

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
T-02-N R-08-E	

Professional Seal:



Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	EGLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	EGLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390

PH: 248-926-0063

COVER SHEET

**UNION LAKE KAYAK
LAUNCH**

COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN

Date:	04-02-2024
Scale:	N/A
Sheet:	01
Project:	20492.00

UNION LAKE KAYAK LAUNCH

A PART OF SECTION 15, T-2-N, R-8-E
CHARTER TOWNSHIP OF COMMERCE,
OAKLAND COUNTY, MICHIGAN

ENGINEER:

GIFFELS WEBSTER
JASON MAYER, P.E.
(248) 852-3100
JMAYER@GIFFELSWEBSTER.COM
1025 E MAPLE RD SUITE 100,
BIRMINGHAM, MI 48009

SURVEYOR:

GIFFELS WEBSTER
CHRIS ASIALA, P.S.
(313) 962-4442
CASIALA@GIFFELSWEBSTER.COM
28 W ADAMS ST SUITE 1200,
DETROIT, MI 48226

**CHARTER TOWNSHIP OF COMMERCE
BOARD OF TRUSTEES:**

LARRY GRAY - SUPERVISOR
MOLLY PHILLIPS - TREASURER
MELISSA CREECH - CLERK
ROBERT BERKHEISER - TRUSTEE
VANESSA MAGNER - TRUSTEE
RICK SOVEL - TRUSTEE
GEORGE WEBER - TRUSTEE

PROJECT CONTACT INFO:

ELECTRIC - DTE ENERGY
NORTHWEST PLANNING & DESIGN CENTER
SEBASTIAN SARKISSIAN, 313-235-4420

GAS - DTE / MICHCON
24" HIGH PRESSURE GAS MAIN
ROBERT WAGNER, (O)248-685-0966, (C) 248-249-4336

GAS - CONSUMERS ENERGY
MICHAEL JABLONSKI, 248-769-5704

TELEPHONE - AT&T
JEFF HEATH, 248-705-5506

WATER MAIN / SANITARY - OAKLAND COUNTY WATER
RESOURCE COMMISSIONER
BRIAN BENNETT, P.E., 248-858-0976

ROW - ROAD COMMISSION FOR OAKLAND COUNTY
BOB ZSCHERING, 248-294-9099

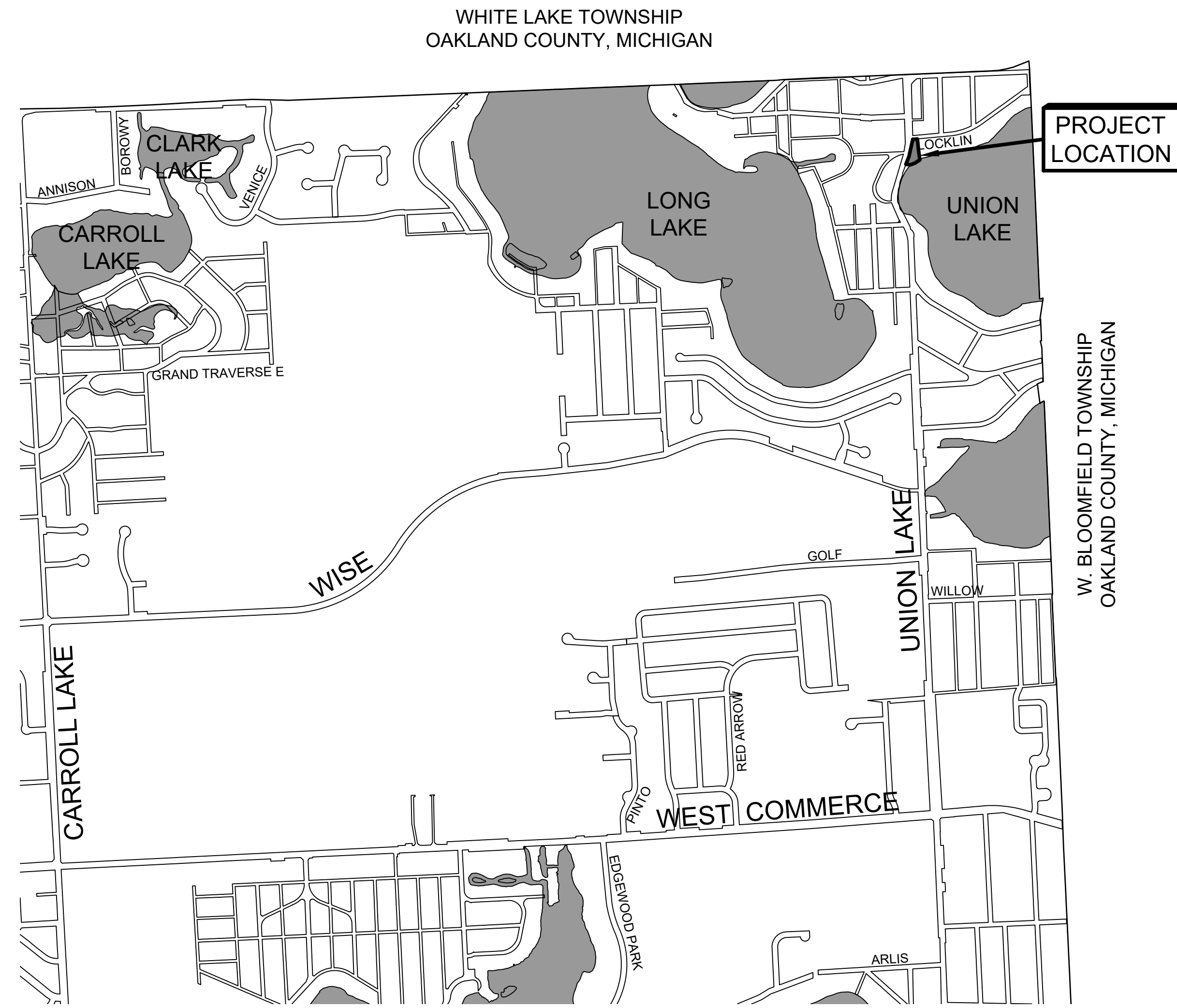
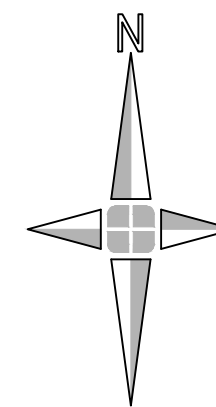
SOIL EROSION CONTROL - COMMERCE TOWNSHIP
JAY JAMES, 248-960-7060

NOTES:

- A. ALL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF COMMERCE TOWNSHIP
- B. ALL WORK WITHIN THE UNION LAKE ROAD RIGHT-OF-WAY REQUIRES A PERMIT FROM THE ROAD COMMISSION FOR OAKLAND COUNTY (RCOC)
- C. ALL PUBLIC IMPROVEMENTS SHALL HAVE COMPETENT FULL-TIME INSPECTION PROVIDED BY OR CAUSED TO BE PROVIDED BY THE COMMERCE TOWNSHIP AND SHALL BE APPROVED PRIOR TO A FINAL CERTIFICATE OF OCCUPANCY

RCOC NOTES:

- A. CALL INSPECTOR OR PERMIT SUPERVISOR BEFORE BEGINNING ANY WORK IN R.O.W
- B. "PROPER SIGNING" IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED
- C. PROJECT EXCEEDING 3-DAYS REQUIRE GROUND MOUNTED SIGNS PER MDOT SSC/SEC 812.03
- D. LANE CLOSURES RESTRICTED TO 9-3 MON - FRI
- E. FLAG PERSONS REQUIRED FOR TEMPORARY ONE LANE ROADS
- F. RAMPS & SIDEWALKS MUST MEET ADA SPECIFICATIONS
- G. KEEP ROADS CLEAN OF DIRT AND DEBRIS
- H. FULL DEPTH SAWCUT AND/OR MILL A BUTT JOINT, WITH LOCATION/WIDTH AS DIRECTED BY RCOC INSPECTOR
- I. SUITABLE BASE TO BE DETERMINED BY R.C.O.C. INSPECTOR IN THE FIELD
- J. SUBMIT ALL MATERIAL AND DENSITY REPORTS TO RCOC PERMIT DEPARTMENT



VICINITY MAP
NOT TO SCALE

APPROVAL AND PERMITS

AGENCY / TYPE	SUBMITTAL DATE	REVISED DATE	APPROVED DATE	PERMIT NO.	EXPIRATION DATE
COMMERCE TOWNSHIP SSC PERMIT					
RCOC RIGHT-OF-WAY PERMIT	5/31/2024		7/23/2024	24-0884	
RCOC APPROACH PERMIT	5/31/2024		7/23/2024	24-0884	
EGLE	7/2/2024		7/10/2024	WRP041982	7/10/2029

SHEET INDEX:

- 01 COVER SHEET
- 02 GENERAL NOTES & LEGEND
- 03 EXISTING CONDITIONS
- 04 REMOVALS & SOIL EROSION PLAN
- 05 IMPROVEMENTS PLAN
- 06 GRADING PLAN
- 07 DETAILS

1 OF 1 WRC SOIL EROSION AND SEDIMENT CONTROL DETAILS

OVERALL PROJECT QUANTITIES

NO.	ITEM DESCRIPTION	QUANTITY
1	SILT FENCE	144 LF
2	PAVEMENT, REMOVE	631 SYD
3	FULL DEPTH PAVEMENT REMOVAL WITH RESTORATION	186 SYD
4	CURB AND GUTTER, REMOVE	87 LF
5	SIGN, REMOVE	8 EA
6	BOULDER, REMOVE AND RELOCATE	20 EA
7	LANDSCAPE BORDER, REMOVE	95 LF
8	PARKING BARRICADE, REMOVE	12 EA
9	BOLLARD, REMOVE	2 EA
10	TREE, REMOVE, 12 INCH	1 EA
11	TREE, REMOVE, 5 INCH	1 EA
12	RCOC APPROACH HMA	44 TON
13	CONCRETE DRIVEWAY OPENING, DET M	75 LF
14	RCOC CURB AND GUTTER F-2 MOD REVERSE	27 LF
15	RCOC CURB AND GUTTER F-2	27 LF
16	RCOC CURB AND GUTTER F-2 (OR MATCH EXISTING)	28 LF
17	PARKING LOT HMA	130 TON
18	AGGREGATE BASE, 6 INCH, 21AA	700 SYD
19	SIDEWALK, CONC, 4 INCH	401 SFT
20	AGGREGATE BASE, 6 INCH, CL II SAND	52 SYD
21	ADA PARKING SIGN	1 EA
22	VAN ACCESSIBLE PARKING SIGN	1 EA
23	"NO TRAILERS" SIGN	1 EA
24	PARKING LOT STRIPING	1 EA
25	ADA KAYAK LAUNCH INSTALLED (COMPLETE)	1 LS
26	SITE GRADING	1 LS
27	RESTORATION	1 LS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF COMMERCE TOWNSHIP, OAKLAND COUNTY WATER RESOURCES COMMISSIONER, GREAT LAKES WATER AUTHORITY, THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY AND THE ROAD COMMISSION FOR OAKLAND COUNTY.
- ALL PERMITS, BONDS AND INSURANCE, ETC., SHALL BE PAID BY THE CONTRACTOR AS DESCRIBED IN THE SPECIFICATIONS.
- 72 HOURS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) FOR LOCATION OF UNDERGROUND AND CABLE FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK.
- UTILITY INFORMATION SHOWN ON THE PLANS WERE OBTAINED FROM UTILITY OWNERS AND MAY OR MAY NOT BE ACCURATE AND COMPLETE. CONTRACTOR SHALL VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES WHICH MIGHT HAVE AN EFFECT ON THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN ON THE PLANS.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AT PROPOSED CONNECTIONS AND/OR CROSSINGS, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES TO THE PLAN.
- ALL ELEVATIONS ON THESE PLANS ARE ON U.S.G.S. NAVD88 DATUM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL. PROVIDE NECESSARY MATERIAL AND EQUIPMENT TO KEEP DUST IN CHECK AT ALL TIMES. RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS. DUST CONTROL SHALL BE INCIDENTAL TO THE PROJECT.
- DURING CONSTRUCTION, CONTRACTOR MAY ENCOUNTER SPRINKLER HEADS, PIPING, LIGHTING, AND BURIED ELECTRICAL CABLE, MAILBOXES, FENCES, SIGNS, ETC. CONTRACTOR SHALL REPLACE AND/OR RESTORE ALL COMPONENTS OF SUCH SYSTEMS. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- ALL WORK SHALL BE CONDUCTED WITHIN ROAD RIGHT-OF-WAY OR SPECIFIED EASEMENTS, UNLESS PRIOR WRITTEN CONSENT IS OBTAINED FROM PROPERTY OWNERS. ANY DAMAGES ON PRIVATE PROPERTY CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE PAID FOR BY THE CONTRACTOR AT NO COST TO THE OWNER.
- NO FROZEN MATERIAL SHALL BE PERMITTED AS BACKFILL MATERIAL UNDER ANY ROADWAY, DRIVEWAY OR PARKING AREA.
- EXCESS EXCAVATION SHALL BE DISPOSED OF BY THE CONTRACTOR.
- EXISTING PAVEMENTS, SIDEWALKS, CURBS, DRIVEWAYS, GUTTERS, CROSSWALKS, AND OTHER BITUMINOUS OR CONCRETE SURFACES TO BE REMOVED, SHALL BE SAWCUT FULL DEPTH AND REMOVED TO THE LIMITS SHOWN OR AS REQUIRED BY THE ENGINEER. REMOVAL SHALL BE CAREFULLY DONE AND TO A NEAT LINE.
- RESTORATION OF GRAVEL SHOULDERS: GRAVEL SHOULDERS WHICH ARE DISRUPTED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED WITH MDOT COURSE GRADED AGGREGATE 22A. THE DEPTH AND WIDTH OF THE RESTORED SHOULDER RESTORATION SHALL FOLLOW IMMEDIATELY BEHIND BACKFILLING OF THE PROPOSED UTILITY. THIS COST SHALL BE INCIDENTAL.
- ALL RESTORATION SHALL BE SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS.
- THE CONTRACTOR AND/OR HIS SUBCONTRACTORS SHALL NOTIFY THE CHARTER TOWNSHIP OF COMMERCE, ROAD COMMISSION FOR OAKLAND COUNTY, AND COMMERCE TOWNSHIP FIRE DEPARTMENT AT LEAST TWO (2) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE NECESSARY SIGNS, BARRICADES, AND LIGHTS TO PROTECT THE TRAFFIC AND THE WORK AS DIRECTED BY THE ROAD COMMISSION FOR OAKLAND COUNTY.
- ALL LOT MARKERS AND MONUMENT POINTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED OPEN FOR EMERGENCY VEHICLES AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENTS AND BUSINESSES WHOSE DRIVEWAYS ARE AFFECTED BY HIS SCHEDULE 24 HOURS IN ADVANCE. CONTRACTOR SHALL SCHEDULE CONSTRUCTION AT NON-PEAK USE HOURS AND SHALL MINIMIZE DRIVEWAY CLOSURE BY EXPEDITING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING WHICH IS REQUIRED TO CONSTRUCT THE PROPOSED UTILITIES. COST OF DEWATERING SHALL BE INCIDENTAL TO THE PROJECT.
- ONLY THOSE ITEMS LISTED IN THE PROPOSAL ARE PAY ITEMS, AND ANY OTHER WORK CALLED FOR BY EITHER PLANS OR SPECIFICATIONS ARE CLASSED AS INCIDENTAL AND SHALL BE INCLUDED IN OTHER PRICES BID IN THE PROPOSAL.

PAVING AND GRADING NOTES

- REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
- THE EDGE OF EXISTING PAVEMENT SHALL BE CLEANED OF EARTH AND OTHER FOREIGN MATERIAL BEFORE ADJACENT POURS ARE PLACED.
- ALL PAVEMENT AREAS SHOULD BE CLEARED AND GRUBBED BY REMOVING SURFACE VEGETATION, TOPSOIL, DEBRIS AND OTHER DELETERIOUS MATERIALS.
- THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS OR PROJECT ENGINEER.
- PROPOSED AGGREGATE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVEMENT EDGE/BACK OF CURB.
- PRIOR TO THE START OF ANY FILLING, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ALL OTHER UNACCEPTABLE SOIL FROM THE FILL AREAS, AND PROPERLY BACKFILL WITH ACCEPTABLE SOIL.
- ALL BARRIER FREE RAMPS TO BE A.D.A. COMPLIANT.
- ALL PROPOSED GRADES ARE AT THE TOP EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.
- CONCRETE JOINTS WILL BE SET OR CUT EVERY 5 FEET ON-CENTER.
- EXPANSION PAPER WITH A MINIMUM THICKNESS OF 1/2 INCH WILL BE INSTALLED AT LEAST EVERY 100 L.F. AND AGAINST EXISTING CONCRETE.

EROSION CONTROL NOTES

- ALL EROSION & SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF COMMERCE TWP.
- DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND ANY SEDIMENTATION FROM WORK ON THIS PROJECT SHALL BE CONTAINED AND SHALL NOT BE ALLOWED TO COLLECT IN ANY ADJACENT AREA OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS, AND WETLANDS.
- CONSTRUCTION AND REMOVAL OF EXCESS EXCAVATED MATERIAL SHALL BE ACCOMPLISHED IN ONE CONTINUOUS OPERATION.
- TEMPORARY STABILIZATION SHALL BE PROVIDED DURING THE NON GROWING SEASON FOR ALL AREAS TO BE SEEDED. THIS TIME PERIOD IS CONSIDERED TO BE FROM OCTOBER 1 THROUGH APRIL 20.
- IF FOR ANY REASON, PERMANENT STABILIZATION CANNOT BE PROVIDED WITHIN 15 DAYS OF THE COMPLETION OF PIPE LAYING OPERATIONS, TEMPORARY STABILIZATION SHALL BE PROVIDED AT ALL DISTURBED AREAS.
- TEMPORARY STABILIZATION SHALL CONSIST OF EITHER SMALL GRAIN STRAW OR GRASS HAY SPREAD AT THE RATE OF 1.5 TO 2 TONS PER ACRE WHICH SHALL BE ANCHORED IN PLACE TO PREVENT IT FROM BEING BLOWN OR WASHED AWAY.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PERMANENT STABILIZATION AS SOON AS PRACTICAL.
- TEMPORARY STABILIZATION SHALL BE REPAIRED WHEN, AND AS OFTEN AS NECESSARY, AS DETERMINED BY THE TOWNSHIP ENGINEER.
- COST OF ALL EROSION CONTROL MEASURES ARE TO BE CONSIDERED INCIDENTAL TO THE PROJECT UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL REMOVE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAVE BEEN ACCOMPLISHED, AND WHEN REQUIRED.
- STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED, AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
- SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF DIRT OFF THE SITE.
- ALL DEWATERING SHALL BE DONE IN A MANNER WHICH WILL NOT CONTRIBUTE TO DEPOSITION OF SEDIMENT IN ROAD DITCHES OR OPEN WATER.
- ISSUANCE OF THE EROSION CONTROL PERMIT DOES NOT NEGATE THE NEED FOR ANY OTHER FEDERAL, STATE OR LOCAL PERMITS.

SEQUENCE OF CONSTRUCTION

- INSTALL SOIL EROSION MEASURES PRIOR TO ANY EARTH DISRUPTION.
- PERFORM GRADING OPERATIONS.
- PERFORM CONSTRUCTION ACTIVITIES.
- MAINTAIN SOIL EROSION DEVICES/ IMMEDIATELY REINSTALL SOIL EROSION MEASURES DAMAGED DURING CONSTRUCTION OR STORM EVENTS.
- PLACE TOPSOIL AND PERMANENT STABILIZATION IN ALL DISRUPTED AREAS.
- ONE MONTH AFTER PLACEMENT OF PERMANENT STABILIZATION, VERIFY VEGETATION GROWTH AND RESEED/RESAD, FERTILIZE AND MULCH AS NECESSARY.
- CONTACT COMMERCE TOWNSHIP & RCOC FOR FINAL INSPECTION & APPROVAL.

LEGEND - EXISTING

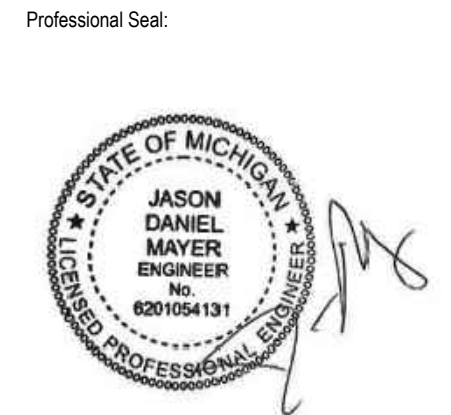
SECTION LINE	Ⓢ SAN. MH	Ⓢ GAS METER	★ MISC. TOPO. FEATURE
E/ PAVEMENT	Ⓢ SAN. CLEAN OUT	Ⓢ GAS RISER	▲ SURVEY CONTROL POINT
CURB	Ⓢ SAN. RISER	Ⓢ GAS VALVE	● FOUND IRON
E/ GRAVEL	Ⓢ SAN. PUMP STATION	Ⓢ GAS MH	● FOUND NAIL
CL. ROAD	Ⓢ COMB. MH	Ⓢ TELE. RISER	✕ F. OUT CROSS
E/ WALK	Ⓢ GATE VALVE	Ⓢ TELE. MH	⊙ SECTION COR.
RAILROAD	Ⓢ HYDRANT	Ⓢ TELE. CROSS BOX	⊙ FENCE POST
E/ BRICK	Ⓢ WATER VALVE	Ⓢ CABLE RISER	⊙ BENCHMARK
MISC. LINE	Ⓢ WATER METER	Ⓢ PAY PHONE	⊙ FOUND PIPE
FENCE	Ⓢ POST INDICATOR VALVE	Ⓢ MANHOLE	● FOUND MON.
CL. DITCH/STREAM	Ⓢ WELL HEAD	○ ASPH.	ASPH. ASPHALT
SHRUB LINE	Ⓢ FDC CONNECTION	○ CONC.	CONC. CONCRETE
TREE LINE	Ⓢ IRRIGATION CONTROL BOX	○ A.C.	A.C. AIR CONDITIONER
WATER EDGE	Ⓢ STORM MH	○ G.P.	G.P. GUARD POST
WETLAND LINE	Ⓢ CATCH BASIN	<	< DECIDUOUS TREE
STORM LINE	Ⓢ BEEHIVE CB	Ⓢ CONIFEROUS TREE	Ⓢ CONIFEROUS TREE
SAN. LINE	>	Ⓢ DEAD TREE	Ⓢ DEAD TREE
WATER LINE	Ⓢ CULVERT E.S.	Ⓢ UTILITY FLAG	Ⓢ UTILITY FLAG
GAS LINE	Ⓢ ROOF/DOWN SPOUT	★	★ BLDG. CORNER (FIELD LOCATED)
UGE UG ELEC. LINE	Ⓢ OVERFLOW/OUTLET STRUCTURE	Ⓢ HANDICAP PARKING	Ⓢ HANDICAP PARKING
UGT UG TELE. LINE	Ⓢ O.C.O. STORM CLEAN OUT	Ⓢ WETLAND FLAG	Ⓢ WETLAND FLAG
CTV UG CABLE TV LINE	Ⓢ ROUND CB	Ⓢ BUSH/SHRUB	Ⓢ BUSH/SHRUB
PAINT STRIPE	Ⓢ LIGHT POLE	Ⓢ PARKING METER	Ⓢ PARKING METER
COMBINED SEWER	Ⓢ UTILITY POLE	Ⓢ RESIDENTIAL MAILBOX	Ⓢ RESIDENTIAL MAILBOX
FLD LINE	Ⓢ ELEC. TRANS.	Ⓢ U.S. MAILBOX	Ⓢ U.S. MAILBOX
STEAM LINE	Ⓢ AIR CONDITIONER	000.00+00.00	EXISTING ELEVATION
ELECTRIC OVERHEAD	Ⓢ ELEC. MH	Ⓢ SOIL BORING	Ⓢ SOIL BORING
TELEPHONE OVERHEAD	Ⓢ ELEC. METER	Ⓢ MONITORING WELL	Ⓢ MONITORING WELL
	Ⓢ ELEC. RISER	Ⓢ LAWN IRRIG. HEAD	Ⓢ LAWN IRRIG. HEAD
	Ⓢ TRAFFIC CONTROL BOX	Ⓢ STREAM MH	Ⓢ STREAM MH
	Ⓢ PUBLIC LIGHTING MH	▲	▲ CENTERLINE R.R. TRACK



Engineers
Surveyors
Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
	T-02-N R-08-E



DATE:	ISSUE:
05-14-2024	EGLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	EGLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390

PH: 248-926-0063

GENERAL NOTES & LEGEND

UNION LAKE KAYAK
LAUNCH

COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN

Date:	04-02-2024
Scale:	N/A
Sheet:	02
Project:	20492.00

Copyright © 2024 Giffels Webster.
No reproduction shall be made without the
prior written consent of Giffels Webster.

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
T-02-N R-08-E	

Professional Seal:



Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	EGLE PREAPPLICATION REQUEST
05-31-2024	RCCO PERMIT
07-03-2024	EGLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390

PH: 248-926-0063

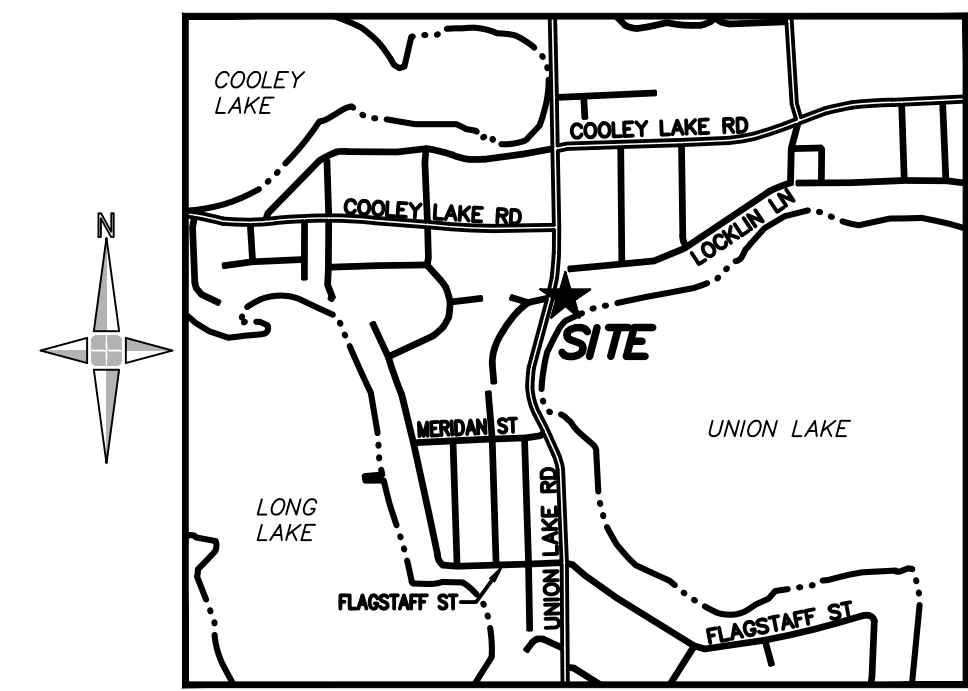
**EXISTING
CONDITIONS**

**UNION LAKE KAYAK
LAUNCH**

**COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN**

Date:	04-02-2024
Scale:	1" = 20'
Sheet:	03
Project:	20492.00

Copyright © 2024 Giffels Webster.
No reproduction shall be made without the
prior written consent of Giffels Webster.



LOCATION MAP
(NOT TO SCALE)



PROPERTY DESCRIPTION
(PER TAX RECORDS)

TAX ID. 17-01-212-001
LAND LOCATED IN THE CHARTER TOWNSHIP OF COMMERCE, IN THE COUNTY OF OAKLAND, IN THE STATE OF MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS:
TOWN 02 NORTH, RANGE 08 EAST, SECTION 1, RUSSELL BEACH SUBDIVISION, LOTS 162 & 163, EXCLUDING THAT PART TAKEN FOR ROAD.

TAX ID. 17-01-229-001
LAND LOCATED IN THE CHARTER TOWNSHIP OF COMMERCE, IN THE COUNTY OF OAKLAND, IN THE STATE OF MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS:
TOWN 02 NORTH, RANGE 08 EAST, SECTION 1, UNION LAKE HIGHLANDS, LOT 114.

NOTE: LOT 162 OF TAX ID. 17-01-212-001 WAS NOT INCLUDED IN THIS SURVEY.

SCHEDULE OF STRUCTURES

STRUCTURE	TYPE	SIZE OF PIPE	RIM	DROP	INVERT	DIRECTION	COMMENTS
312	GATE VALVE	T/PIPE	939.58	-5.53	934.05	NORTH & SOUTH	
325	GATE VALVE	T/PIPE	941.85	-5.58	936.27	EAST & WEST	
423	STORM MANHOLE	18" CPP	932.82	-3.57	929.25	NORTH	NO FLOW
473	TELEPHONE MANHOLE	T/WATER	931.10	-1.24	929.86	NO CABLES, WIRES, OR PIPES VISIBLE	FULL OF WATER
476	TELEPHONE MANHOLE	T/WATER	931.10	-13.10	918.00	NO CABLES, WIRES, OR PIPES VISIBLE	FULL OF WATER
559	CATCH BASIN	12"	937.45	-1.90	935.55	SOUTHEAST TO STRUCTURE 619	
611	UNKNOWN MANHOLE		937.42			UNABLE TO ACCESS	LID STATES "ENVIRONMENT ONE CORPORATION SCHEMENEADY, NEW YORK, USA". POSSIBLE GRINDER PUMPS/SEWER. BOLTED SHUT.
619	CATCH BASIN	12"	938.15	-3.75	934.40	NORTHWEST TO STRUCTURE 559	
			938.15	-5.53	932.62	NORTH	
			938.15	-4.07	934.08	NORTHEAST	
			938.15	-6.15	932.00	SOUTH TO STRUCTURE 423	

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

(R) = UTILITY SHOWN FROM RECORDS OR PLANS, & FIELD LOCATED WHERE POSSIBLE.

PRIOR TO THE PLANNED BUILDING IMPROVEMENTS, AND/OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR UTILITIES.

BENCH MARK DATA

(NAVD88) DATUM

BENCH MARK 1
ARROW ON HYDRANT (1990), LOCATED ON THE EASTERLY SIDE OF UNION LAKE ROAD, +/- 71 FEET SOUTH OF THE CENTERLINE OF THE ENTRANCE FOR THE PARCEL WITH TAX ID. 17-01-229-001.
ELEVATION=933.56'
(SHOWN GRAPHICALLY)

BENCH MARK 2
MAG. NAIL IN THE SOUTHWEST FACE OF A UTILITY POLE, LOCATED ON THE NORTH SIDE OF THE WESTERLY DEAD END TO LOCKLIN LANE, +/- 52 FEET EAST OF UNION LAKE ROAD.
ELEVATION=942.20'
(SHOWN GRAPHICALLY)

NOTES:

- PUBLIC LIGHTING MAPS WERE NOT AVAILABLE AT TIME OF SURVEY.
- THE FOLLOWING RECORDS WERE REVIEWED AND/OR UTILIZED FOR THE REPRESENTATION OF UNDERGROUND UTILITIES IN THIS DRAWING:
GAS
GAS LINES ARE REPRESENTED IN RECORD, SCHEMATICALLY, & SOME ARE REPRESENTED WITHOUT MEASUREMENTS. THEREFORE, PRECISE LOCATION OF CONDUIT CANNOT BE DETERMINED. THEREFORE, ALL GAS LINE LOCATIONS SHOULD BE AS APPROXIMATE WHERE REPRESENTED IN THIS DRAWING. CONTACT MISS DIG TO LOCATE ALL UNDERGROUND LINES, PRIOR TO ANY CONSTRUCTION.
- CONSUMERS ENERGY, QUARTER SECTION MAP NO. 02-58-01-1, WITH A REQUEST DATE OF NOVEMBER 17, 2023 & SENT ON FEBRUARY 02, 2024.
- CONSUMERS ENERGY, SERVICE DETAIL RECORD, SENT ON FEBRUARY 02, 2024.
- BUCKEYE PIPELINE RECORD, SENT ON FEBRUARY 22, 2024, FAILS TO COMMUNICATE THE PRECISE LOCATION OF GAS FACILITIES & PIPE SIZES. ADDITIONAL RECORDS WERE REQUESTED ON MARCH 18, 2024. NO ADDITIONAL RECORDS HAVE BEEN RECEIVED AT TIME OF SURVEY.
- WATER & SEWER
SINCE WATER & SEWER LINES ARE REPRESENTED IN RECORD, SCHEMATICALLY, & WITHOUT MEASUREMENTS. PRECISE LOCATION OF CONDUIT CANNOT BE DETERMINED. THEREFORE, ALL WATER & SEWER LINE LOCATIONS SHOULD BE AS APPROXIMATE WHERE REPRESENTED IN THIS DRAWING. CONTACT MISS DIG TO LOCATE ALL UNDERGROUND LINES, PRIOR TO ANY CONSTRUCTION. THE WATER & SEWER RECORDS, UTILIZED, WERE ON FILE WITH GIFFELS WEBSTER ENGINEERS.
- CHARTER TOWNSHIP OF COMMERCE WATER MAIN MASTER PLAN, BY GIFFELS WEBSTER ENGINEERS, MAP UPDATED ON SEPTEMBER 01, 2023.
- COMMERCE WATER SUPPLY SYSTEM, TOWNSHIP OF COMMERCE, NE SECTION 1, SHEET 001, WITH A PRINT DATE OF NOVEMBER 26, 2019.
- GIS RECORD, DATED MARCH 16, 2024 DEPICTING WATER & SEWER LINES.
- COMMERCE SANITARY / COMBINED SEWER SYSTEM, TOWNSHIP OF COMMERCE, NE SECTION 1, SHEET 001, WITH A PRINT DATE OF SEPTEMBER 06, 2023.
- ELECTRIC
- DTE ELECTRIC FACILITY MAP, NO. 238-406, DATED MARCH 05, 2024, DOES NOT DEPICT ANY UNDERGROUND UTILITIES WITHIN THE PROJECT AREA.
- TELEPHONE, CABLE, & COMMUNICATIONS
DUE TO THE SCHEMATIC NATURE OF TELEPHONE, CABLE, & COMMUNICATIONS RECORDS, PRECISE LOCATION OF UNDERGROUND LINES CANNOT BE DETERMINED. THEREFORE, ALL TELEPHONE, CABLE, & COMMUNICATION UNDERGROUND LINE LOCATIONS SHOULD BE AS APPROXIMATE WHERE REPRESENTED IN THIS DRAWING. CONTACT MISS DIG TO LOCATE ALL UNDERGROUND LINES, PRIOR TO ANY CONSTRUCTION.
- COMCAST RECORDS SENT ON MARCH 06, 2024 DEPICT ONLY AERIAL CABLE IN THE VICINITY OF THE PROJECT AREA.
- AT&T RECORDS, DATED FEBRUARY 28, 2024.
- 123NET PLANS, "SM - POINTS TO MILFORD SECTION 7", OI: GM8-5B1FDD8F, SHEET 4, DATED DECEMBER, 27, 2018, REVISED MARCH 08, 2019.
- THIS PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) & ZONE AE (SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY 1% ANNUAL CHANCE FLOOD; BASE FLOOD ELEVATIONS DETERMINED) IN ACCORDANCE WITH THE FEDERAL INSURANCE RATE MAP, PANEL NUMBER 477 OF 704, MAP NUMBER 26125C0477F, EFFECTIVE DATE SEPTEMBER 29, 2006.
- TREE SIZES AND SPECIES ARE THE BEST ESTIMATION OF THE FIELD SURVEYOR. SPECIFIC QUESTIONS REGARDING INDIVIDUAL TREES SHOULD BE DIRECTED TO A QUALIFIED FORESTER.
- NO BOUNDARY SURVEY WAS PERFORMED BY GIFFELS-WEBSTER ENGINEERS, INC. AT TIME OF SURVEY.
- NO TITLE COMMITMENT POLICY WAS PROVIDED. THEREFORE EASEMENTS MAY EXIST THAT ARE NOT SHOWN.
- LEGAL DESCRIPTION WAS PREPARED FROM FIELD MEASUREMENTS, CLIENT PROVIDED DOCUMENTS AND TAX ASSESSOR'S RECORDS.
- NO CERTIFICATION CAN BE MADE AS TO LIMITS OF OWNERSHIP.
- MEASURED BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH (2113), NAD83.

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
T-02-N R-08-E	

Professional Seal:



Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	EGLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	EGLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390

PH: 248-926-0063

REMOVALS PLAN

UNION LAKE KAYAK
LAUNCH

COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN

Date:	04-02-2024
Scale:	1" = 20'
Sheet:	04
Project:	20492.00

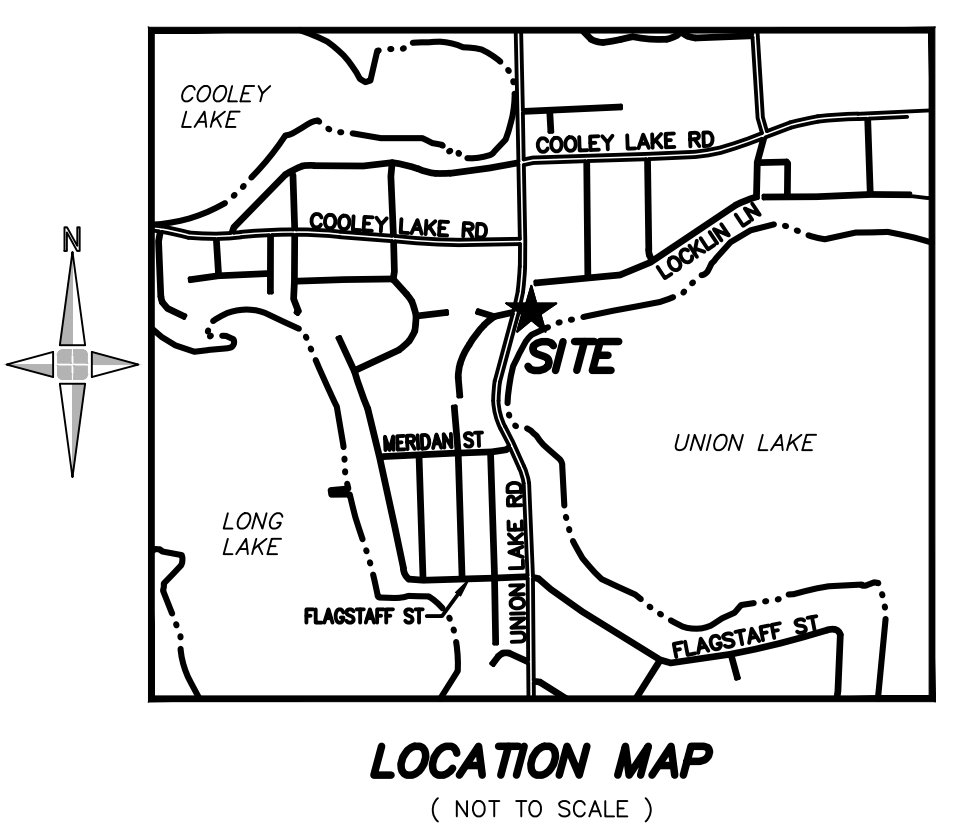
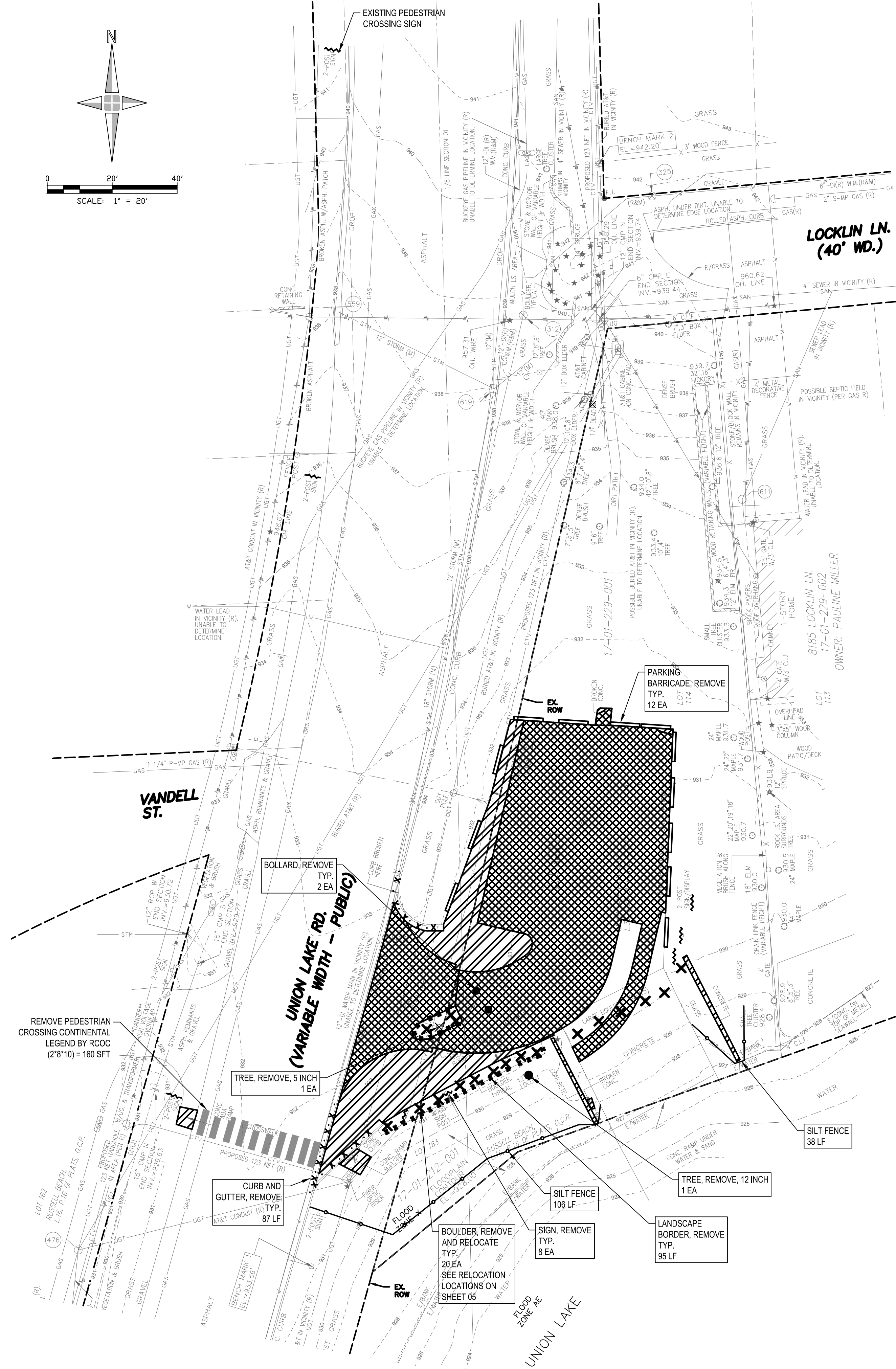
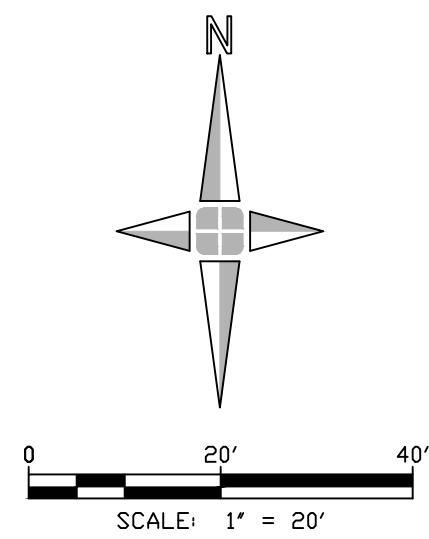
Copyright © 2024 Giffels Webster.
No reproduction shall be made without the
prior written consent of Giffels Webster.

LEGEND

- PAVEMENT REMOVE
- FULL DEPTH PAVEMENT REMOVE AND RESTORATION

QUANTITIES THIS SHEET

NO.	ITEM DESCRIPTION	QUANTITY
1	SILT FENCE	144 LF
2	PAVEMENT, REMOVE	631 SYD
3	FULL DEPTH PAVEMENT REMOVAL WITH RESTORATION	186 SYD
4	CURB AND GUTTER, REMOVE	87 LF
5	SIGN, REMOVE	8 EA
6	BOULDER, REMOVE AND RELOCATE	20 EA
7	LANDSCAPE BORDER, REMOVE	95 LF
8	PARKING BARRICADE, REMOVE	12 EA
9	BOLLARD, REMOVE	2 EA
10	TREE, REMOVE, 12 INCH	1 EA
11	TREE, REMOVE, 5 INCH	1 EA



FURTHER SOUTH ON UNION LAKE ROAD

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
T-02-N R-08-E	

Professional Seal:



Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	ESLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	ESLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

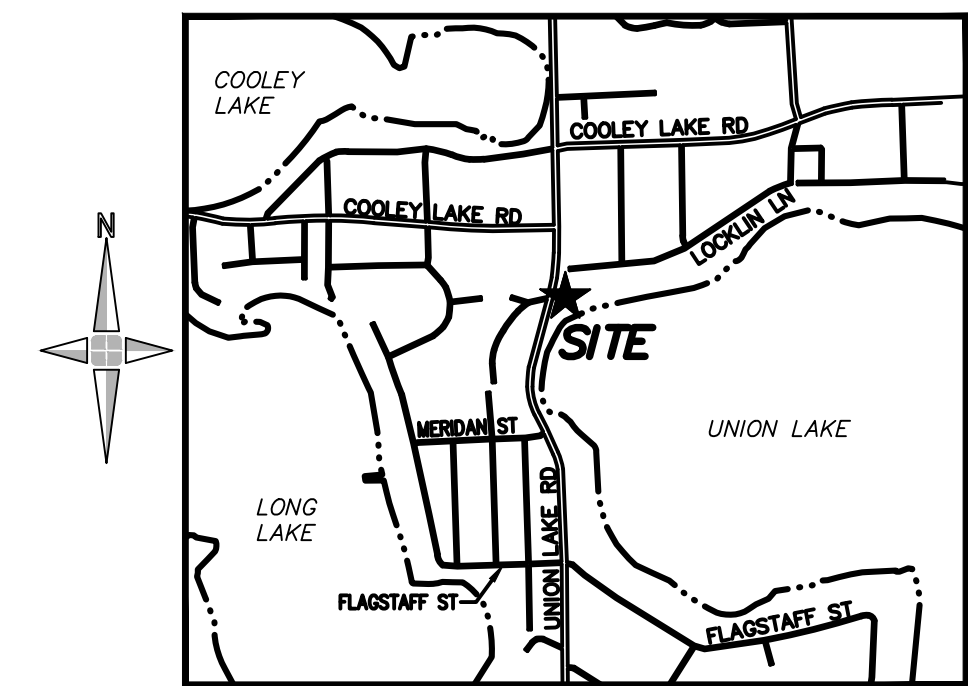
1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390
PH: 248-926-0063

**IMPROVEMENTS
PLAN**

**UNION LAKE KAYAK
LAUNCH**

COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN

Date:	04-02-2024
Scale:	1" = 20'
Sheet:	05
Project:	20492.00



LOCATION MAP
(NOT TO SCALE)

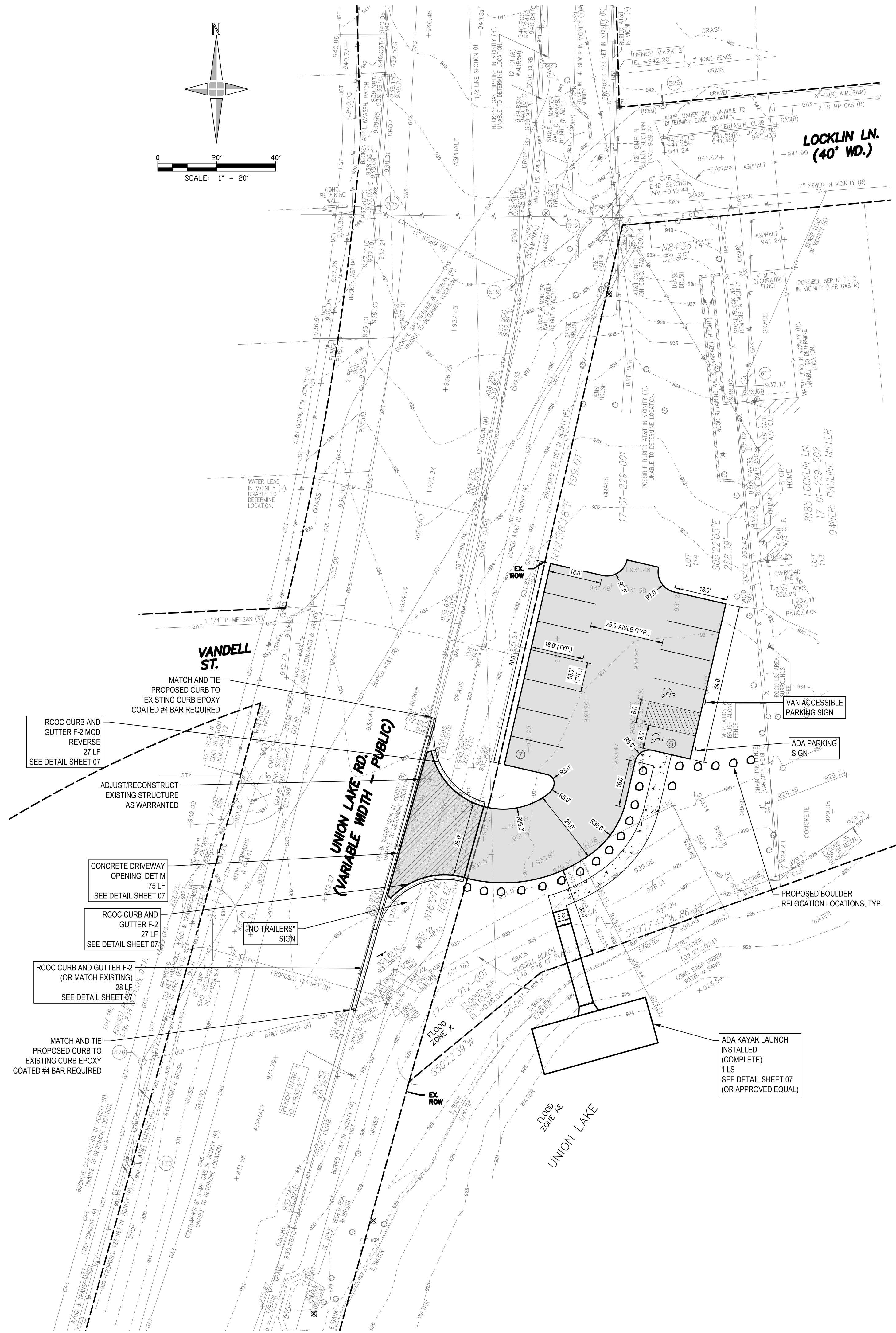
LEGEND

- DRIVEWAY APPROACH PAVEMENT
- PARKING LOT PAVEMENT
- SIDEWALK CONCRETE

NOTE: SEE PAVEMENT CROSS SECTION
DETAILS ON SHEET 07.

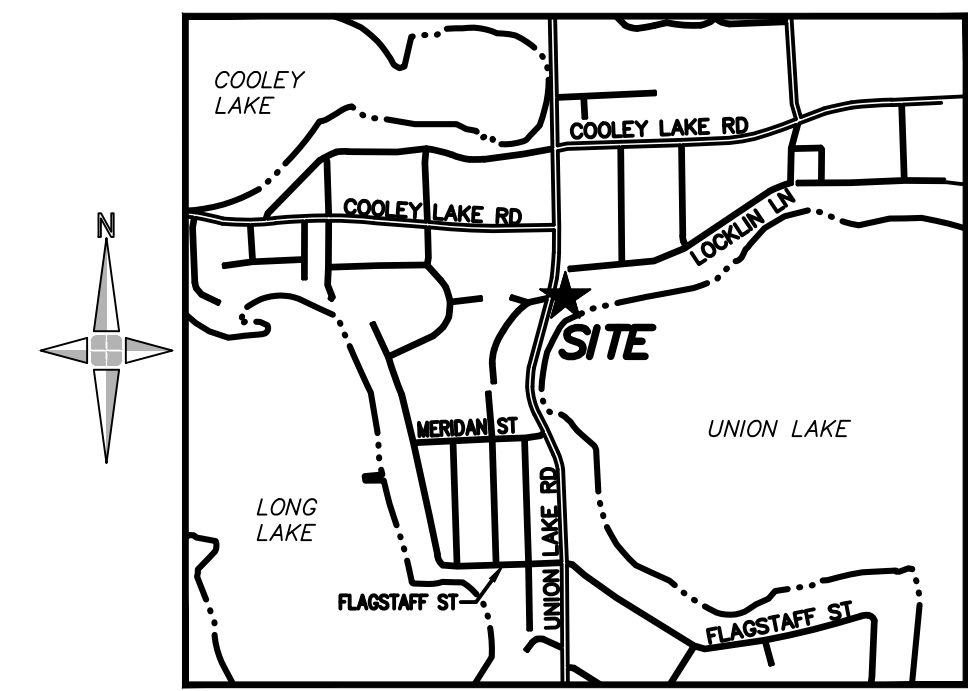
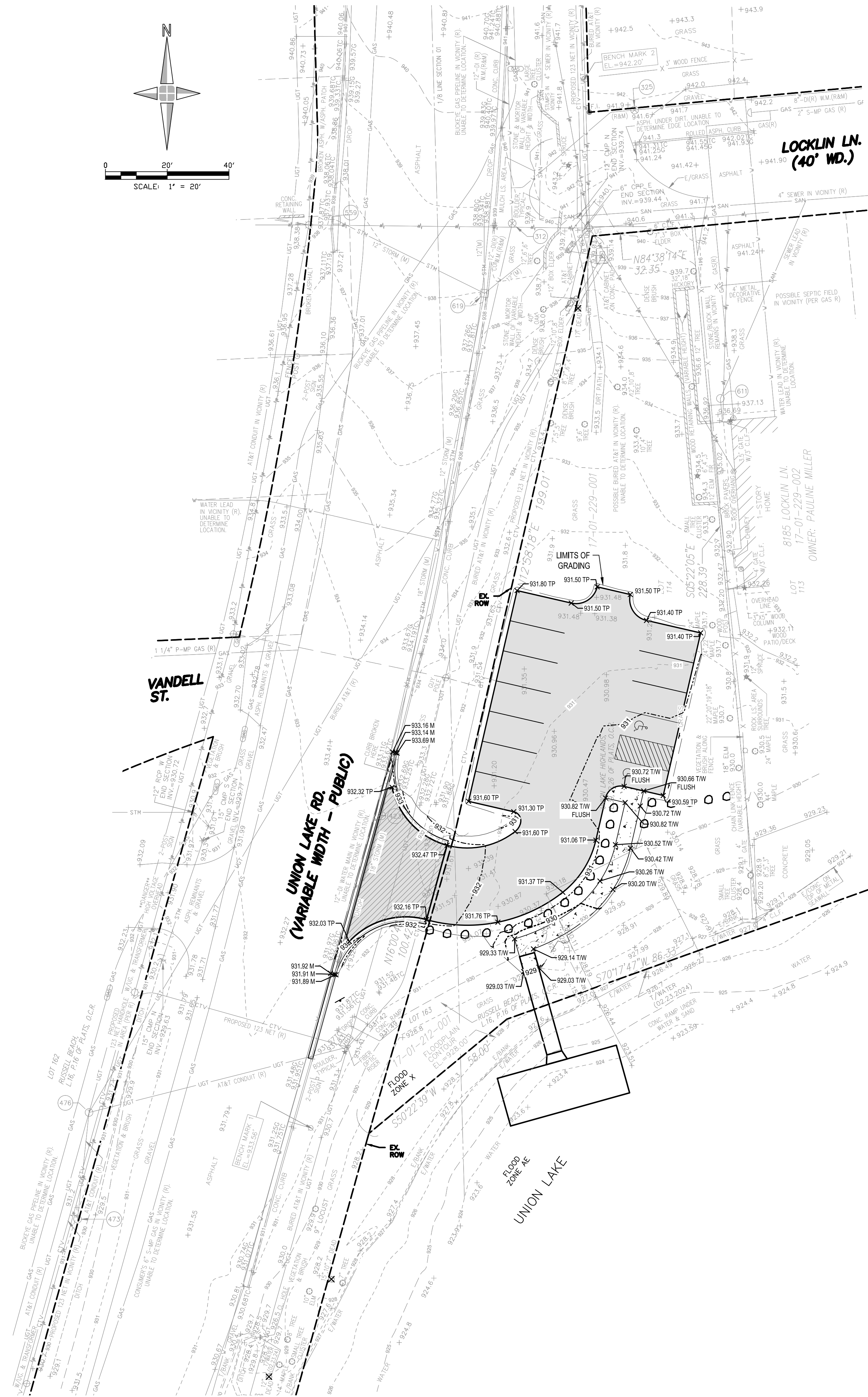
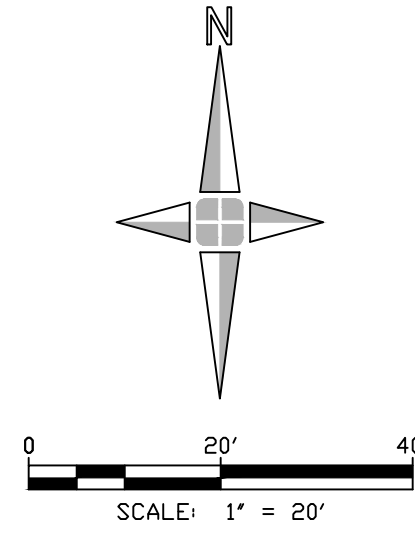
QUANTITIES THIS SHEET

NO.	ITEM DESCRIPTION	QUANTITY
1	RCOC APPROACH HMA	44 TON
2	CONCRETE DRIVEWAY OPENING, DET M	75 LF
3	RCOC CURB AND GUTTER F-2 MOD REVERSE	27 LF
4	RCOC CURB AND GUTTER F-2	27 LF
5	RCOC CURB AND GUTTER F-2 (OR MATCH EXISTING)	28 LF
6	PARKING LOT HMA	130 TON
7	AGGREGATE BASE, 6 INCH, 21AA	700 SYD
8	SIDEWALK, CONC, 4 INCH	401 SFT
9	AGGREGATE BASE, 6 INCH, CL II SAND	52 SYD
10	ADA PARKING SIGN	1 EA
11	VAN ACCESSIBLE PARKING SIGN	1 EA
12	"NO TRAILERS" SIGN	1 EA
13	PARKING LOT STRIPING	1 EA
14	ADA KAYAK LAUNCH INSTALLED (COMPLETE)	1 LS



QUANTITIES THIS SHEET

NO.	ITEM DESCRIPTION	QUANTITY
1	SITE GRADING	1 LS
2	RESTORATION	1 LS



LOCATION MAP
(NOT TO SCALE)

Engineers
Surveyors
Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
T-02-N R-08-E	

Professional Seal:



Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	ESLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	ESLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
**CHARTER TOWNSHIP OF
COMMERCE PARKS &
RECREATION DEPARTMENT**

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI
48390

PH: 248-926-0063

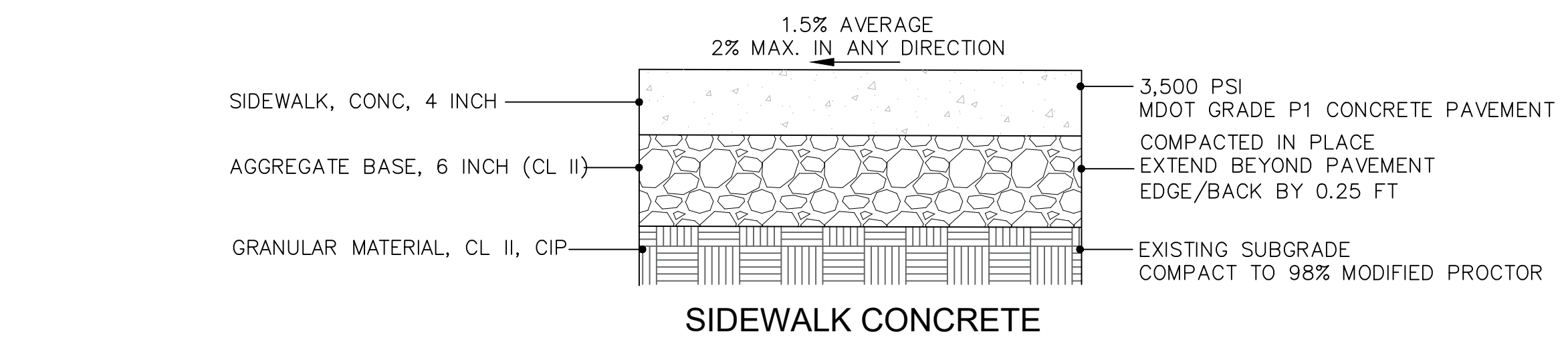
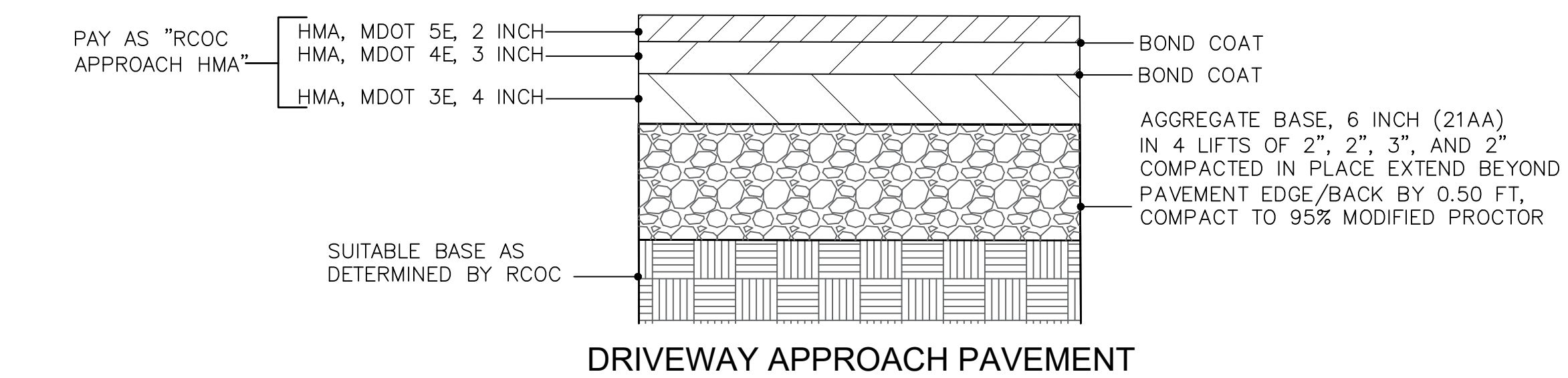
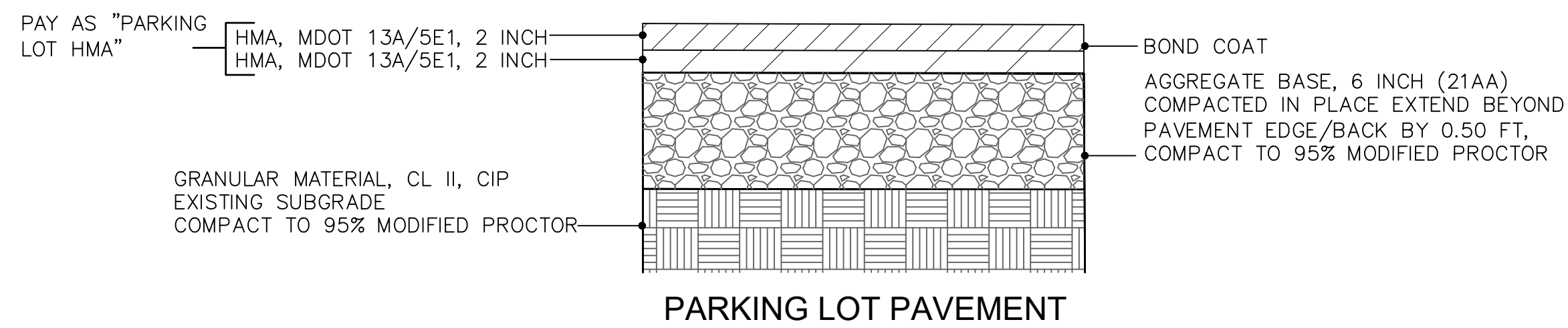
GRADING PLAN

**UNION LAKE KAYAK
LAUNCH**

COMMERCE TOWNSHIP,
OAKLAND COUNTY,
MICHIGAN

Date:	04-02-2024
Scale:	1" = 20'
Sheet:	06
Project:	20492.00

Copyright © 2024 Giffels Webster.
No reproduction shall be made without the
prior written consent of Giffels Webster.

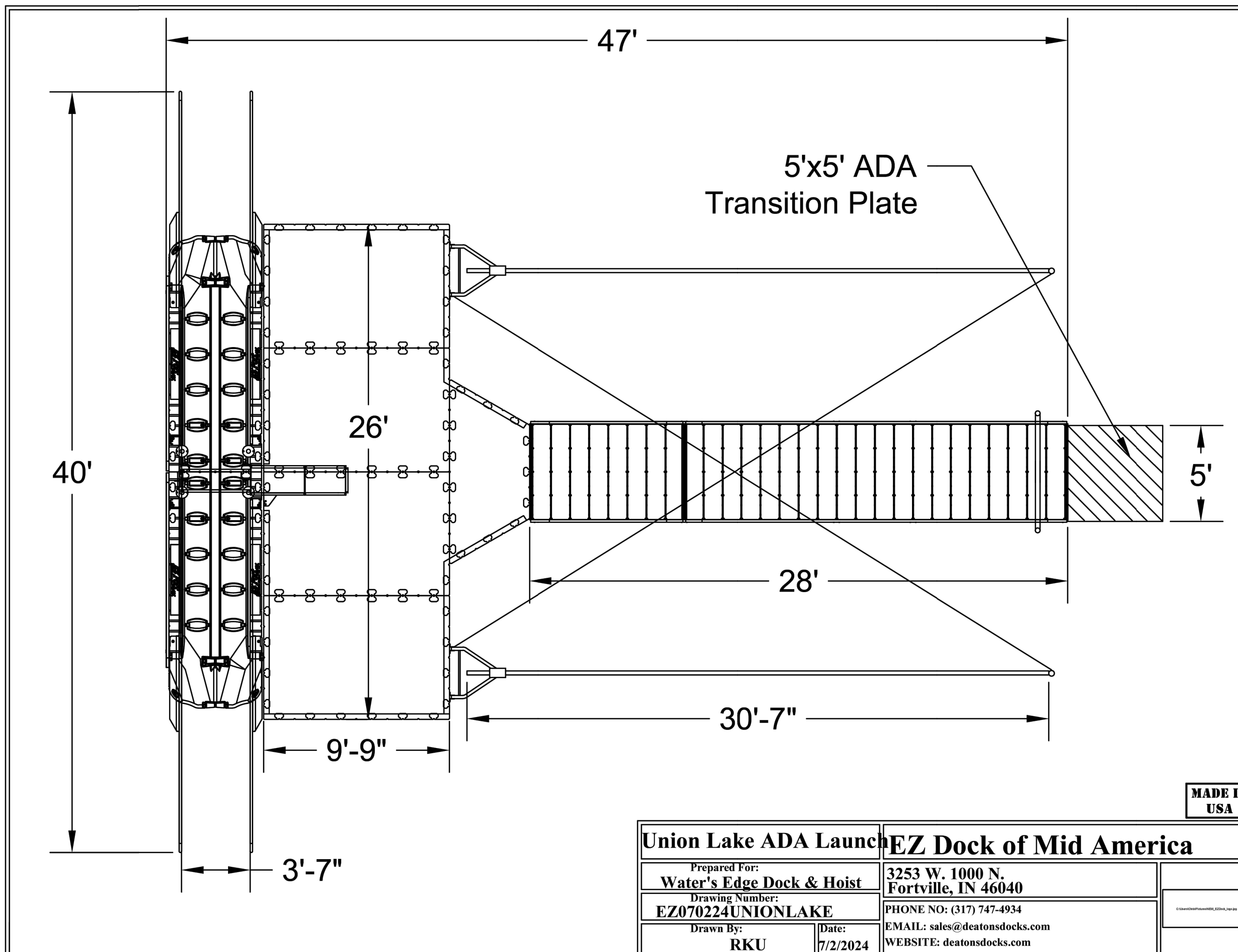


- NOTES:**
- BROOM FINISH CONCRETE SURFACE.
 - SEE MUNICIPAL DETAILS FOR CONCRETE JOINTING PLAN AND PLACEMENT OF EXPANSION JOINTS.
 - SAWCUT CONCRETE JOINTS AS SOON AS PAVEMENT CAN SUPPORT MACHINE.

HMA AND PARKING LOT PAVEMENT NOTES:

HMA ASPHALT PAVEMENT MATERIALS AND CONSTRUCTION SHALL BE PER MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 501.02 AND 501.03 AND RCOC SPECIAL PROVISION 501C.

AGGREGATE BASE SHALL BE PER RCOC SPECIAL PROVISION 302A



Union Lake ADA Launch

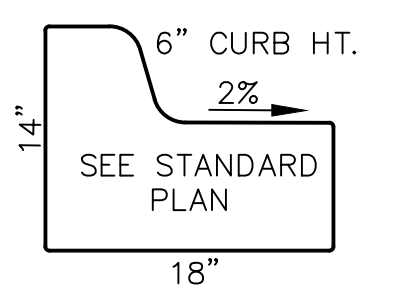
Prepared For: **Water's Edge Dock & Hoist**
 Drawing Number: **EZ070224UNIONLAKE**
 Drawn By: **RKU** Date: **7/2/2024**

EZ Dock of Mid America
 3253 W. 1000 N. Fortville, IN 46040
 PHONE NO: (317) 747-4934
 EMAIL: sales@deaton docks.com
 WEBSITE: deaton docks.com

MADE IN USA

ADA KAYAK LAUNCH

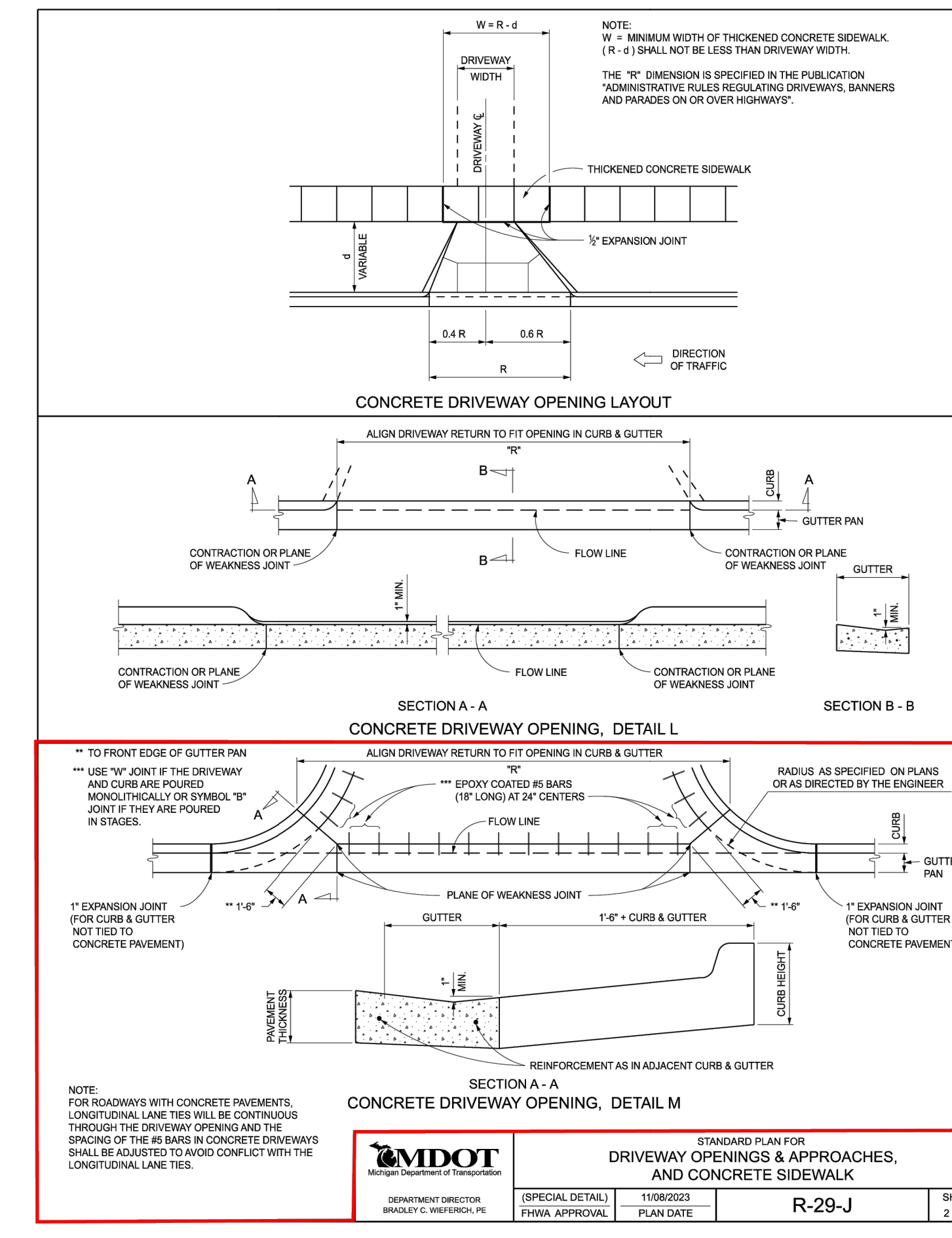
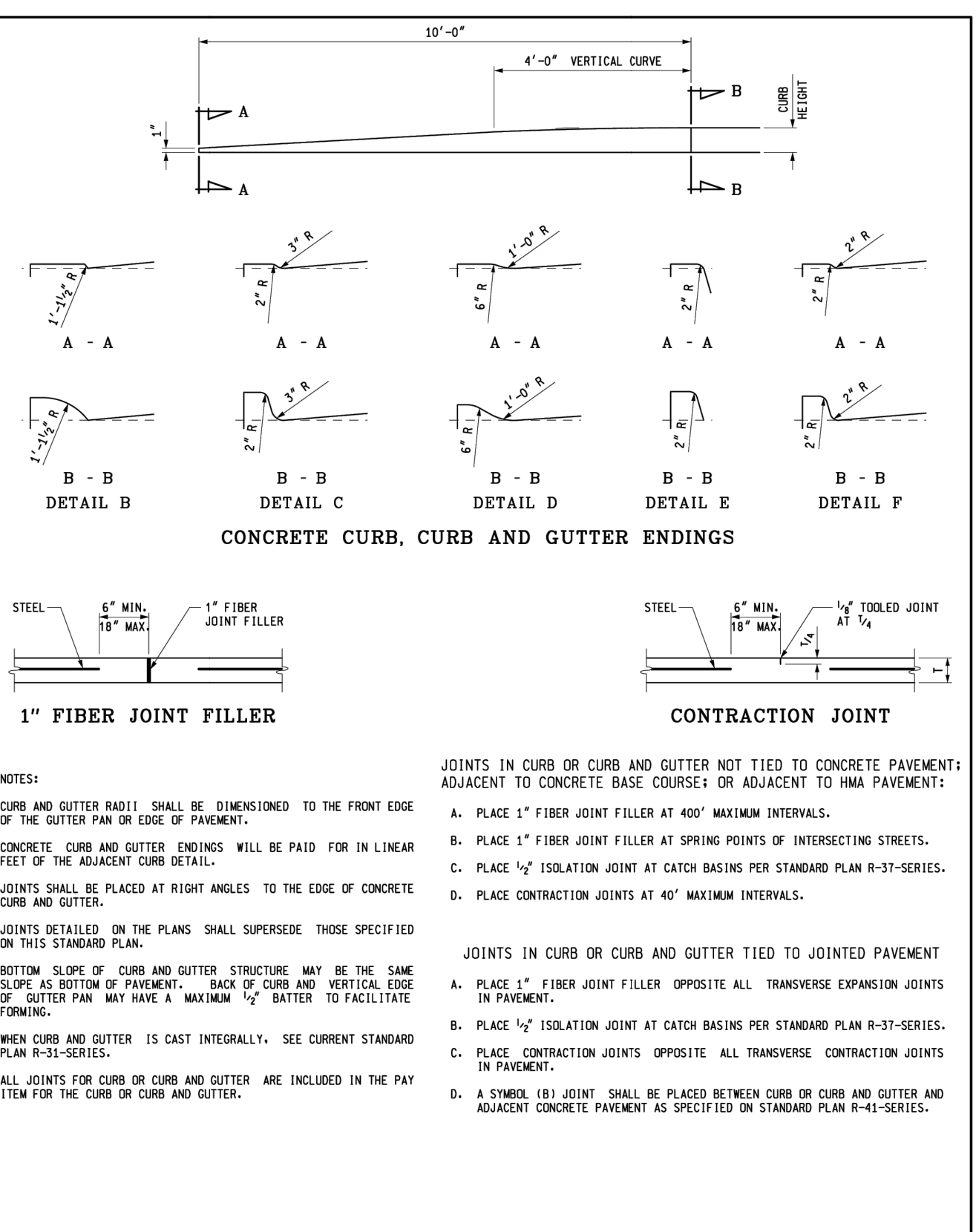
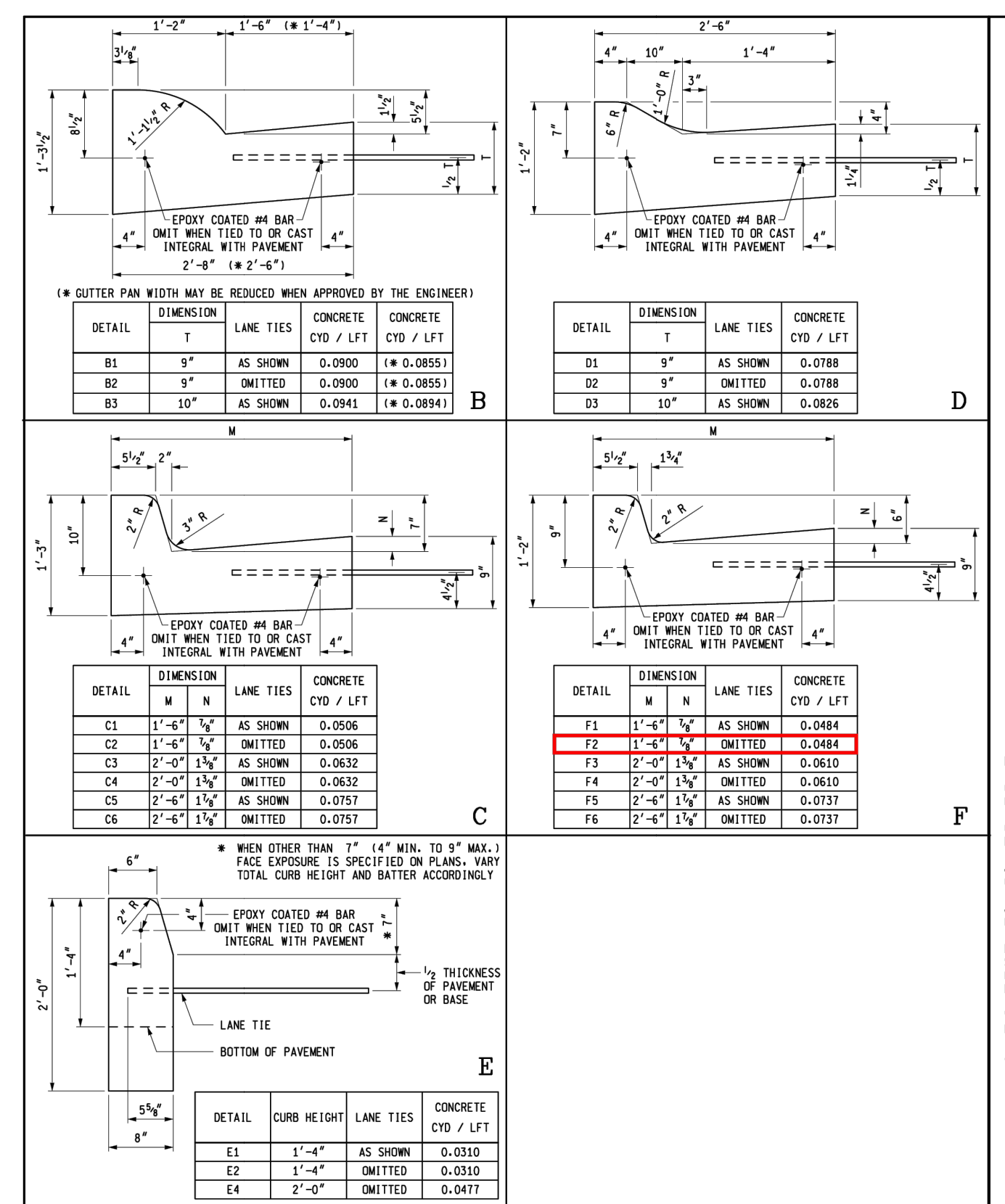
N.T.S.



CONCRETE CURB AND REVERSE GUTTER MDOT F-2 MODIFIED

CONCRETE CURB AND GUTTER NOTES:

CONCRETE CURB AND GUTTER MATERIALS AND CONSTRUCTION SHALL BE PER MDOT 2020 SPECIFICATIONS FOR CONSTRUCTION SECTIONS 802.02 AND 802.03 AND RCOC SPECIAL PROVISIONS 802A AND 802B.



DEPARTMENT DIRECTOR
906 T. BRUBAKER

APPROVED BY: *Randy U. Roth*
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: *Mad. A. Van Rosten*
DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

CONCRETE CURB AND GUTTER

9-30-2014 2-6-2014 R-30-G SHEET 1 OF 2

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

CONCRETE CURB AND GUTTER

9-30-2014 2-6-2014 R-30-G SHEET 2 OF 2

STANDARD PLAN FOR
DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK

9-30-2014 11/08/2023 R-29-J SHEET 2 OF 4

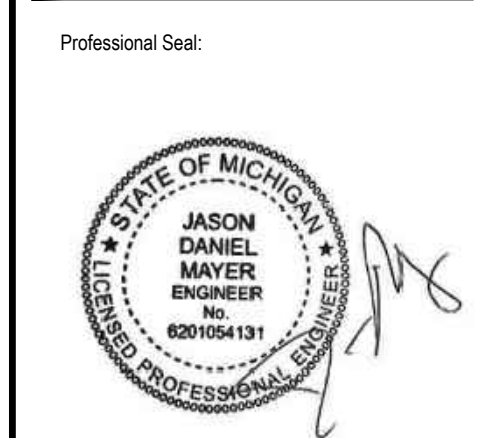
DEPARTMENT DIRECTOR
BRADLEY C. WEBSTER, PE

giffels webster

Engineers
Surveyors
Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	JDM
Manager:	JDM
Designer:	BDM
Quality Control:	DB
Section:	15
	T-02-N R-08-E



811

Know what's below.
Call before you dig.

DATE:	ISSUE:
05-14-2024	EGLE PREAPPLICATION REQUEST
05-31-2024	RCOC PERMIT
07-03-2024	EGLE PERMIT
08-06-2024	BID SET FOR REVIEW

Developed For:
CHARTER TOWNSHIP OF COMMERCE PARKS & RECREATION DEPARTMENT

1485 OAKLEY PARK ROAD
COMMERCE TOWNSHIP, MI 48390
PH: 248-926-0063

DETAILS

UNION LAKE KAYAK LAUNCH

COMMERCE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

Date:	04-02-2024
Scale:	AS NOTED
Sheet:	07
Project:	20492.00

H:\2024\04\02\0492.00\Union Lake Kayak Launch\Design\CAD\07 Details.dwg

