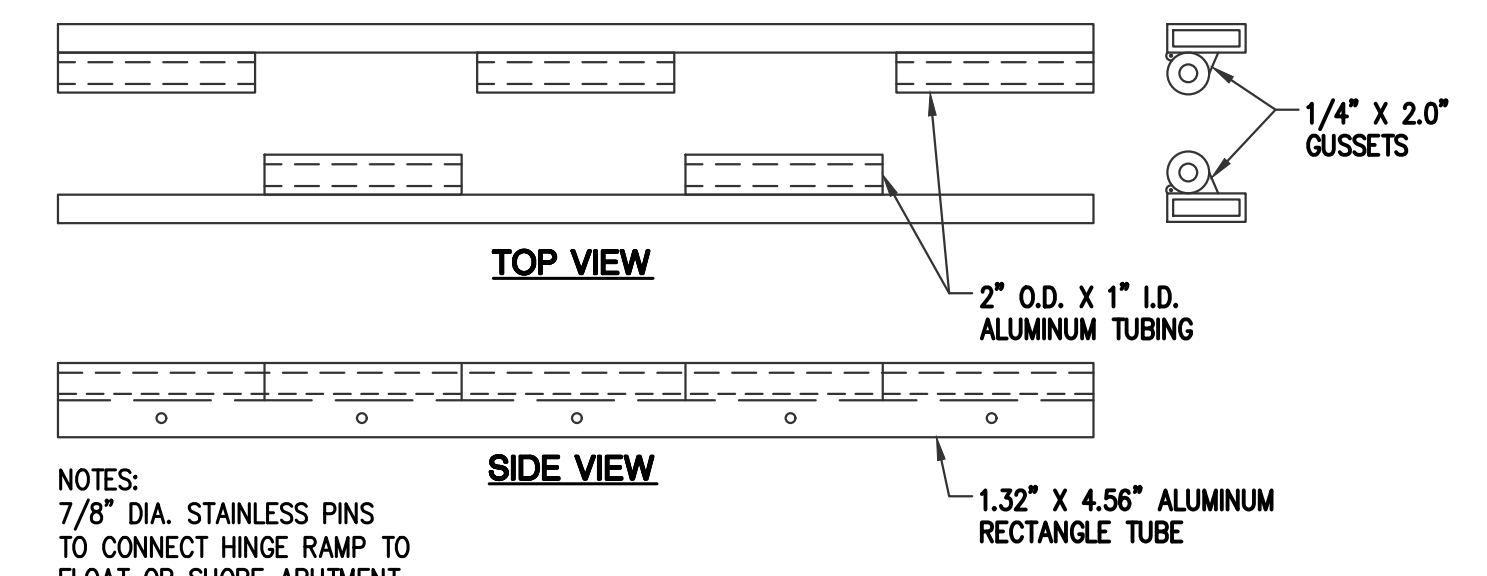
DOCK LIVE LOAD OF 62.5 LBS/SFT



**EZ LAUNCH**  
NOT TO SCALE



**CONCRETE ABUTMENT AT LAUNCH**  
NOT TO SCALE



**HINGE DETAIL**  
NOT TO SCALE

811  
Know what's below.  
Call before you dig.

PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

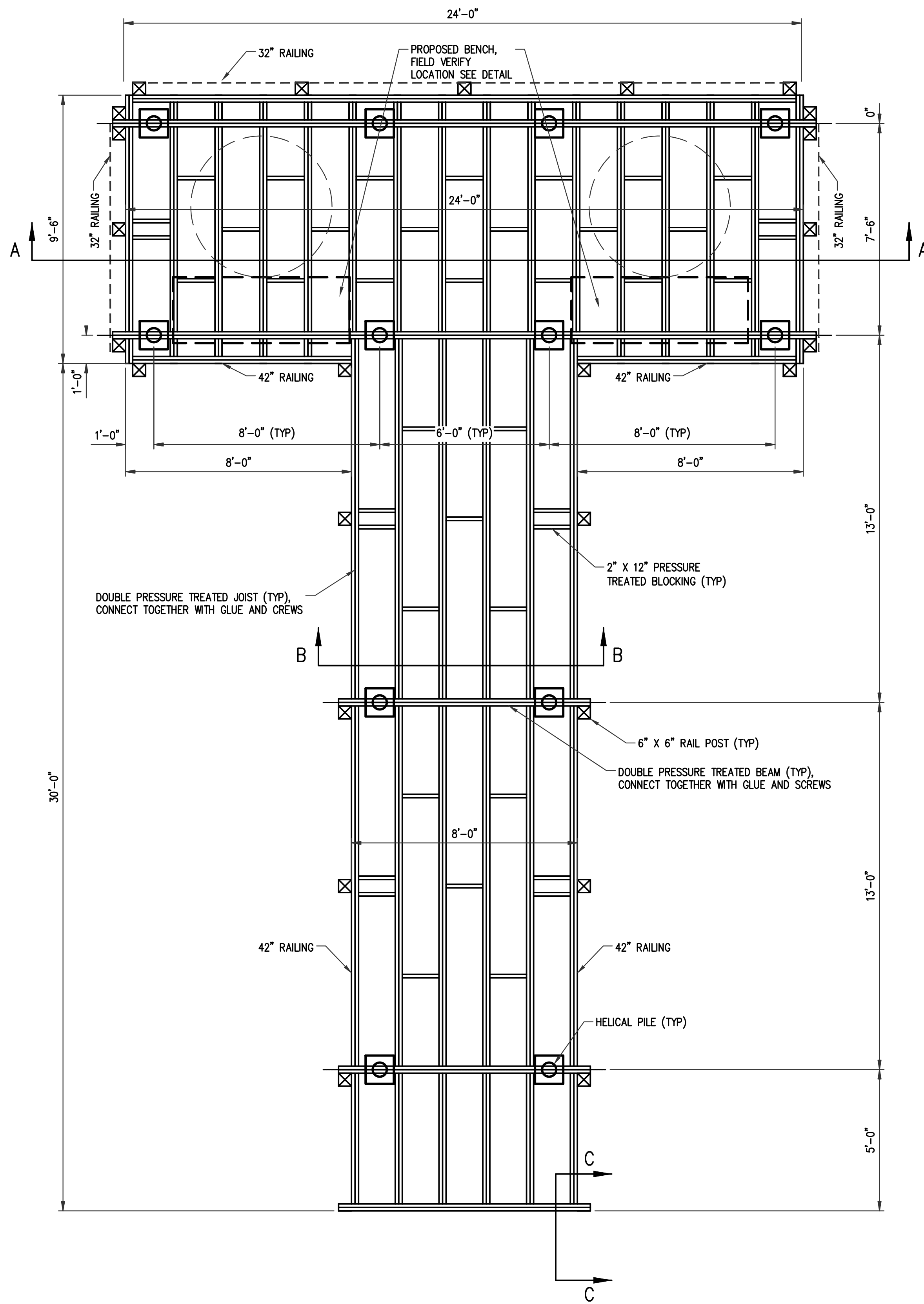
The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
KAYAK LAUNCH DETAILS SHEET

REV:   
SHT# 16 OF 20  
JOB No: 20C0027

R:\Projects\20C0027\Argo\Construction Drawings\20C0027-DET.dwg PLOTED: 7/23/2021 10:01 AM





**BOARDWALK FRAMING - PLAN**  
SCALE: 3/8" = 1'-0"

**BOARDWALK NOTES:**

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, PEDESTRIAN LOADING OF 90 PSF AND A MAINTENANCE VEHICLE H10 LOADING, NOT ACTING CONCURRENTLY.

ALL WORK AND MATERIALS REQUIRED TO INSTALL TIMBER BOARDWALK WILL BE PAID FOR AS Structure, Timber, Boardwalk.

ALL LUMBER MATERIALS SHALL BE PRESSURE TREATED WITH AN APPROVED PROCESS AND PRESERVATION IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION STANDARDS. SUITABLE FOR GROUND CONTACT.

ALL LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF OR CERTIFICATE OF INSPECTING AGENCY.

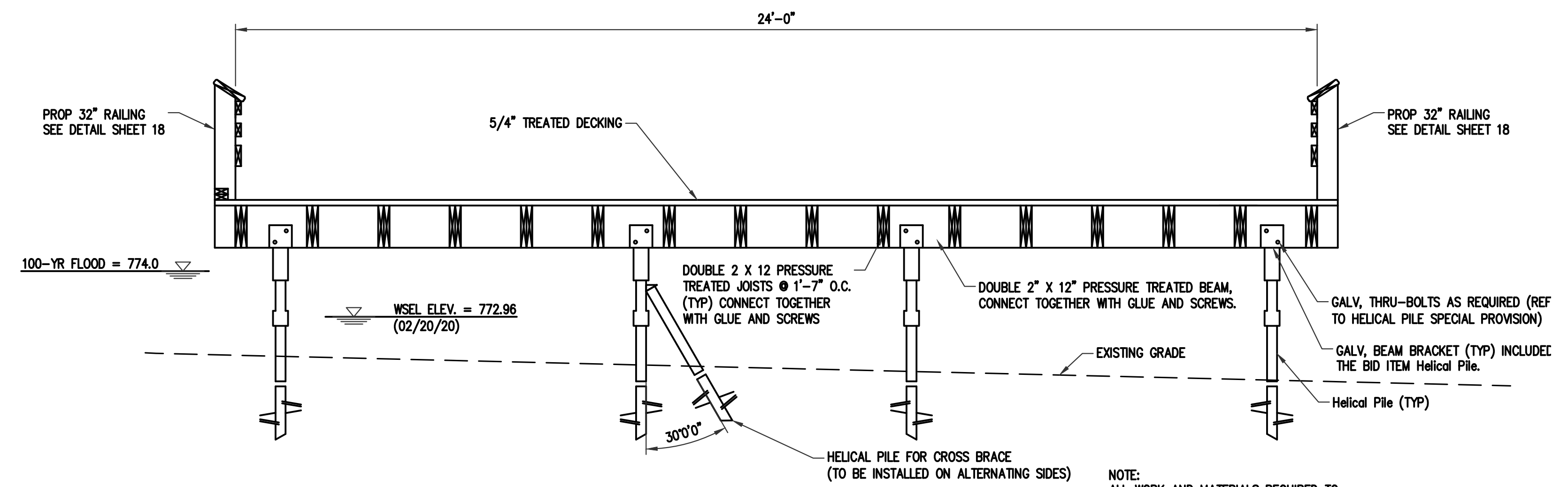
ALL LUMBER SHALL BE SOUTHERN YELLOW PINE, GRADE OF LUMBER AS INDICATED IN THE SPECIAL PROVISIONS WITH PRESERVATION TREATMENT WITH RETENTION LEVEL OF 0.4 (LB/CU.FT.) OF ACQ-B.

ALL SCREWS, BOLTS, AND NAILS SHALL BE HOT-DIPPED GALVANIZED STEEL.

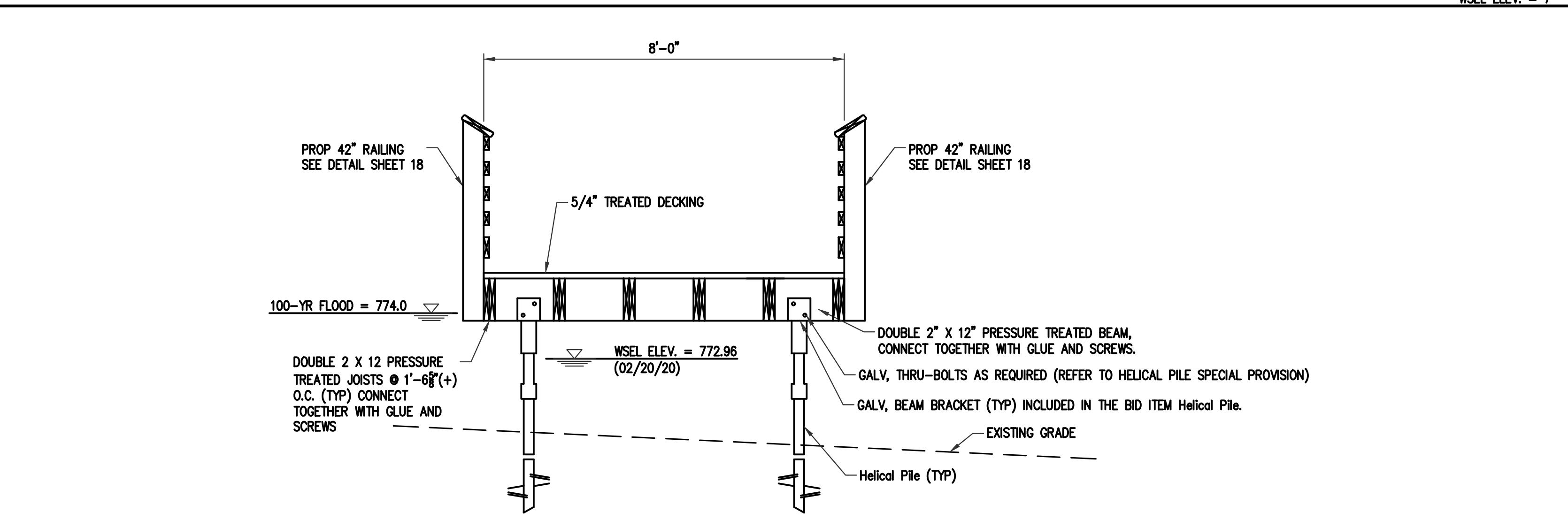
ALL METAL HARDWARE INCLUDING JOIST HANGERS SHALL BE HOT-DIPPED GALVANIZED STEEL.

ALL NAILS SHALL MEET THE REQUIREMENTS OF ASTM F-1667.  
WOOD SCREWS SHALL MEET THE REQUIREMENTS OF ANSI/ASME B18.2.1.  
THREADED NAILS SHALL INCLUDE HELICAL (SPIRAL) AND ANNULAR (RING-SHRANK) NAILS.

VERTICAL HELICAL PILES SHALL BE INSTALLED TO A MINIMUM ULTIMATE PILE CAPACITY OF 22 KIPS.  
DESIGN HELICAL PILE SYSTEM FOR A DESIGN LIFE OF 50 YEARS.



**PROPOSED TYPICAL 24 FOOT BOARDWALK SECTION A-A**  
SCALE: 1/2" = 1'-0"



**PROPOSED TYPICAL 8 FOOT BOARDWALK SECTION B-B**  
SCALE: 1/2" = 1'-0"

NOTE:  
ALL WORK AND MATERIALS REQUIRED TO INSTALL BOARDWALK, AS SHOWN, EXCEPT Helical Pile, IS INCLUDED IN Structure, Timber, Boardwalk PAY ITEM BY THE FOOT AND NOT PAID FOR SEPARATE.

NOTE:  
ALL WORK AND MATERIALS REQUIRED TO INSTALL BOARDWALK, AS SHOWN, EXCEPT Helical Pile, IS INCLUDED IN Structure, Timber, Boardwalk PAY ITEM BY THE FOOT AND NOT PAID FOR SEPARATE.



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

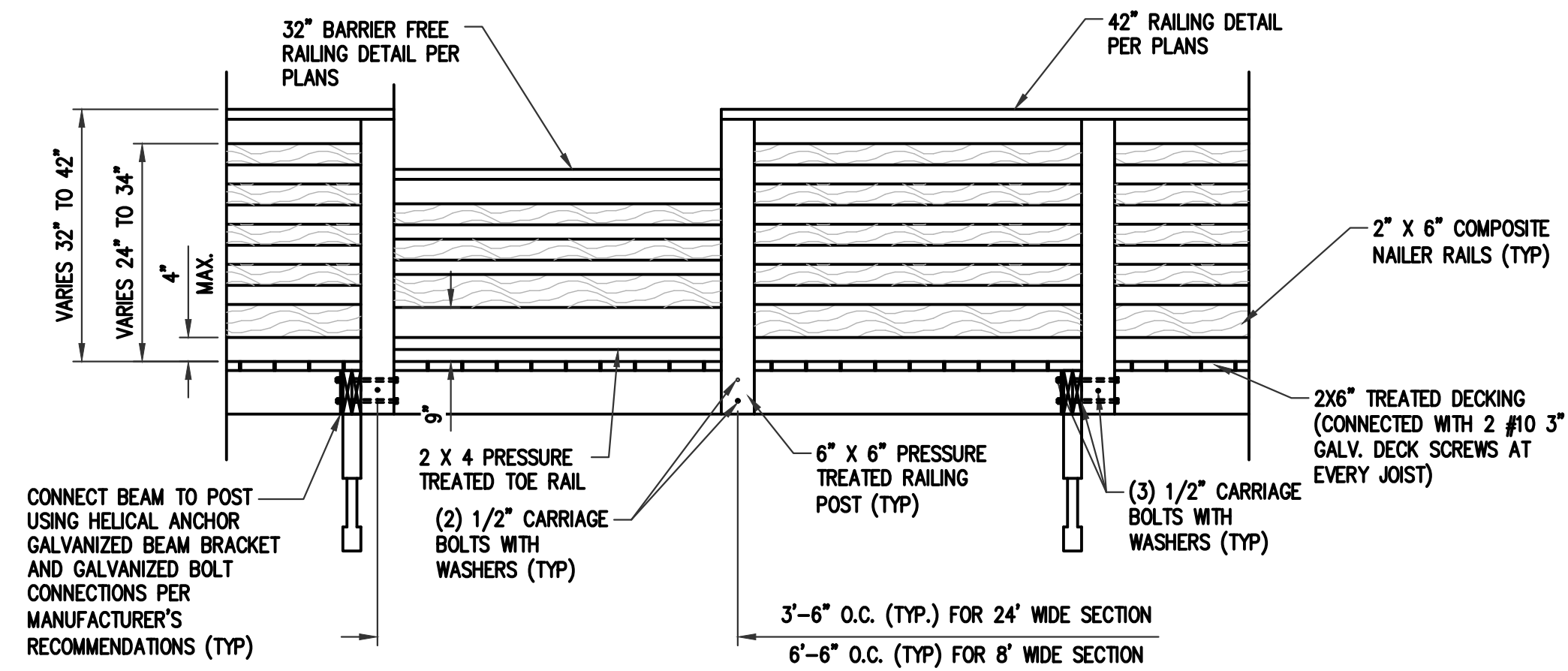
PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com  
The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
BOARDWALK DETAILS SHEET

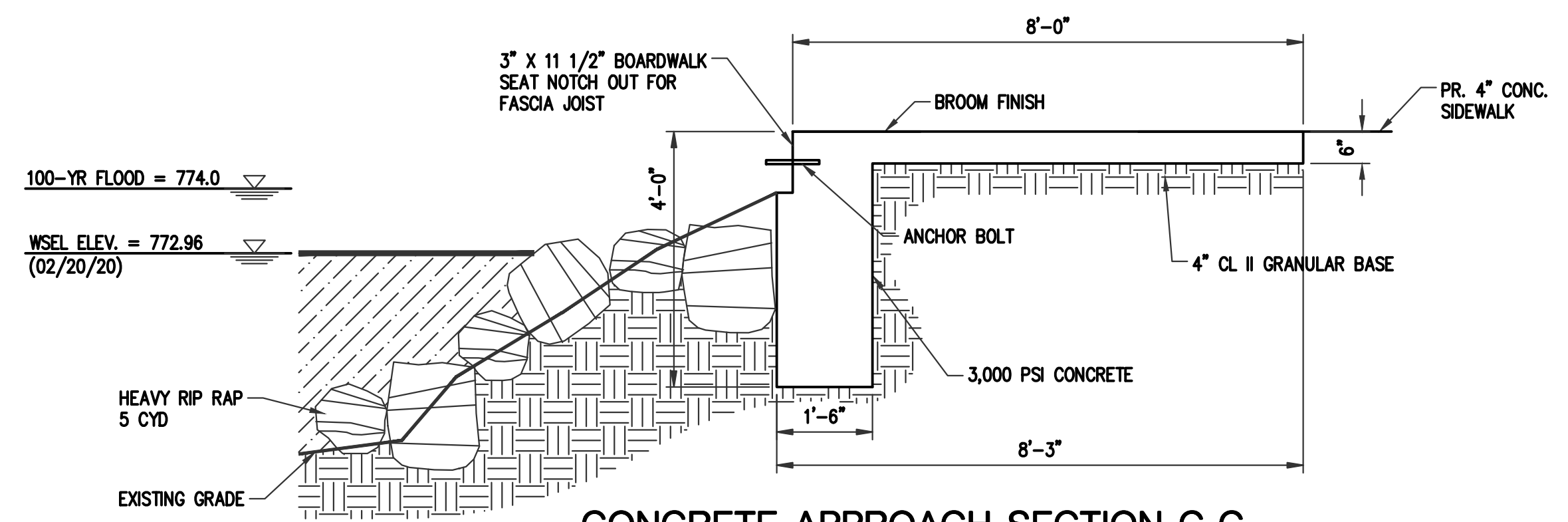
REV: \_\_\_\_\_  
SHT# 17 OF 20  
JOB No: 20C0027

R:\Projects\20C0027\Drawings\811-20C027-DET 2.dwg



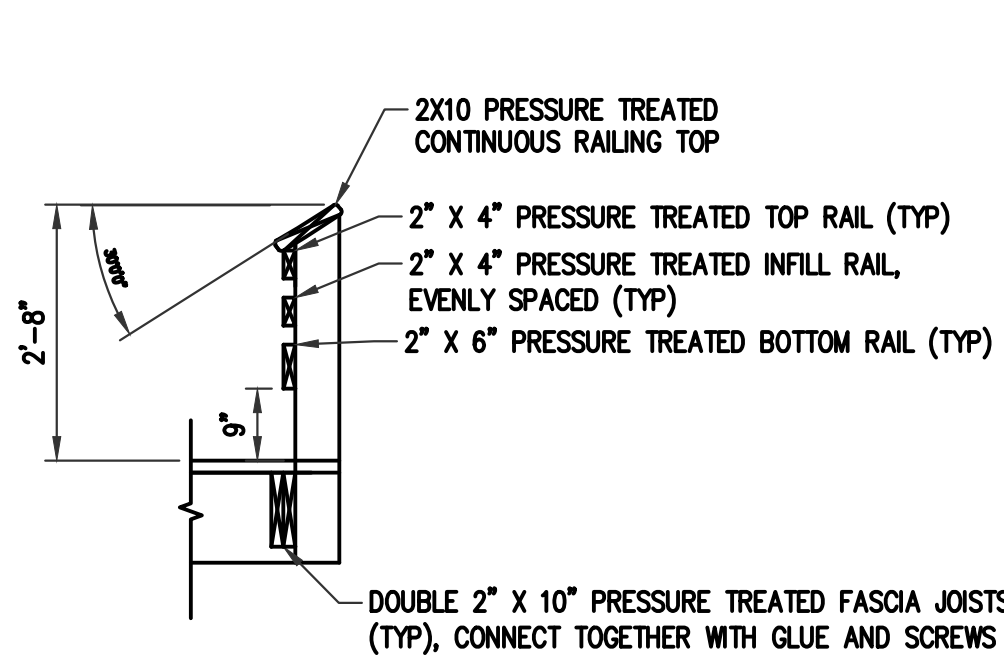
**BOARDWALK RAILING ELEVATION**

SCALE: 1/2" = 1'-0"



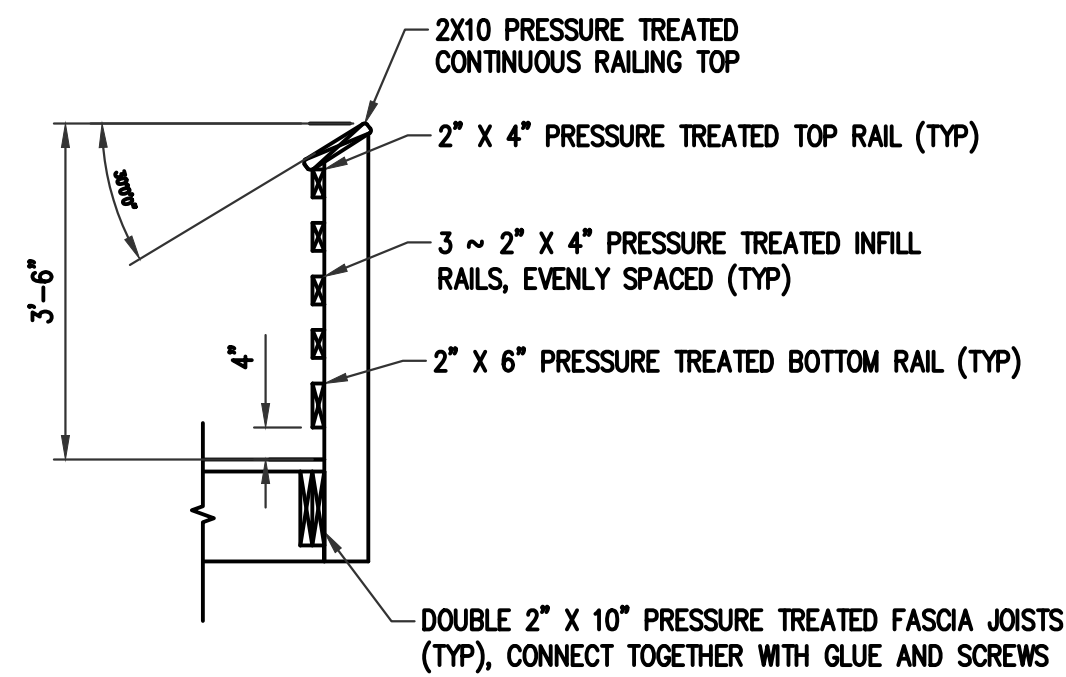
**CONCRETE APPROACH SECTION C-C**

SCALE: 1/2" = 1'-0"



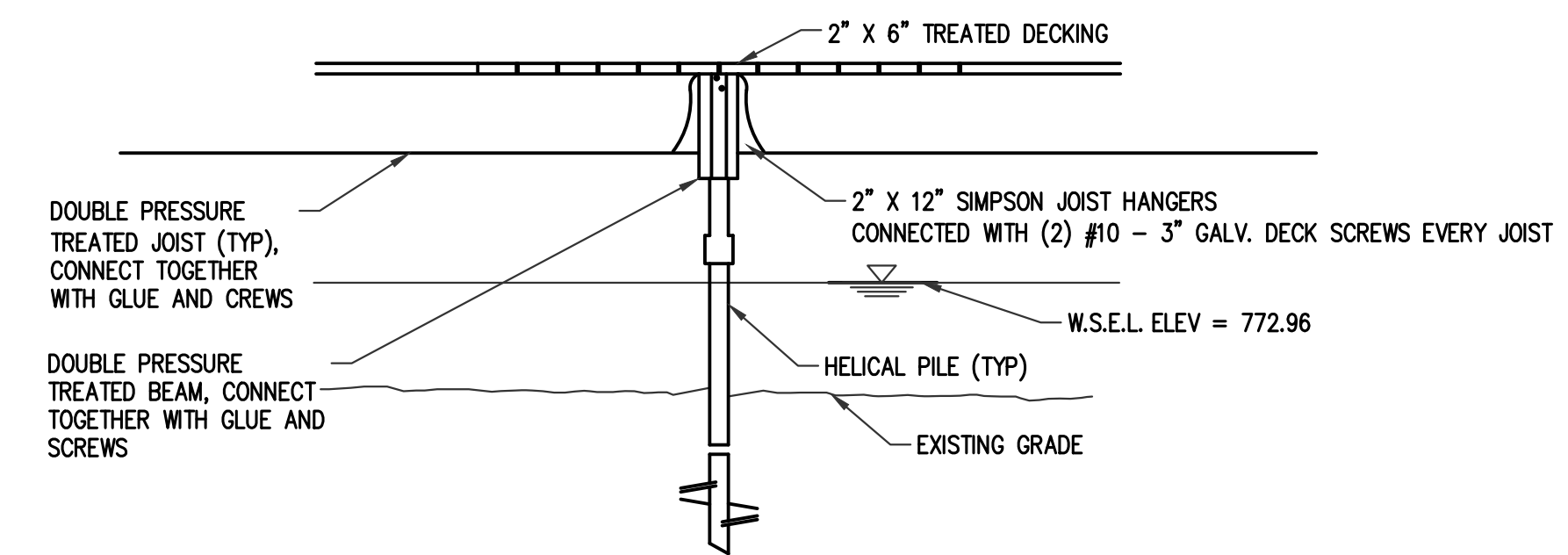
**PROPOSED TYPICAL 32\"/>**

SCALE: 1/2" = 1'-0"



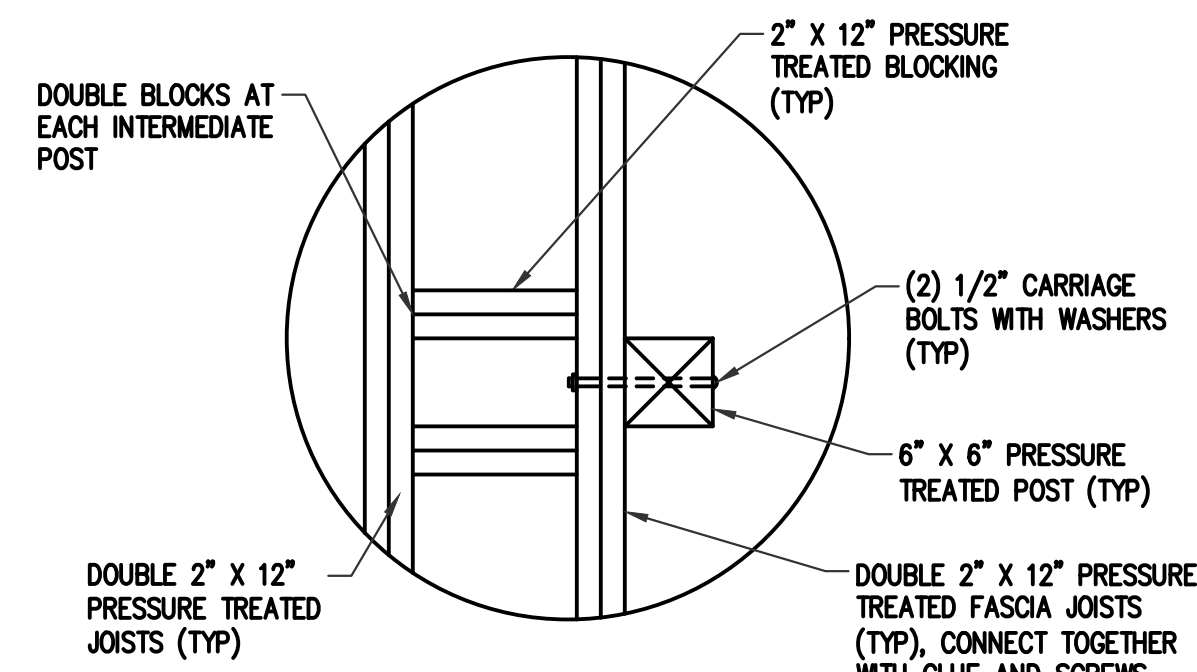
**PROPOSED TYPICAL 42\"/>**

SCALE: 1/2" = 1'-0"



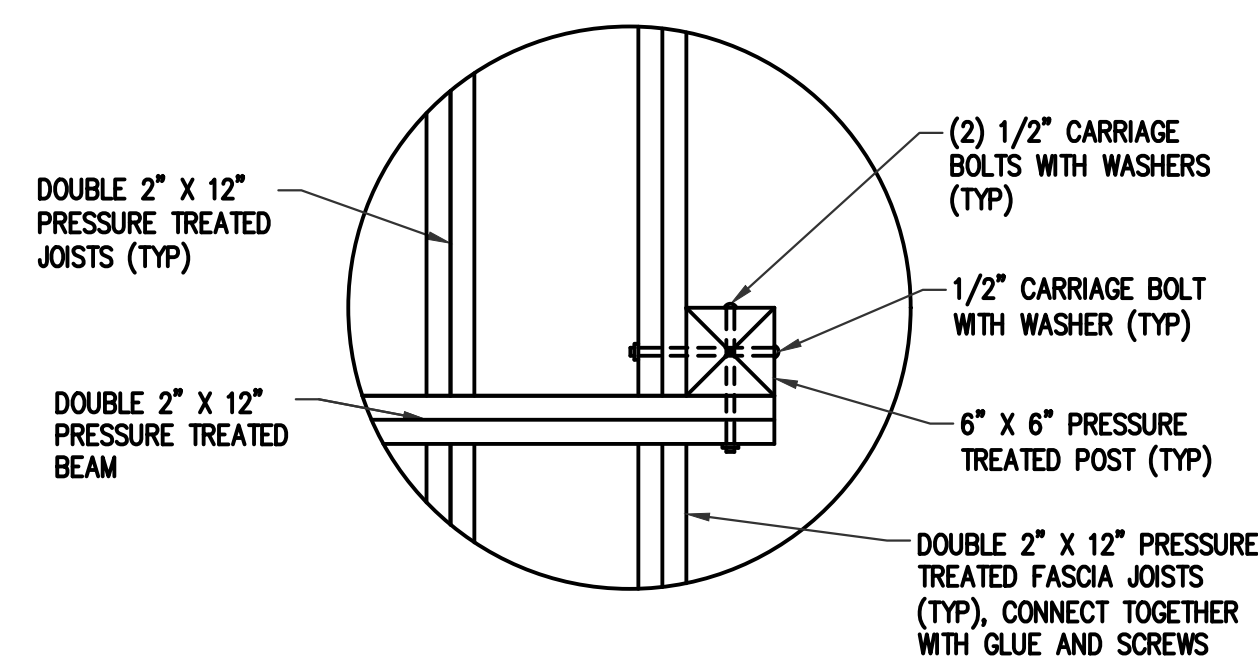
**BOARDWALK FRAMING CONNECTION**

NOT TO SCALE



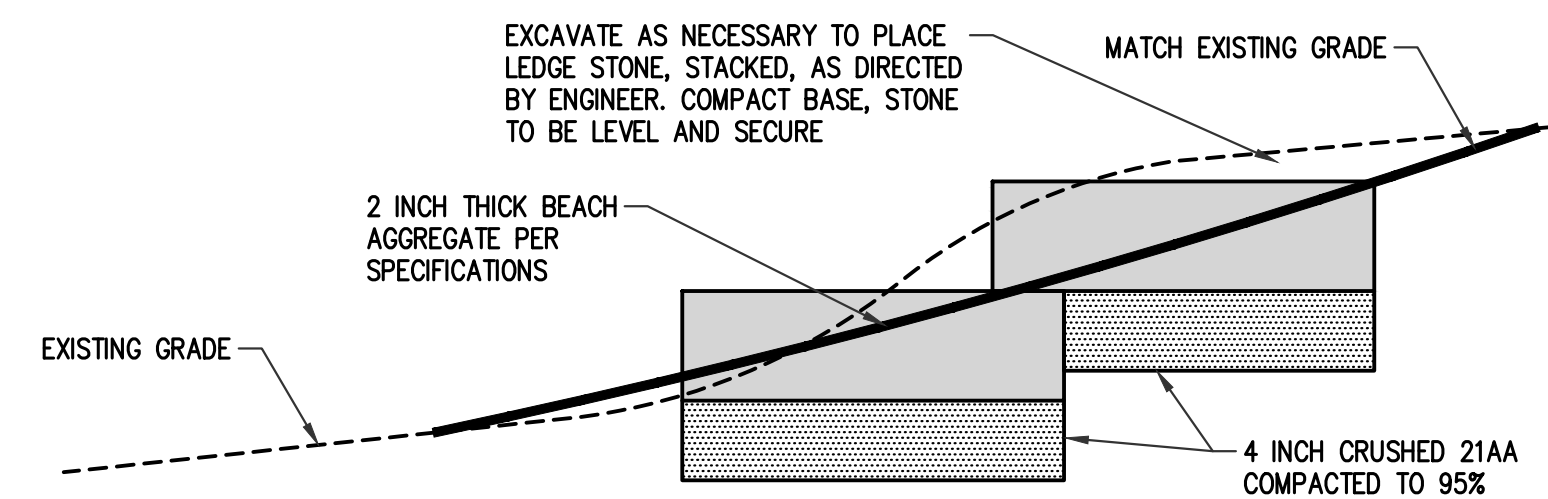
**RAIL POST CONNECTION DETAIL**

SCALE: 1" = 1'-0"



**RAIL POST CONNECTION DETAIL - AT BEAM**

SCALE: 1" = 1'-0"



**LEDGE STONE / BEACH AGGREGATE SECTION DETAIL**

NOT TO SCALE



Know what's below.  
Call before you dig.

**PLAN SUBMITTALS AND CHANGES**

**BIDDING DOCUMENTS**

DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV:

SHT# 18 OF 20  
JOB No: 20C0027

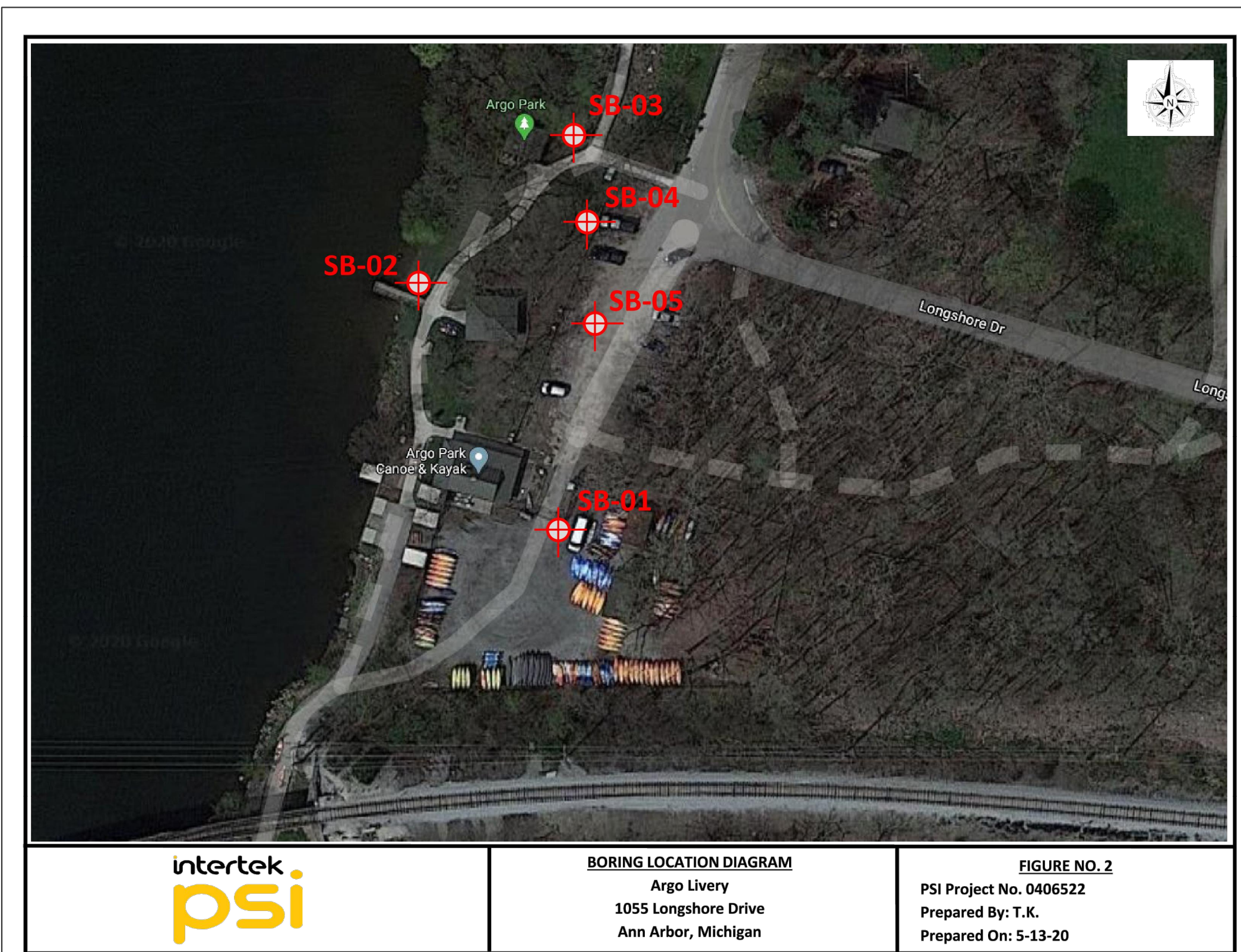
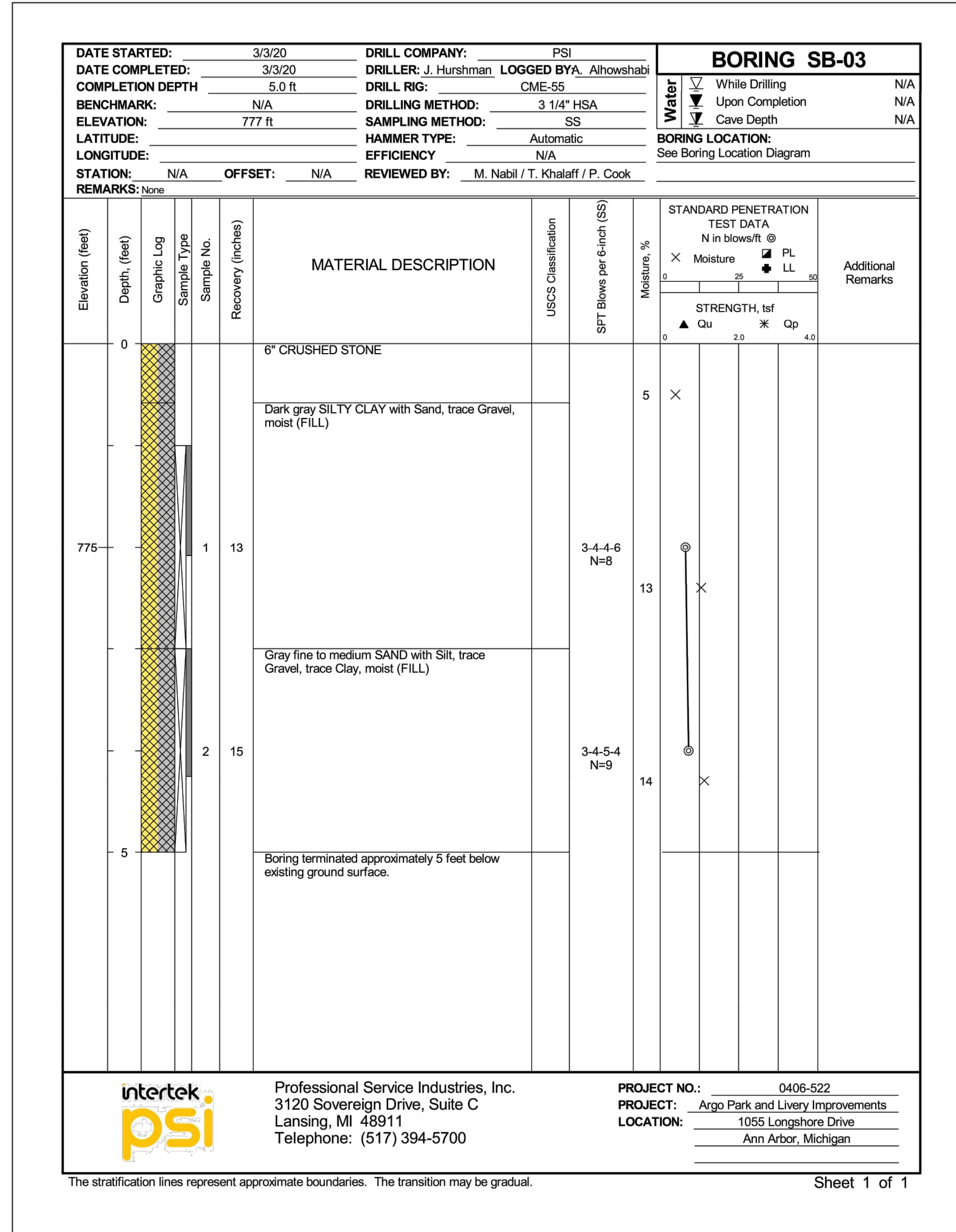
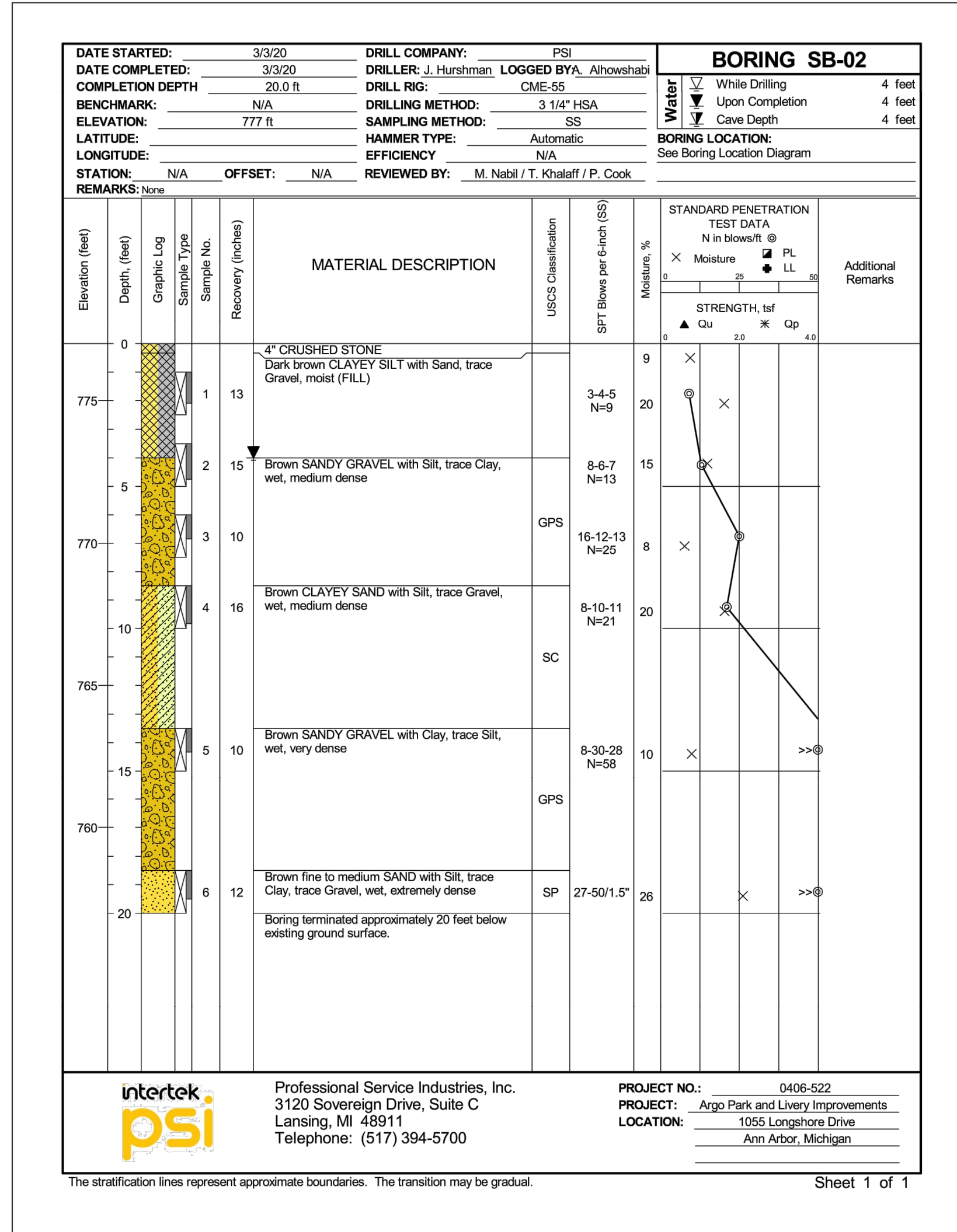
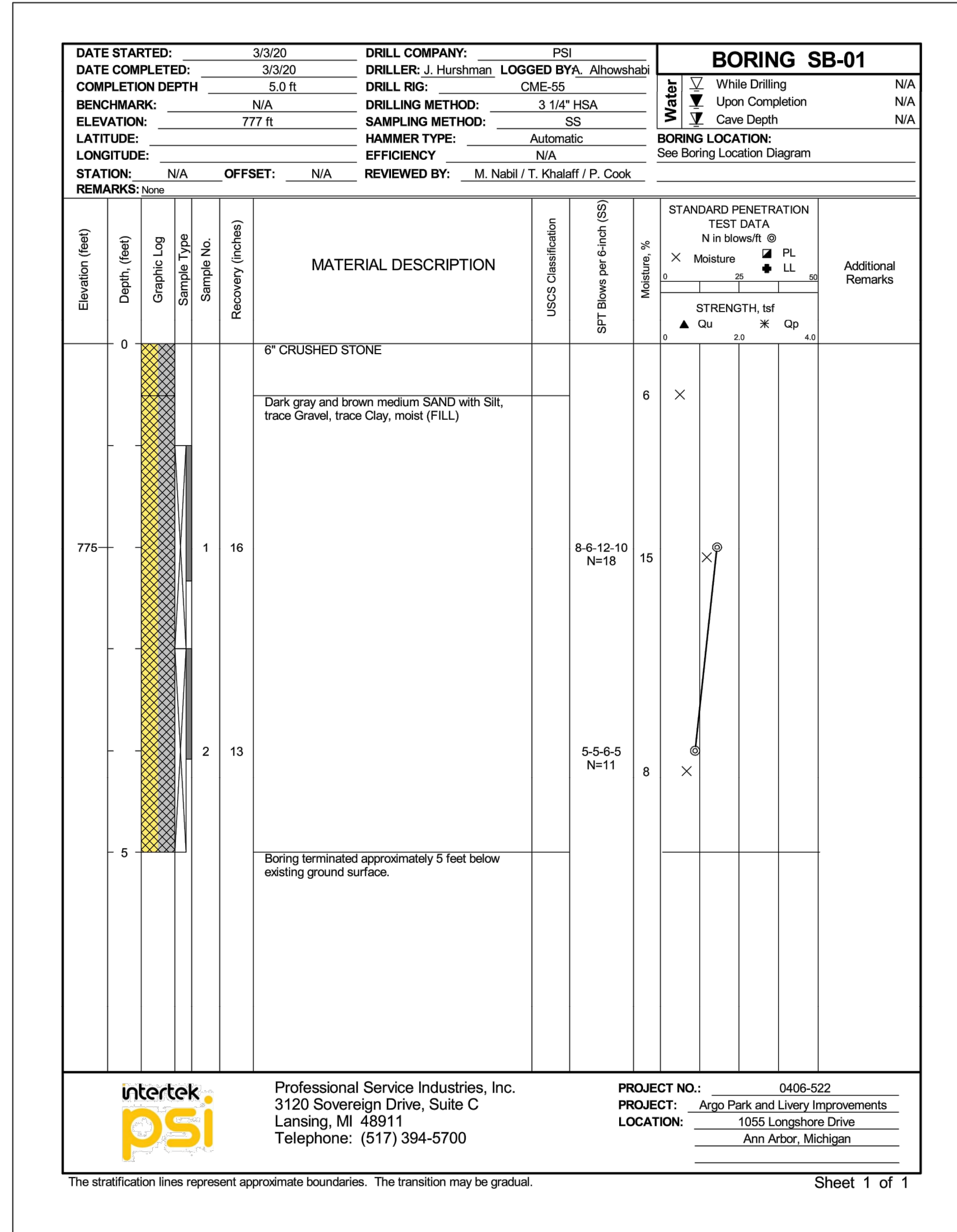
PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

**Rowe**  
The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**

BOARDWALK DETAILS SHEET



PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

REV:

SHT# 19 OF 20  
JOB No: 20C0027

PLAN DATE: JANUARY 2021  
PROJECT MGR: DRS  
REVIEWER: AW  
SCALE: NOT TO SCALE

**ROWE PROFESSIONAL SERVICES COMPANY**



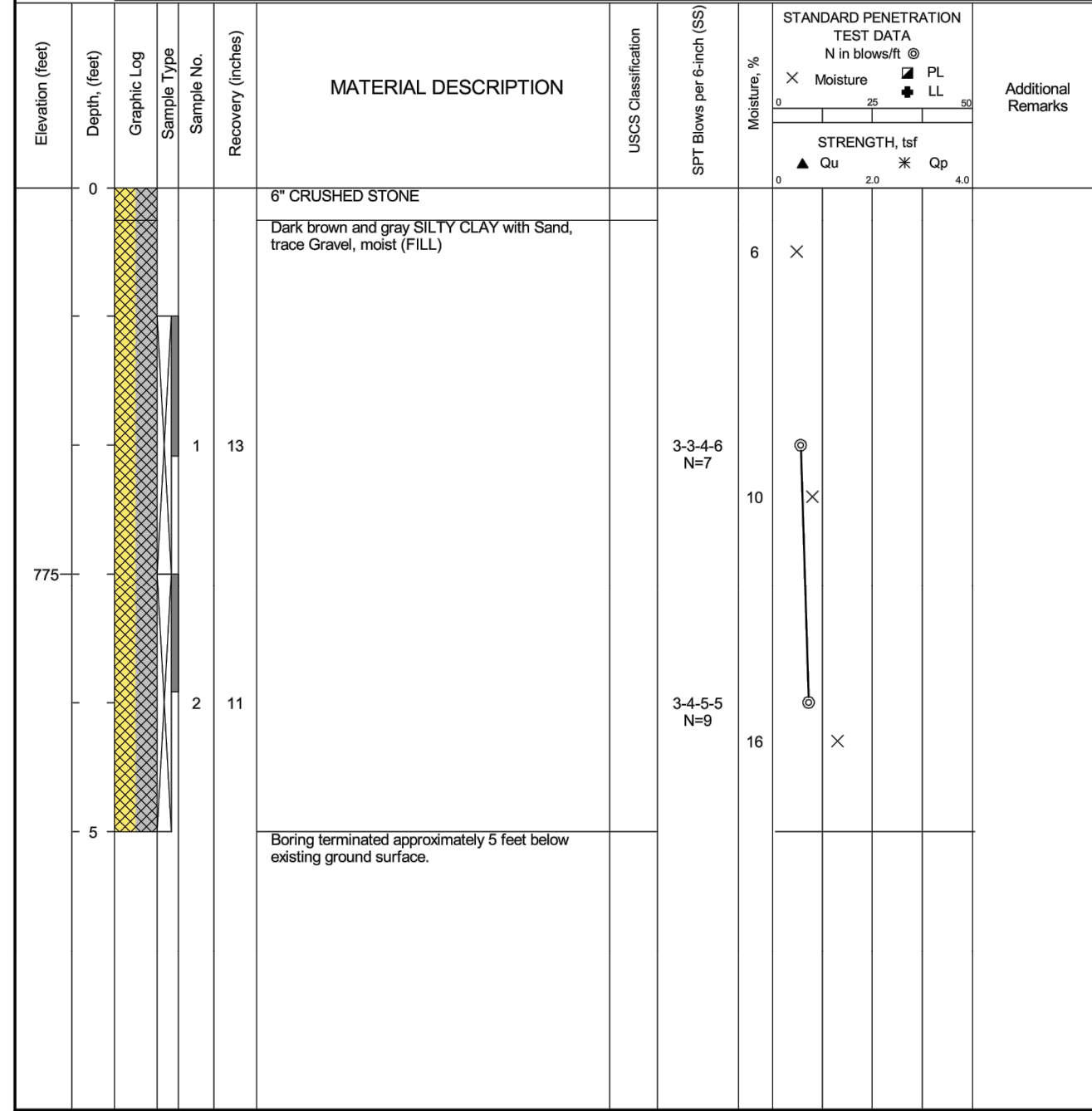
The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502  
O: (810) 341-7500  
F: (810) 341-7573  
www.rowepsc.com

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**

SOIL BORINGS SHEET

DATE STARTED: 3/3/20 DRILL COMPANY: PSI  
 DATE COMPLETED: 3/3/20 DRILLER: J. Hurstman LOGGED BY: Ahowshab  
 COMPLETION DEPTH: 5.0 ft DRILL RIG: CME-55  
 BENCHMARK: N/A DRILLING METHOD: 3 1/4" HSA  
 ELEVATION: 778 ft SAMPLING METHOD: SS  
 LATITUDE: N/A HAMMER TYPE: Automatic  
 LONGITUDE: N/A EFFICIENCY: N/A  
 STATION: N/A OFFSET: N/A REVIEWED BY: M. Nabil / T. Khalaf / P. Cook  
 REMARKS: None

**BORING SB-04**



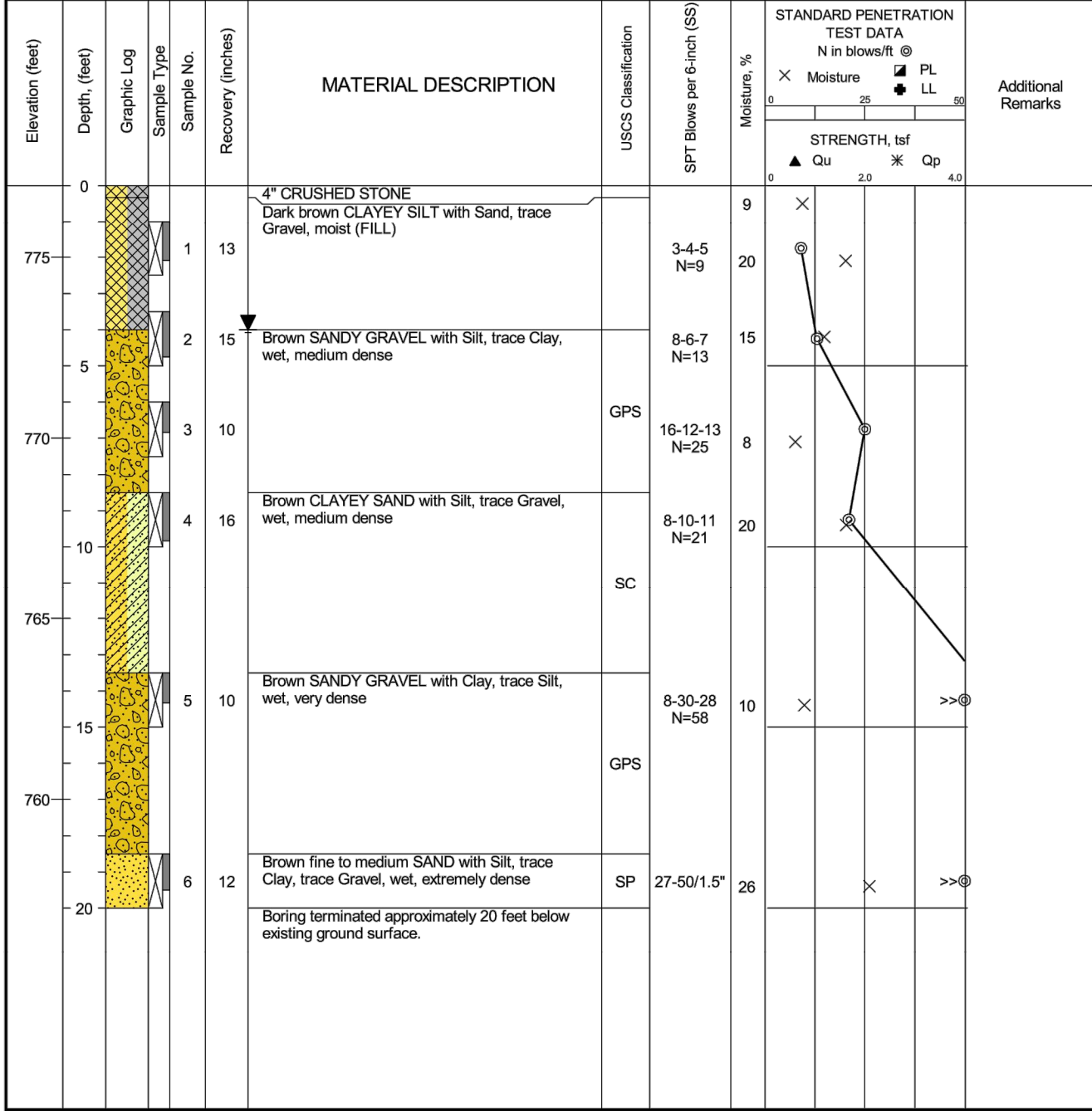
PROJECT NO.: 0406-522  
 PROJECT: Argo Park and Livery Improvements  
 LOCATION: 1055 Longshore Drive, Ann Arbor, Michigan

Professional Service Industries, Inc.  
 3120 Sovereign Drive, Suite C  
 Lansing, MI 48911  
 Telephone: (517) 394-5700

intertek psi

DATE STARTED: 3/3/20 DRILL COMPANY: PSI  
 DATE COMPLETED: 3/3/20 DRILLER: J. Hurstman LOGGED BY: Ahowshab  
 COMPLETION DEPTH: 20.0 ft DRILL RIG: CME-55  
 BENCHMARK: N/A DRILLING METHOD: 3 1/4" HSA  
 ELEVATION: 777 ft SAMPLING METHOD: SS  
 LATITUDE: N/A HAMMER TYPE: Automatic  
 LONGITUDE: N/A EFFICIENCY: N/A  
 STATION: N/A OFFSET: N/A REVIEWED BY: M. Nabil / T. Khalaf / P. Cook  
 REMARKS: None

**BORING SB-05**



PROJECT NO.: 0406-522  
 PROJECT: Argo Park and Livery Improvements  
 LOCATION: 1055 Longshore Drive, Ann Arbor, Michigan

Professional Service Industries, Inc.  
 3120 Sovereign Drive, Suite C  
 Lansing, MI 48911  
 Telephone: (517) 394-5700

intertek psi

**SOIL CLASSIFICATION CHART**

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

MAJOR DIVISIONS	SYMBOLS	TYPICAL DESCRIPTIONS
	GRAPH LETTER	
COARSE GRAINED SOILS	CLEAN GRAVELS	GW
	(LITTLE OR NO FINES)	GP
	GRAVELS WITH FINES	GM
	(APPRECIABLE AMOUNT OF FINES)	GC
	MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 4 SIEVE	SW, SP, SM, SC
FINE GRAINED SOILS	LIQUID LIMIT LESS THAN 50	ML, CL, OL
	LIQUID LIMIT GREATER THAN 50	MH, CH, OH
		PT

intertek psi

**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.  
 HSA: Hollow Stem Auger - typically 3 1/4" or 4 1/4" I.D. openings, except where noted.  
 M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry  
 R.C.: Diamond Bit Core Sampler  
 H.A.: Hand Auger  
 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.  
 N<sub>60</sub>: A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)  
 Q<sub>u</sub>: Unconfined compressive strength, TSF  
 Q<sub>p</sub>: 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  
 γ<sub>w</sub>, γ<sub>s</sub>: Apparent groundwater level at time noted

**RELATIVE DENSITY OF COARSE-GRAINED SOILS**

Relative Density	N - Blows/foot
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**

Description	Criteria
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**

Component	Size Range
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 1/2 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

**RELATIVE PROPORTIONS OF FINES**

Descriptive Term	% Dry Weight
Trace	< 5%
Modifier:	>12%

**GENERAL NOTES**

**CONSISTENCY OF FINE-GRAINED SOILS**

Q <sub>u</sub> - TSF	N - Blows/foot	Consistency
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**

Description	Criteria
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**

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

**STRUCTURE DESCRIPTION**

Description	Criteria
Stratified:	Alternating layers of varying material or color with layers at least 1/4-inch (6 mm) thick
Laminated:	Alternating layers of varying material or color with layers less than 1/4-inch (6 mm) thick
Fisured:	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided:	Fracture planes appear polished or glossy, sometimes striated

**SCALE OF RELATIVE ROCK HARDNESS**

Q <sub>u</sub> - TSF	Consistency
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**

Description	Criteria
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:	1/4-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded:	1/4-inch to 1/2-inch (10 mm to 30 mm)
Thickly Laminated:	1/8-inch to 1/4-inch (3 mm to 10 mm)
Thinly Laminated:	1/8-inch or less "paper thin" (<3 mm)

**ROCK VOIDS**

Void	Void Diameter
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 800 mm (2 in to 24 in)
Cave	>800 mm (>24 in)

**ROCK QUALITY DESCRIPTION**

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

**DEGREE OF WEATHERING**

Description	Criteria
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.

**Graphic Symbols for Materials and Rock Deposits**

	CONCRETE Portland Cement Concrete		METAMORPHIC ROCK Amphibolite, Gneiss, Marble, Phyllite, Quartzite, Schist, Serpentine, Slate
	BITUMINOUS CONCRETE		CHERT
	CLAYSTONE		SANDSTONE Sandstone, Orthoquartzite (Sandstone)
	COAL Coal, Anthracite Coal		SHALE
	CONGLOMERATE/BRECCIA Conglomerate, Breccia		SILTSTONE
	IGNEOUS ROCK Anorthosite, Basalt, Metabasalt, Diabase (Gabbro), Gabbro, Granite/Granodiorite, Hornfels, Pegmatite, Rhyolite/Metaryolite		NO RECOVERY
	LIMESTONE Limestone, Dolomite		VOID

intertek psi



Know what's below.  
Call before you dig.

**PLAN SUBMITTALS AND CHANGES**

BIDDING DOCUMENTS	
DATE	DESCRIPTION
1-15-21	ISSUED FOR BIDS

PLAN DATE: JANUARY 2021  
 PROJECT MGR: DRS  
 REVIEWER: AW

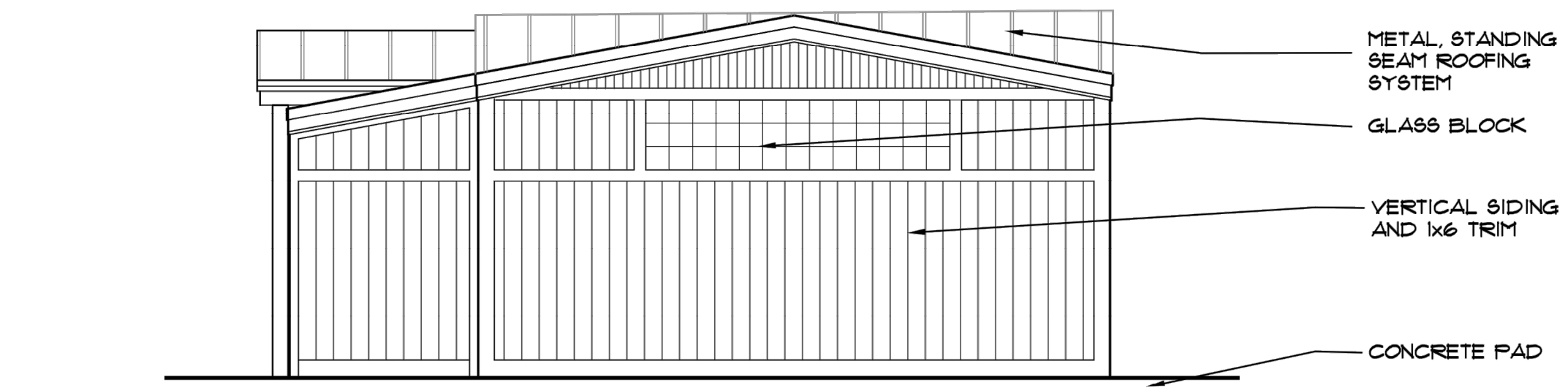
NOT TO SCALE

ROWE PROFESSIONAL SERVICES COMPANY  
 O: (810) 341-7500  
 F: (810) 341-7573  
 www.rowepsc.com

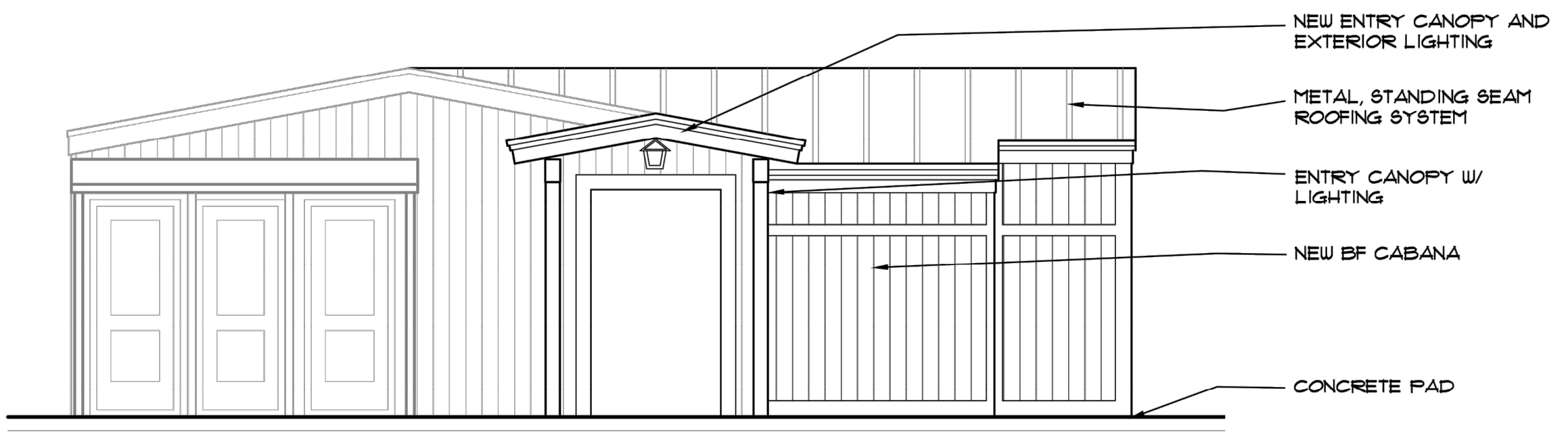
The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48502

PREPARED FOR  
**CITY OF ANN ARBOR PARKS & REC**  
**ARGO PARK LIVERY**  
 SOIL BORINGS SHEET

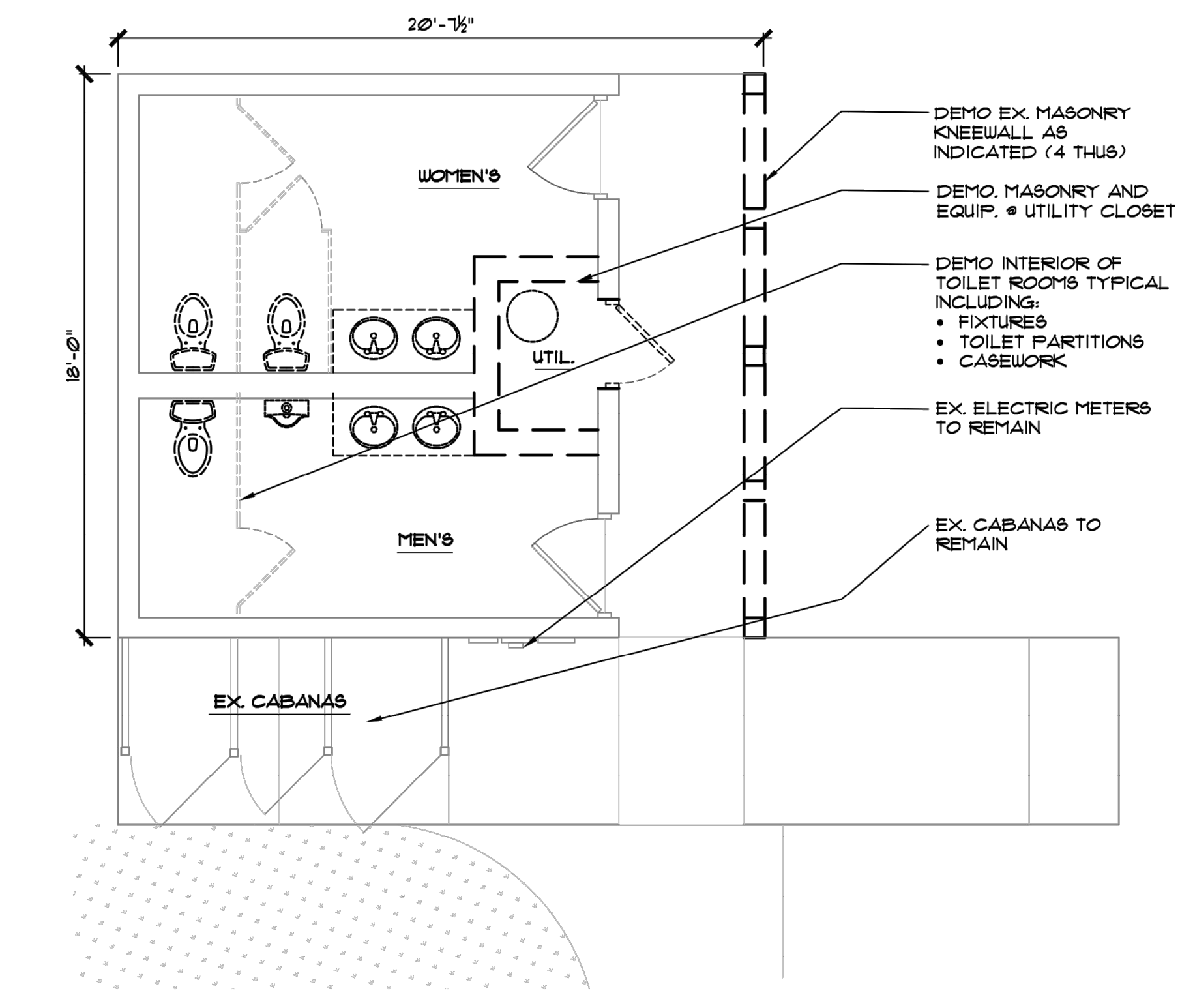
REV: \_\_\_\_\_  
 SH# 20 OF 20  
 JOB No: 20C0027



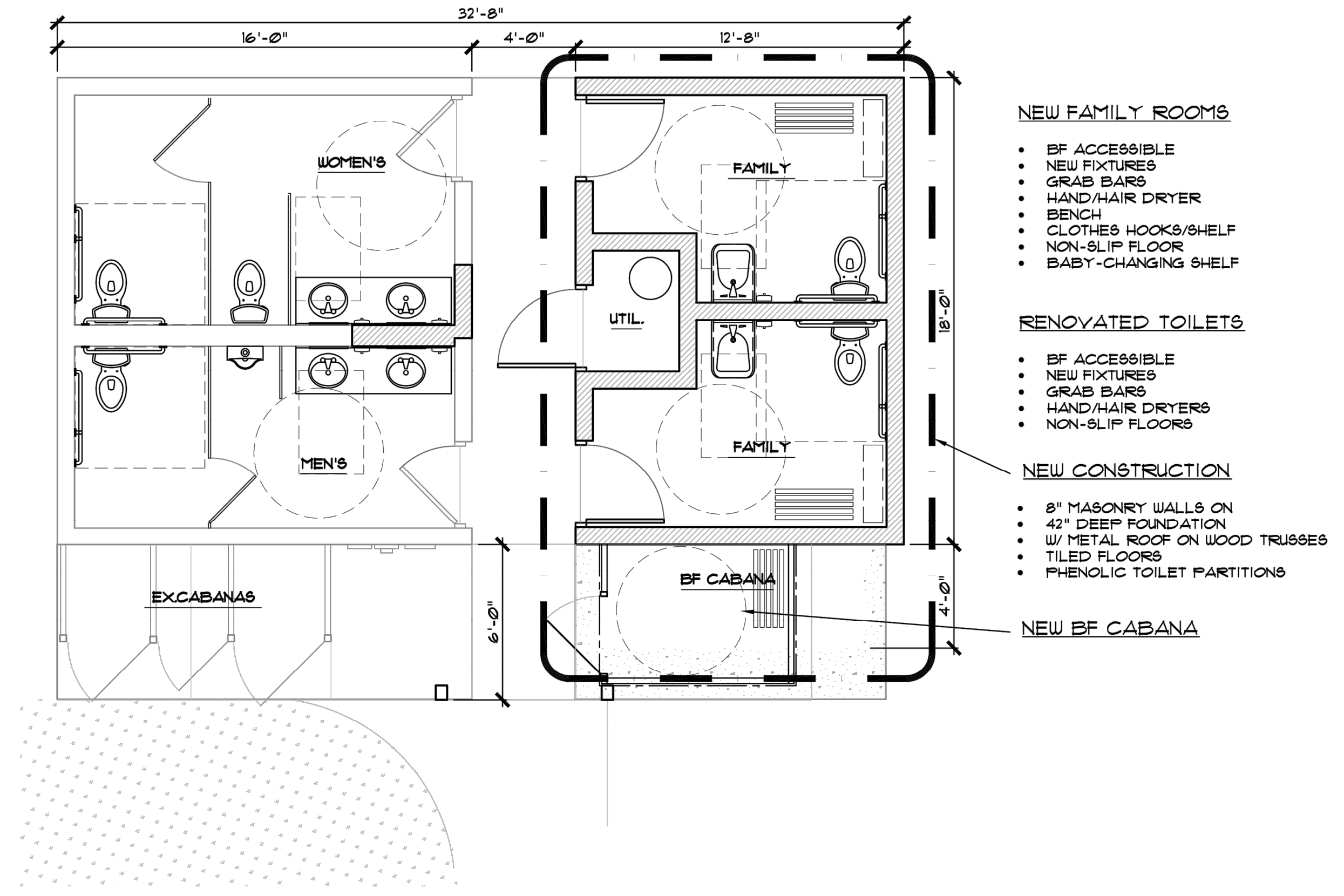
**4 West Elevation**  
 SCALE: 1/4"=1'-0"



**3 South Elevation**  
 SCALE: 1/4"=1'-0"



**2 Demolition Floor Plan**  
 SCALE: 1/4"=1'-0"



**1 Proposed Floor Plan**  
 SCALE: 1/4"=1'-0"