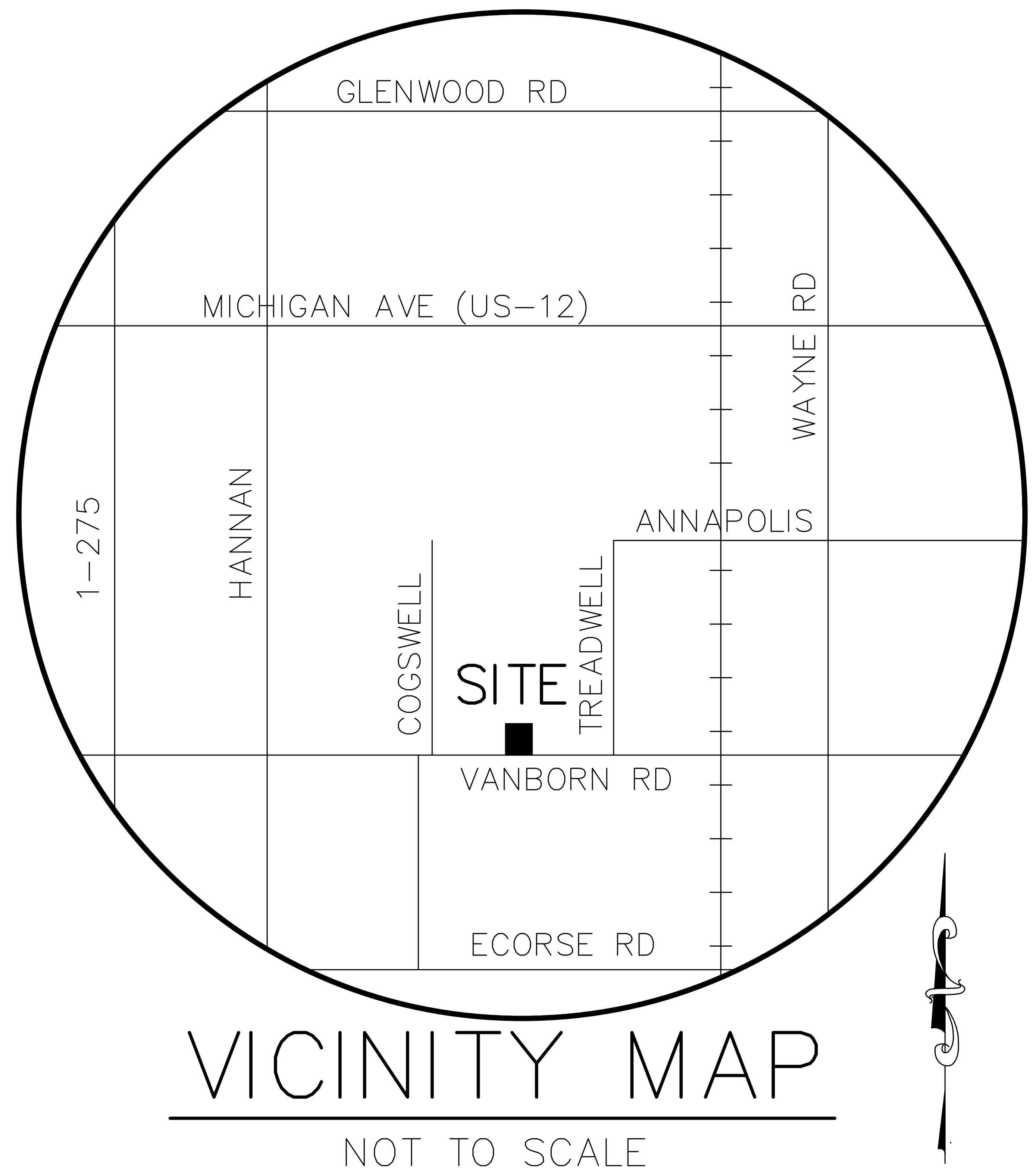
ASW-AMERICA

• • • • • •

38030 VANBORN ROAD
CITY of WAYNE, WAYNE COUNTY, MICHIGAN

PROPERTY OWNER

ASW-AMERICA
5895 N. CHRISTINE
WESTLAND, MI 48185
(313) 595-1747
pure_clouds_mi@yahoo.com
CONTACT: JUAN ELIZONDO

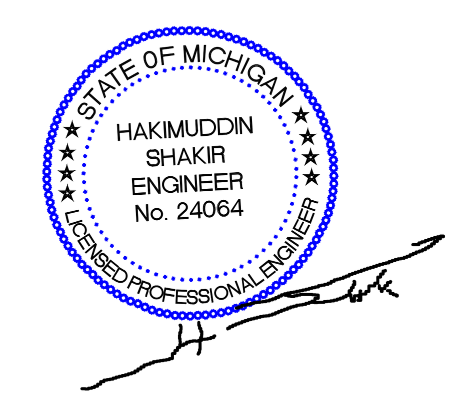


VICINITY MAP

NOT TO SCALE

DESIGN ENGINEERS

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE
WAYNE MI 48184
Ph. (734) 756-2196
E-MAIL: kbhardy1964@hotmail.com
CONTACT: KEVIN HARDY



PROPERTY DESCRIPTION

(LEGAL DESCRIPTION SUPPLIED BY PROPERTY OWNER)
LAND LOCATED IN THE CITY OF WAYNE, COUNTY OF WAYNE, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS:

PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWN 2 SOUTH, RANGE 9 EAST, DESCRIBED AS: BEGINNING AT A POINT S.89°44'28"E., 1133.00 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 31 TO THE POINT OF BEGINNING; THENCE N.00°00'06"E., 666.68 FEET; THENCE S.89°46'31"E., 183.51 FEET; THENCE DUE SOUTH 666.79 FEET; THENCE N.89°44'28"W., 183.50 FEET TO THE POINT OF BEGINNING. EXCEPT THE SOUTHERLY 60.00 FEET THEREOF.

SHEET INDEX

1. SITE & UTILITY PLAN
2. TOPOGRAPHIC SURVEY & REMOVALS PLAN
3. STORM SEWER DESIGN & GRADING PLAN
4. SOIL EROSION PLAN
5. PUMP STATION DETAILS
6. COUNTY DETAILS & NOTES
7. DUMPSTER & COUNTY DETAILS

COUNTY REVIEW
#R21-547

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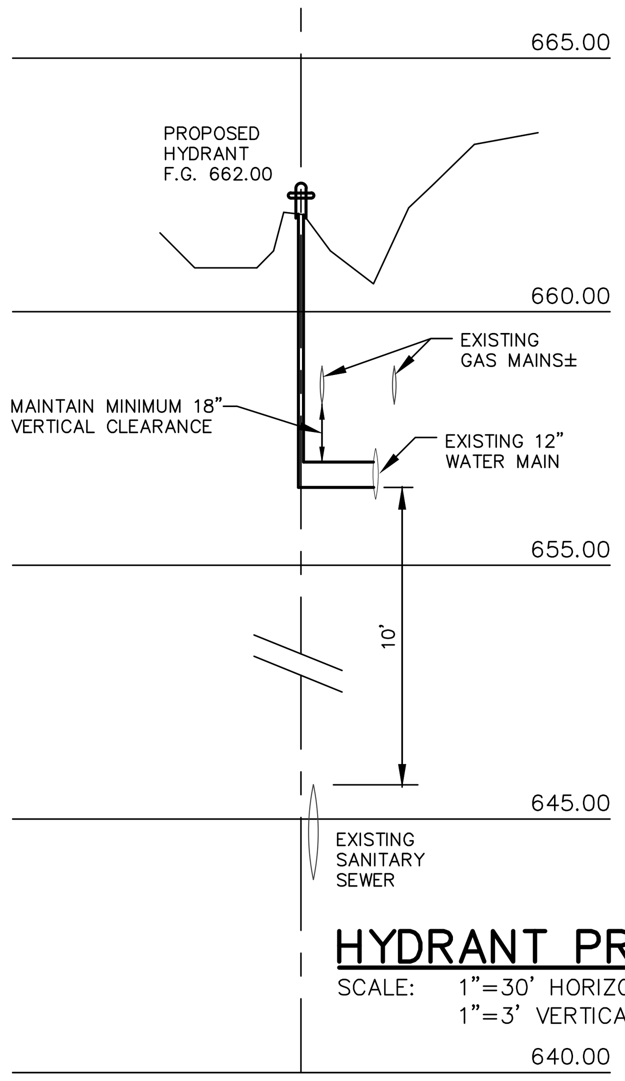

HYDRANT PROFILE

SCALE: 1"=30' HORIZONTAL
1"=3' VERTICAL

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SITE INFORMATION

TAX ID No. 55-015-99-0026-704
LAND AREA: 2.86 acres NET (PER CITY RECORDS)

ZONING: IND-2 (LIGHT INDUSTRIAL DISTRICT)

ADJACENT ZONING:
NORTH: IND-2
EAST: IND-2
WEST: IND-2

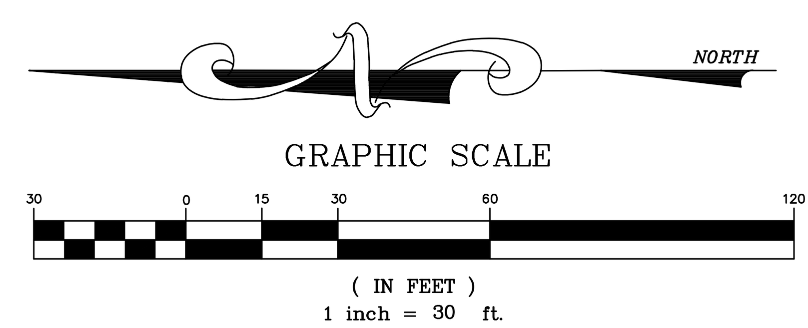
REQUIRED SETBACKS: IND-2
BUILDING HEIGHT 40'(MAX)
FRONT 50'
SIDE 10', TOTAL 25'
REAR 15'

REQUIRED PARKING

1 SPACE FOR EACH 2 EMPLOYEES, COMPUTED ON THE BASIS OF THE GREATEST NUMBER OF PERSONS EMPLOYED AT ANY ONE PERIOD DURING THE DAY OR NIGHT.

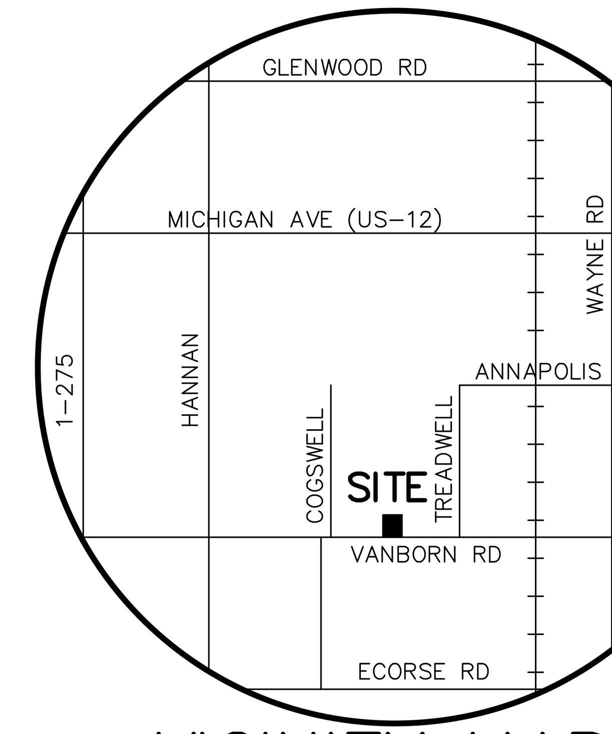
NUMBER OF EMPLOYEES 12
REQUIRED PARKING SPACES 12/2 = 6

PROVIDED PARKING SPACES 16



UTILITY QUANTITIES

1 EA.	HYDRANT ASSEMBLY
11 L.F.	6" CL.54, DIWM HYDRANT LEAD
125 L.F.	2" TYPE "K" COPPER WATER SERVICE
1 EA.	2" WATER SHUT-OFF VALVE
145 L.F.	6" SDR 23.5 SEWER LEAD
2 EA.	6" CLEAN-OUT

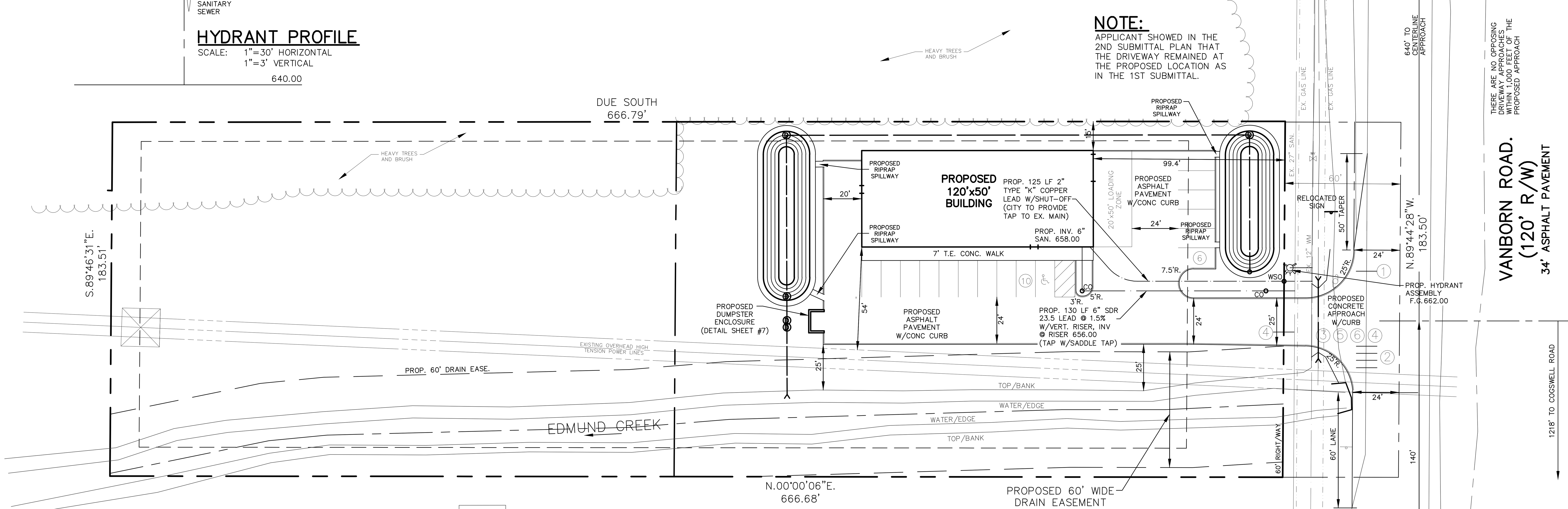


VICINITY MAP

NOT TO SCALE

NOTE:

APPLICANT SHOWED IN THE 2ND SUBMITTAL PLAN THAT THE DRIVEWAY REMAINED AT THE PROPOSED LOCATION AS IN THE 1ST SUBMITTAL.



PROPERTY OWNER

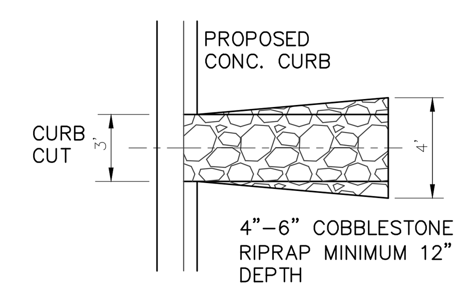
AWS AMERICA
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747

PROPOSED APPROACH NOTES:

1. SAW CUT FULL DEPTH @ 12" FROM BACK OF CURB AND REMOVE THE CURB AND THE PAVEMENT OR AS DIRECTED BY THE COUNTY ENGINEER.
2. TIE THE EXISTING PAVEMENT TO NEW PAVEMENT WITH 18" LONG #5 EPOXY COATED REBAR @ 24" CENTERS.
3. CONSTRUCT THE PROPOSED DRIVE APPROACH OPENING PER WAYNE COUNTY STANDARD D-6 DETAIL OR AS DIRECTED BY THE COUNTY ENGINEER.
4. 1" EXPANSION JOINT TO BE PLACED AT BACK OF CURB, AND 1/2" EXPANSION JOINT TO BE PLACE AT RIGHT/WAY.
5. CONSTRUCT THE PROPOSED DRIVE APPROACH WITH 8" MINIMUM NON-REINFORCED CONCRETE WITH INTEGRAL CURB ON 6" 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE PER WAYNE COUNTY DETAIL D-6 OR AS DIRECTED BY THE COUNTY ENGINEER.
6. CONSTRUCT THE PROPOSED APPROACH WITH 6% MAXIMUM SLOPE.
7. 1/2 INCH EXPANSION JOINT. (NOT REQUIRED)

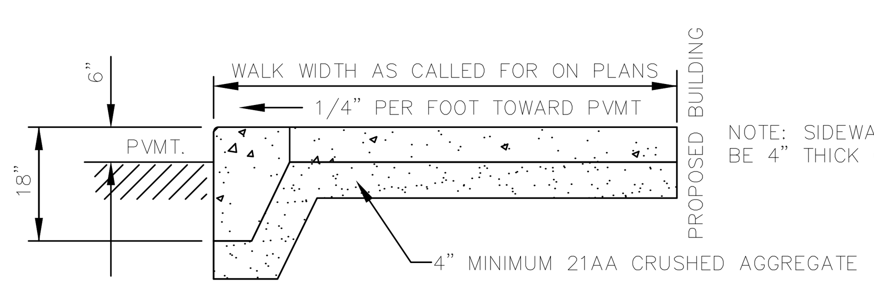
** CLEAR THE RIGHT OF WAY OF TREES, TREE LIMBS, AND SHRUB AND BRUSH WEST OF THE PROPOSED DRIVE TO ACHIEVE MINIMUM SIGHT DISTANCE OF 550'.

** RESTORE ALL DISTURBED AREAS OF THE RIGHT OF WAY WITH MINIMUM 4" TOPSOIL, SEED AND MULCH AS SOON AS CONSTRUCTION WITHIN THE RIGHT OF WAY IS COMPLETE. RESTORE ANY DISTURBED GRAVEL SHOULDER AS REQUIRED.



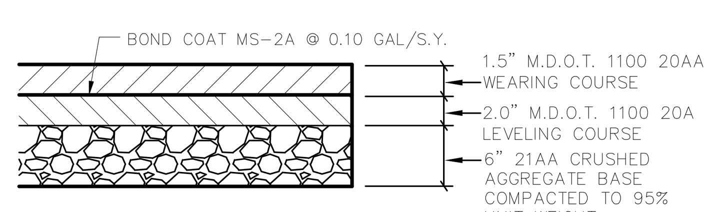
RIPRAP DETAIL

NOT TO SCALE



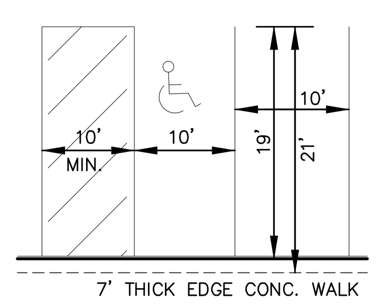
THICKENED EDGE CONCRETE SIDEWALK

NO SCALE



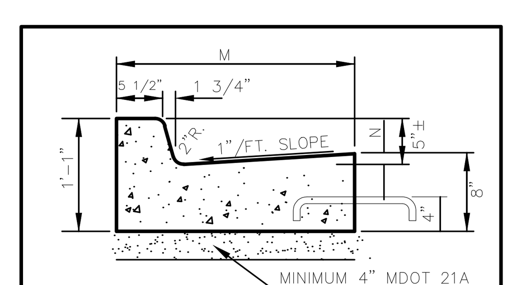
ASPHALT PAVEMENT SECTION

NOT TO SCALE



TYPICAL 90° PARING SPACE DETAIL

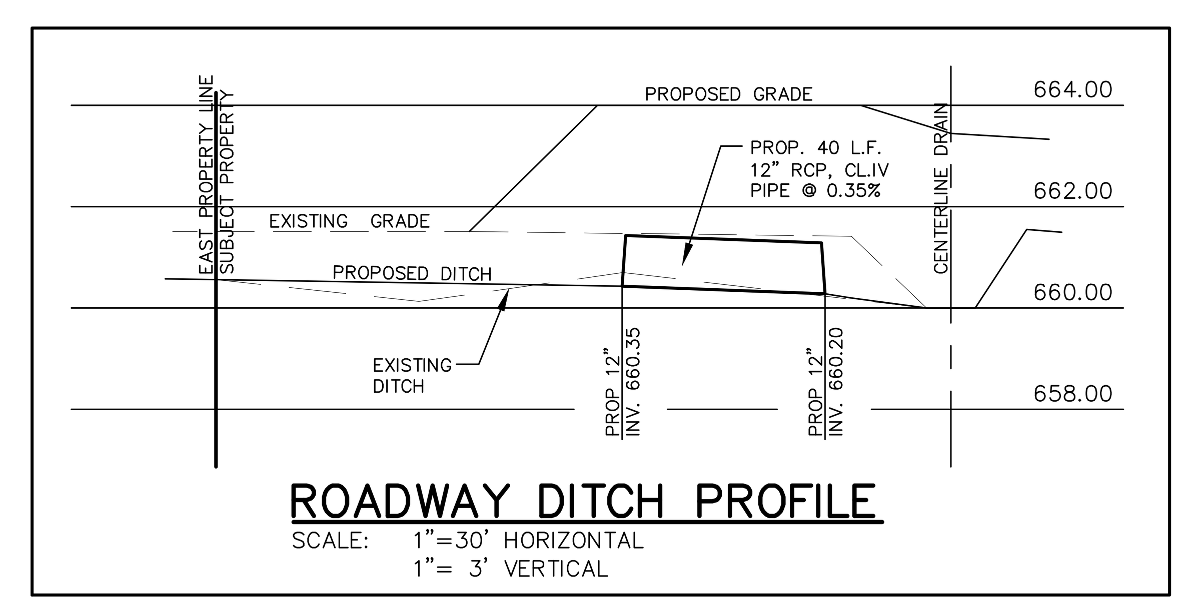
NOT TO SCALE



DETAIL	DIMENSIONS M	DIMENSIONS N	LANE TIES	CONCRETE CU. YD. / LIN. FT.
F1	1'-6"	7/8"	AS SHOWN	0.0424
F2	1'-6"	7/8"	OMITTED	0.0424
F3	2'-0"	1 3/8"	AS SHOWN	0.0550
F4	2'-0"	1 3/8"	OMITTED	0.0550
F5	2'-6"	1 7/8"	AS SHOWN	0.0677
F6	2'-6"	1 7/8"	OMITTED	0.0677

CURB & GUTTER DETAIL

USE CURB DETAIL 'F2'



ROADWAY DITCH PROFILE

SCALE: 1"=30' HORIZONTAL
1"= 3' VERTICAL

LEGEND

- EX. SIGN
- EX. SANITARY MANHOLE
- EX. HYDRANT
- EX. LIGHT POLE
- EX. UTILITY POLE
- EX. VALVE WELL
- EX. FENCE
- EX. CATCH BASIN
- EX. STORM MANHOLE
- EX. SHUT-OFF
- X000.00 EX. SPOT ELEVATION

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E-mail: kbhardy1964@hotmail.com

SITE AND UTILITY PLAN

38030 VANBORN
AWS - AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

REVISIONS
09-02-2021
10-25-2021
11-22-2021
12-21-2021

SHEET No.	JOB No.	DRAWING No.	DATE
1 OF 7	2021-13	A-	07-11-21
		DRAWN BY: K.B. HARDY	CHECKED BY:

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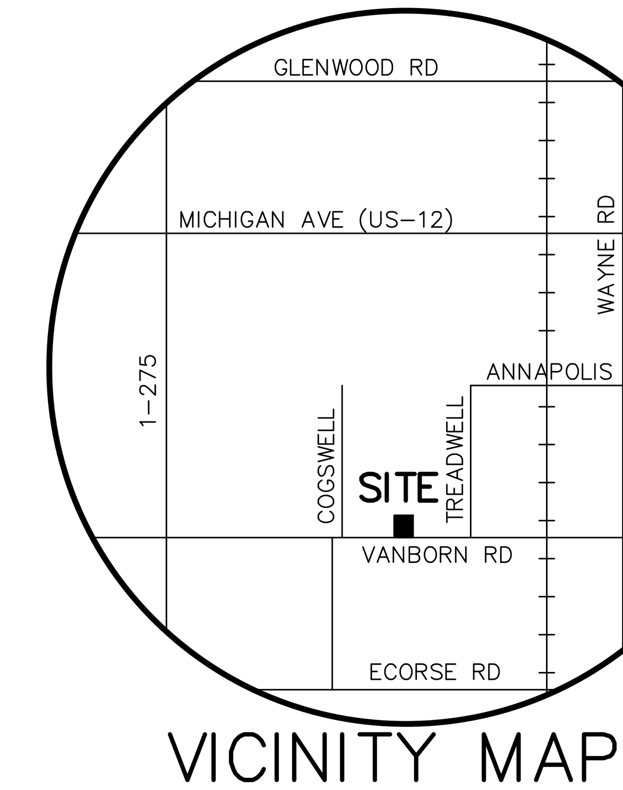
FLOODZONE

THE SUBJECT PROPERTY IS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SHOWN ON FLOOD INSURANCE RATE MAP #26163C0218E, DATED FEBRUARY 02, 2012.

SOIL TYPE

(Pe) PEWAMO LOAM
AS SHOWN ON MAPPING PER USDA SOIL SURVEY INFORMATION.



VICINITY MAP

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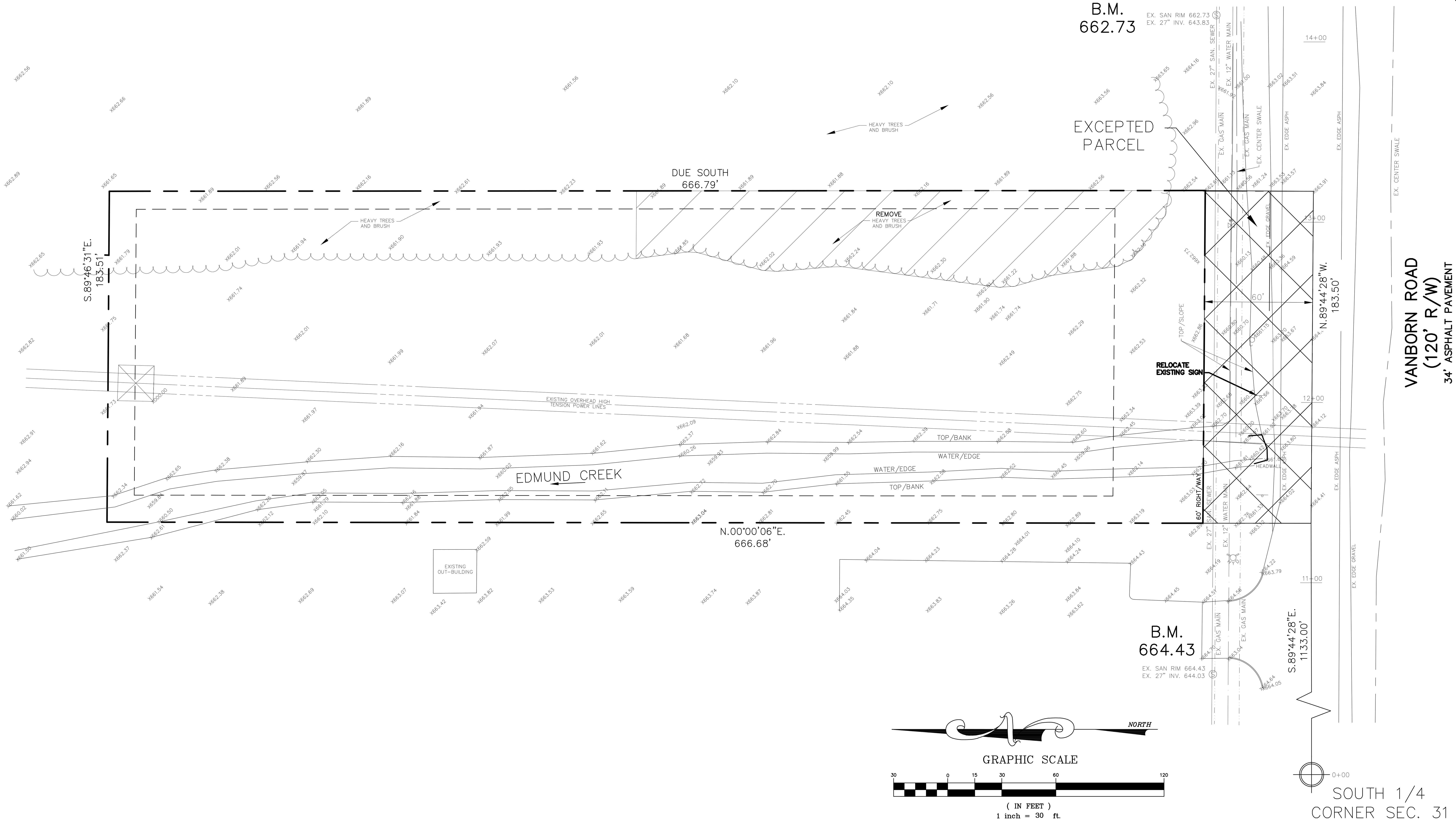

PROJECT BENCHMARKS (navd88)

RIM ON SANITARY SEWER LOCATED 100' EAST OF SUBJECT PROPERTY. ELEVATION: 662.73

RIM ON SANITARY SEWER LOCATED 80' WEST OF SUBJECT PROPERTY. ELEVATION: 664.43

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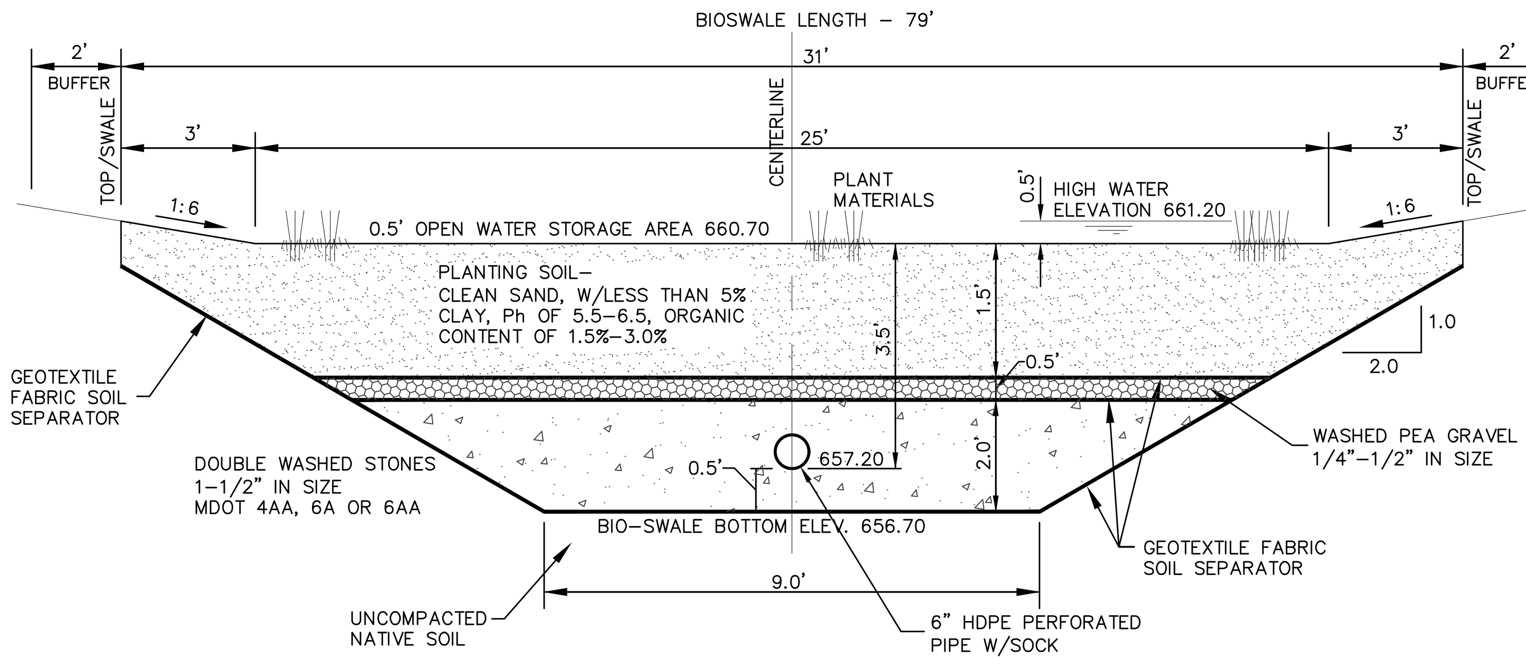
TOPOGRAPHIC SURVEY AND REMOVALS PLAN

38030 VANBORN
AWS - AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

SHEET No.	JOB No.	DRAWING No.	DATE	REVISIONS
2 OF 7	2021-13	A-	07-11-21	09-02-2021 10-25-2021 11-22-2021 12-21-2021
		K.B. HARDY DRAWN BY:	CHECKED BY:	



BIOSWALE #1 DETAIL

NOT TO SCALE

BIO-SWALE #1
10-YEAR DESIGN

LAND AREA

Bldg-Pvmt	0.24 * 0.95 =	0.23
Grass	0.12 * 0.25 =	0.03
	0.36	0.26

SITE COMPOSITE C = C/A = 0.72

BIODETENTION DESIGN
HIGH WATER ELEVATION = 661.20

DETENTION POND DESIGN
10-YEAR FLOOD CONTROL STORAGE REQUIRED:
A (area) = 0.36
C,ave = 0.72
Qa = 0.15*A = 0.054cfs
Qo = 0.208cfs/acr.imp
T10 = 127.56min.
Vs,10 = 6,816cf
Vt,10 = 1,767cf

DETENTION STORAGE PROVIDED:
Depth at first layer = 0.50ft
Depth at second layer = 4.00ft

Maximum 6" open water depth

elev.	area	volume
661.20	= 2250sf	0
660.70	= 1700sf	983cf

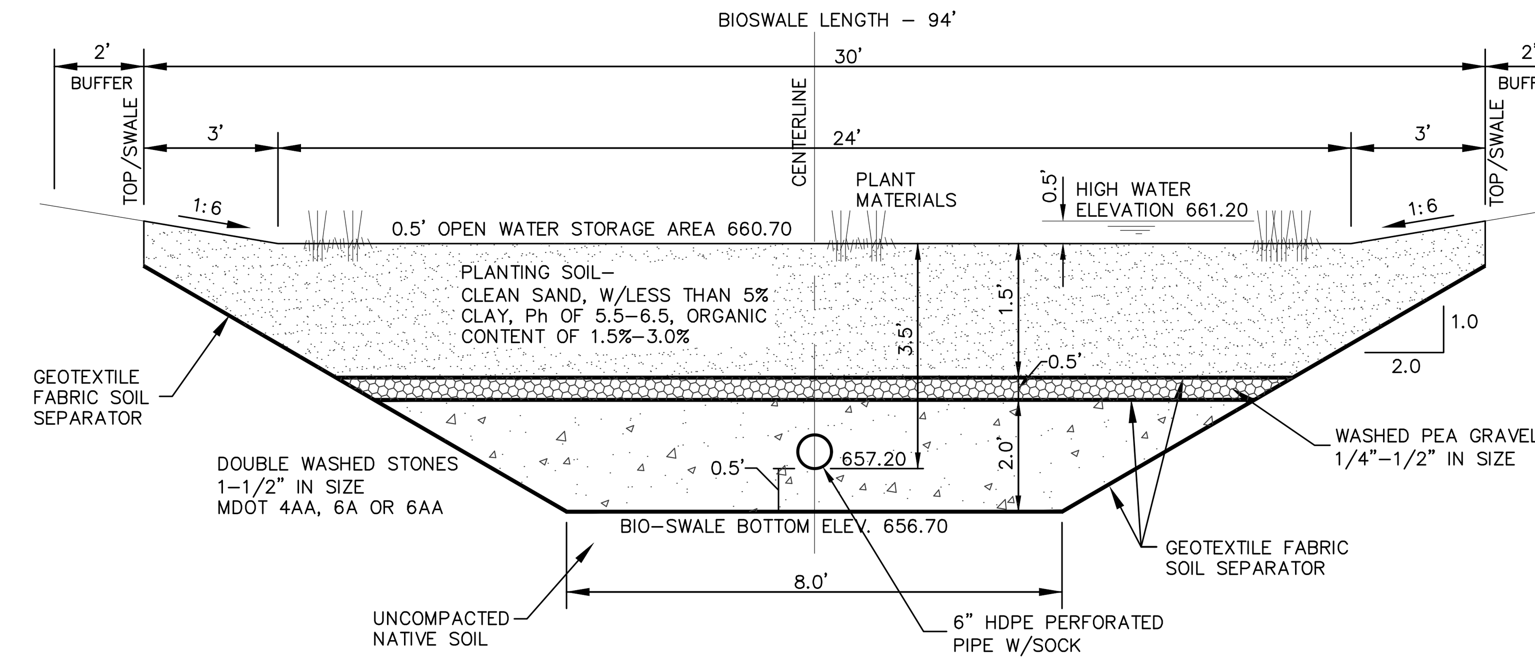
Storage in soils

elev	area	volume
660.70	= 1700sf	0
656.70	= 630sf	4482cf

ASSUME 20% STORAGE VOLUME
4482*20% = 896cf

TOTAL VOLUME PROVIDED:
983cf + 896cf = 1880cf

18800cf > 1767cf {1.06%} {OK}



BIOSWALE #2 DETAIL

NOT TO SCALE

BIO-SWALE #2
10-YEAR DESIGN

LAND AREA

Bldg-Pvmt	0.25 * 0.95 =	0.24
Grass	0.23 * 0.25 =	0.06
	0.48	0.30

SITE COMPOSITE C = C/A = 0.61

BIORETENTION DESIGN
HIGH WATER ELEVATION = 661.20

DETENTION POND DESIGN
10-YEAR FLOOD CONTROL STORAGE REQUIRED:
A (area) = 0.48
C,ave = 0.61
Qa = 0.15*A = 0.072cfs
Qo = 0.246cfs/acr.imp
T10 = 115.83min.
Vs,10 = 6,633cf
Vt,10 = 1,942cf

DETENTION STORAGE PROVIDED:
Depth at first layer = 0.50ft
Depth at second layer = 4.00ft

Maximum 6" open water depth

elev.	area	volume
661.20	= 2615sf	0
660.70	= 1980sf	1144cf

Storage in soils

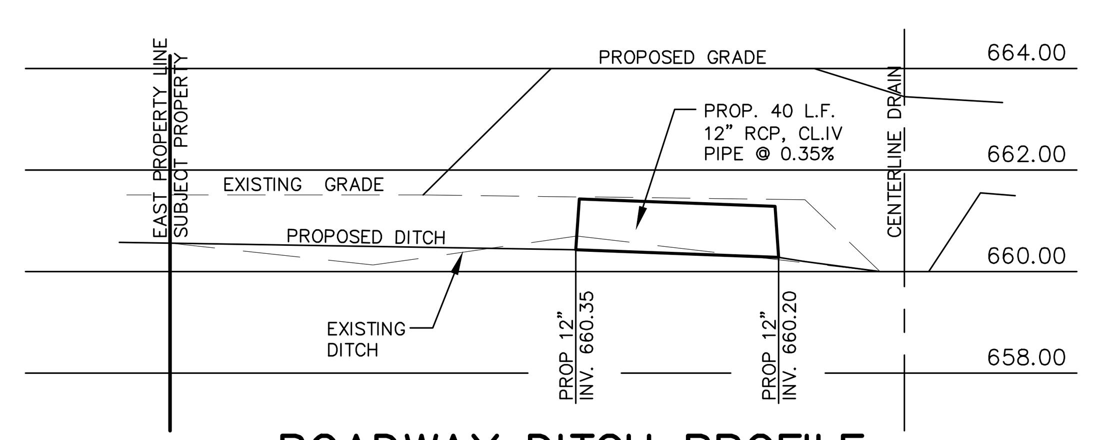
elev	area	volume
660.70	= 1980sf	0
656.70	= 560sf	4786cf

ASSUME 20% STORAGE VOLUME
4786*20% = 957cf

TOTAL VOLUME PROVIDED:
1144 + 957 = 2101
2101cf > 1942cf {1.08%} {OK}

SITE ALLOWABLE OUTLET

DETERMINATION OF PROPOSED STORM WATER RUNOFF:
Qa = 0.454cfs/imp. acre



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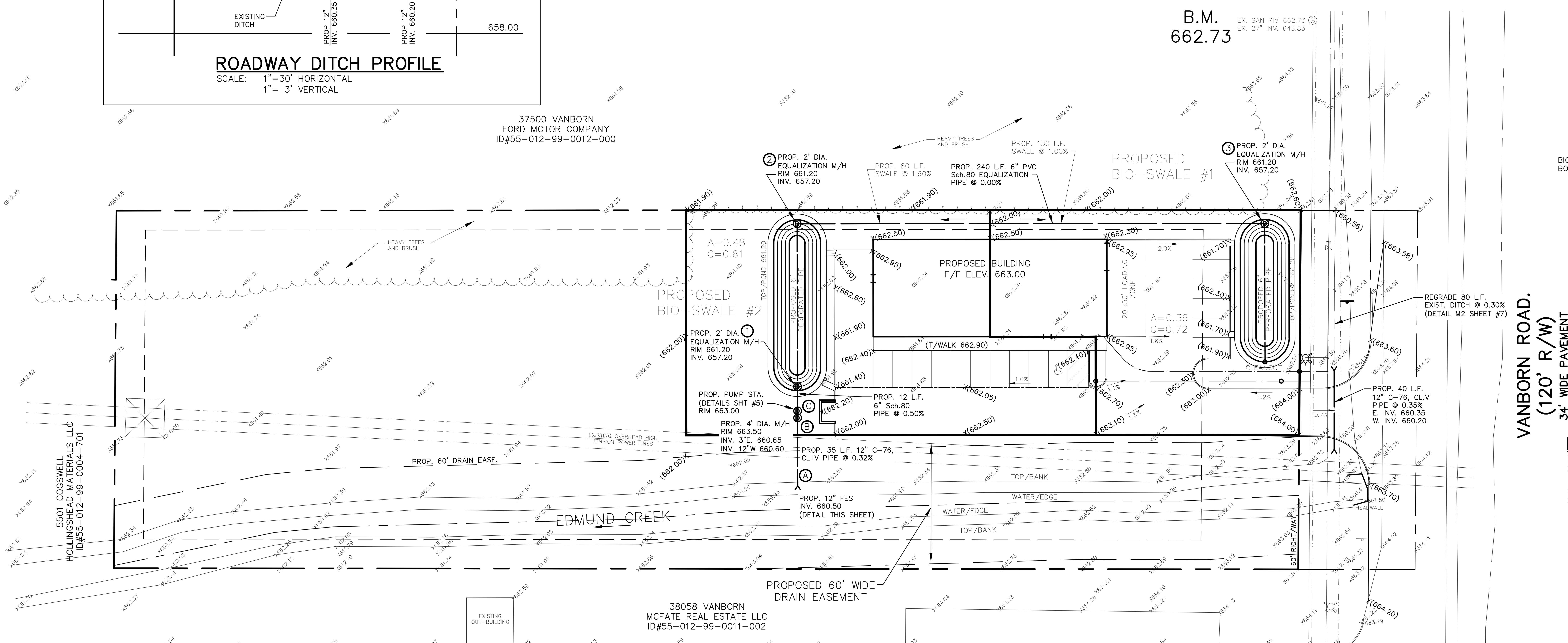

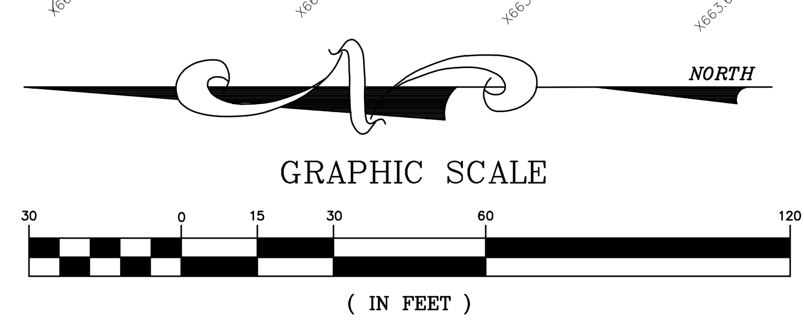

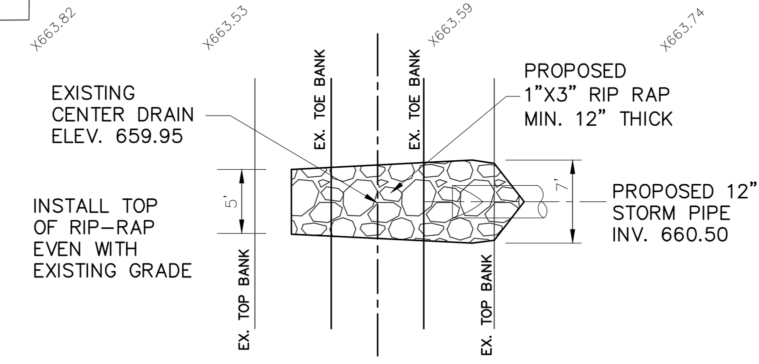

OUTLET DETAIL

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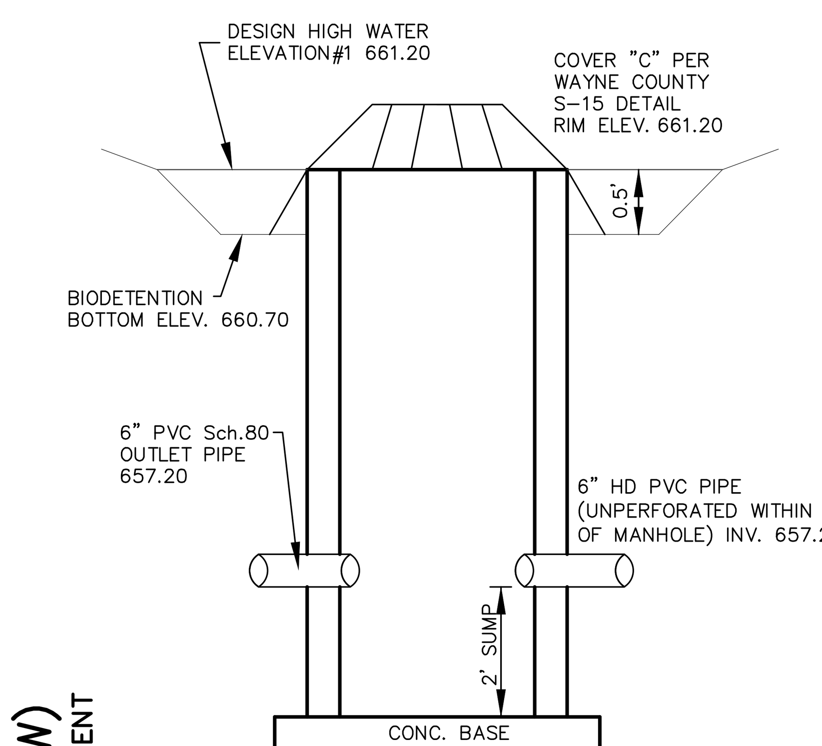

2' DIA. BIORETENTION EQUALIZATION M/H

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—X—	EX. FENCE
□	EX. CATCH BASIN
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	EX. SHUT-OFF
X000.00	EX. SPOT ELEVATION

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STORM SEWER DESIGN AND GRADING PLAN

38030 VANBORN
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CITY of WAYNE
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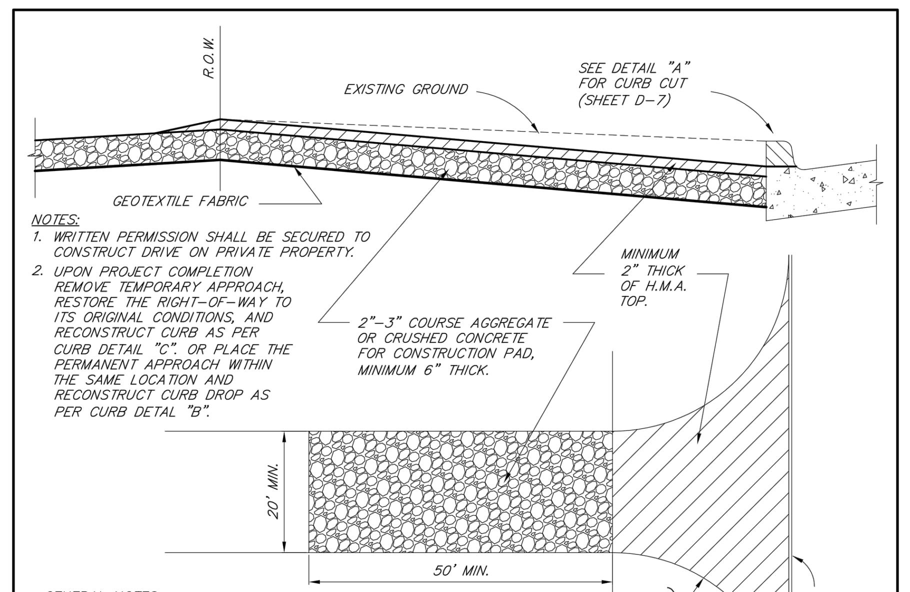
SHEET No.	JOB No.	DRAWING No.	DATE	REVISIONS
3 of 7	2021-13	A-	07-11-21	09-02-2021 10-25-2021 11-22-2021 12-21-2021
		DRAWN BY: K.B. HARDY	CHECKED BY:	



NOTES:
1. WRITTEN PERMISSION SHALL BE SECURED TO CONSTRUCT DRIVE ON PRIVATE PROPERTY.
2. UPON PROJECT COMPLETION REMOVE TEMPORARY APPROACH, RESTORE THE RIGHT-OF-WAY TO ITS ORIGINAL CONDITIONS, AND RECONSTRUCT CURB AS PER CURB DETAIL "C" OR PLACE THE PERMANENT APPROACH WITHIN THE SAME LOCATION AND RECONSTRUCT CURB DROP AS PER CURB DETAIL "B".

GENERAL NOTES:
1. STONE SIZE SHOULD BE 2" MIN. RECLAIMED OR RECYCLED OF AN EQUIVALENT DIAMETER MAY ALSO BE USED.
2. WHERE ACCESS TO THE CONSTRUCTION SITE IS LIMITED IN LENGTH (SUCH AS IN URBAN AREAS), AS DIRECTED BY THE COUNTY ENGINEER, DAILY STREET SWEEPING MAY BE NEEDED TO REMOVE SOIL THAT IS TRACKED ONTO THE ROADS.
3. PROVIDE CULVERT AS SHOWN ON THE PLANS WHEN DITCH IS EXISTING. MIN. 12" DIA. RCP OR CMP.

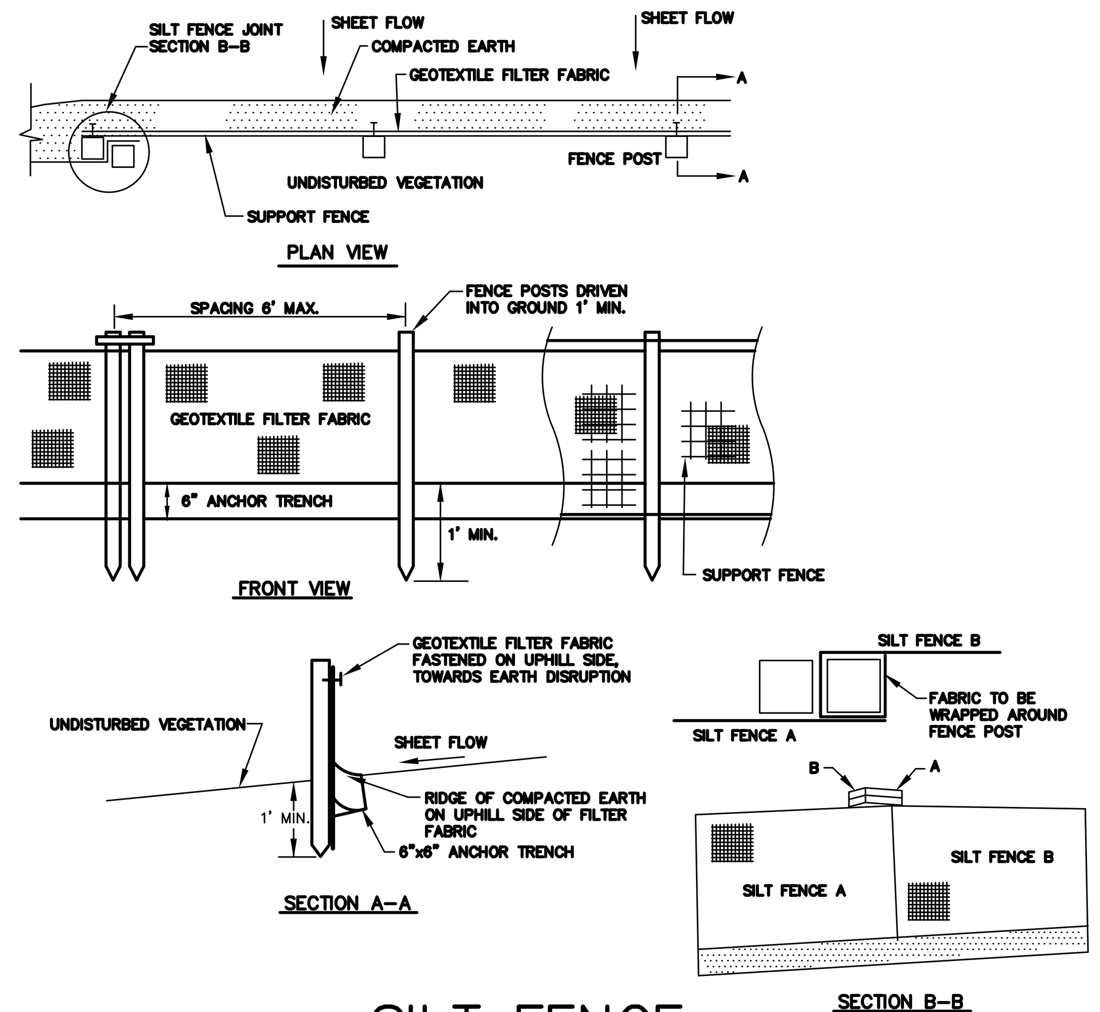
CONSTRUCTION CONSIDERATIONS
1. SAW-CUT HORIZONTALLY THE EXISTING CONCRETE CURB AS PER WAYNE COUNTY DETAIL "A" AND PREPARE THE EDGE OF PAVEMENT.
2. REMOVE AND DISPOSE OF UNWANTED TREES, OTHER VEGETATION, OR FOREIGN OBJECTS AND DEBRIS FROM THE AREA.
3. APPLY THE STONE IN LAYERS AND COMPACT IT AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
4. PLACE H.M.A. TOP AND COMPACT IT TO ITS 97% OF THE UNIT WEIGHT OF THE MATERIALS OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.

AFTER CONSTRUCTION
IF MUD AND SOIL ATTACHED TO TRUCK TIRES DOES NOT FALL OFF ONTO THE ASPHALT, THEN TRUCK TIRES SHOULD BE WASHED ON AN AREA STABILIZED WITH CRUSHED STONE. WASH RACKS MAY BE USED.

MAINTENANCE
PROPER MAINTENANCE MAY INCLUDE ADDITIONAL LAYERS OF STONE OR H.M.A. WHEN THE ORIGINAL LAYERS BECOMES COVERED WITH MUD OR BECOMES COMPLETELY OR PARTIALLY DETERIORATED DUE TO MOVEMENT OF HEAVY TRUCKS AND VEHICLES. AFTER EACH STORM EVENT, INSPECT THE ROAD FOR DEBRIS AND ALL SEDIMENT DROPPED OR ERODED ONTO PUBLIC R.O.W. SHOULD BE REMOVED IMMEDIATELY BY SWEEPING EFFECTIVELY.

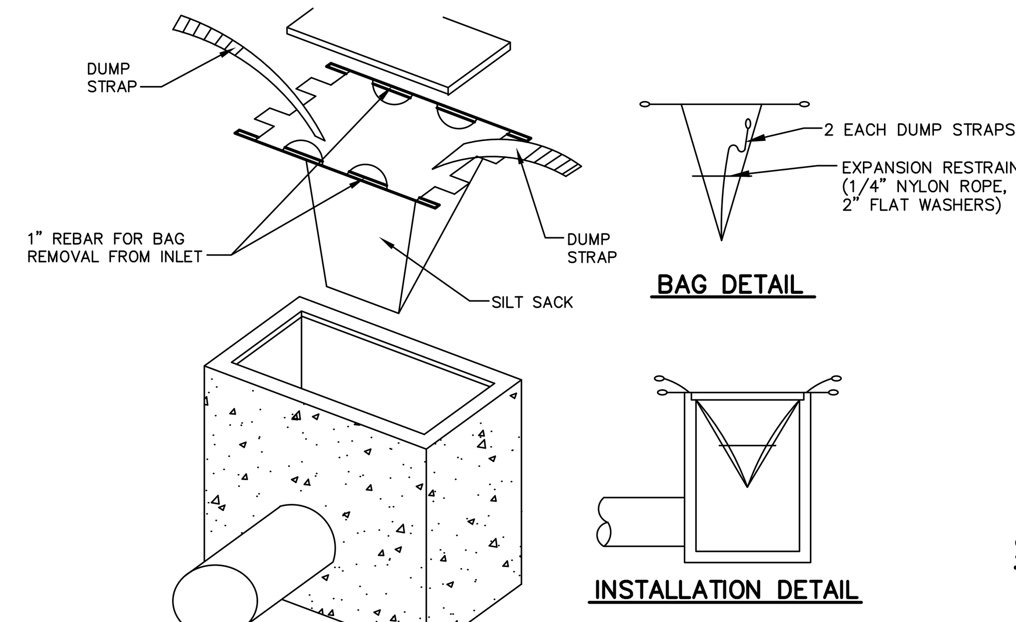
REVISION DATE:	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE
DIRECTOR OF ENGINEERING		CD-1
DIVISION PERMIT ENGINEER	TEMPORARY ASPHALT ACCESS DRIVE	SHEET 1 OF 2

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.



SILT FENCE

THE PROPOSED SILT FENCE REPRESENTS THE LIMITS OF CONSTRUCTION



SOIL EROSION SEQUENCE OF CONSTRUCTION

(1) INSTALL SILT FENCE AS SHOWN HERE ON.
(2) COMPLETE MASS GRADING AND UNDERGROUND UTILITIES.
(3) COMPLETE BIOSWALE INSTALLATION
(4) CONSTRUCT PARKING AREA.
(5) RESTORE ALL DISTURBED AREAS WITH SOD OR TOPSOIL, SEED AND MULCH.
(6) REMOVE SILT FROM FROM BEHIND SILT FENCE AND REMOVE SILT FENCE.

FLOODZONE

THE SUBJECT PROPERTY IS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SHOWN ON FLOOD INSURANCE RATE MAP #26163C0218E, DATED FEBRUARY 02, 2012.

SOIL TYPES :

Pe PEWAMO LOAM (100% OF SITE)

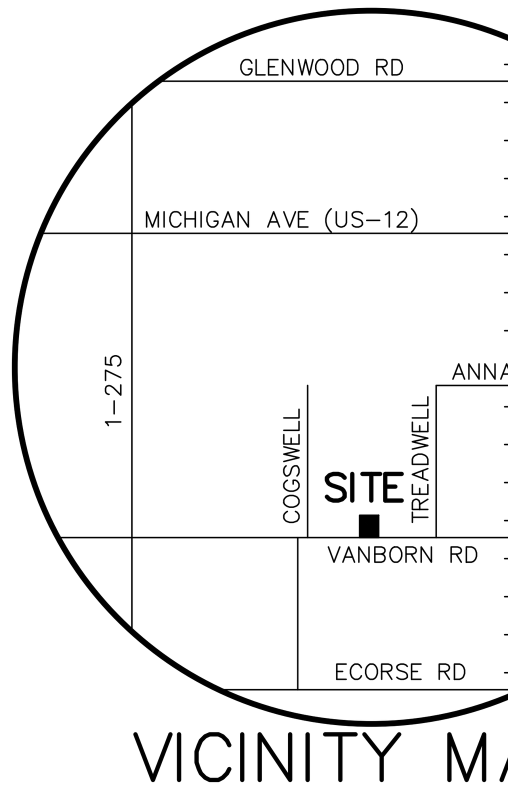
SOIL EROSION QUANTITIES:

850 L.F. SILT FENCING
1 EA. MUD MAT
3 EA. SEDIMENTATION FILTER

SOIL EROSION SEQUENCE OF CONSTRUCTION

START DAY	END DAY	
8-14	11-30	1. STONE TRACKING PAD ATOP GEOTEXTILE LINER (MUD-MAT).
8-14	11-30	2. INSTALL SILT FENCING AND PROTECTIVE FENCING.
8-14	8-18	3. STRIP AND STOCKPILE TOPSOIL.
8-14	9-02	4. GRADE AND BALANCE AS REQUIRED. STABILIZE DITCHES, SWALES, COMMON AREAS AND SLOPES PER PLAN WITHIN 5 DAYS OF GRADE.
8-21	9-02	5. EXCAVATE DETENTION BASIN, INSTALL APPROVED OUTLET, STABILIZE BEFORE PAVING IS STARTED.
9-05	9-16	6. INSTALL UNDERGROUND UTILITIES (I.E. SANITARY, STORM AND WATER MAIN).
8-01	11-30	7. PLACE INLET FILTERS.
9-19	10-06	8. INSTALL PAVEMENT COMPLETE.
10-09	10-13	9. INSTALL ALL PUBLIC UTILITIES COMPLETE (ELECTRIC, TELEPHONE, AND CABLE T.V.).
10-16		10. ESTABLISH VEGETATION FOR ALL DISTURBED AREAS AND ROAD / R.O.W.s.
11-01		11. CLEAN OUT STORM SEWERS SYSTEM.
11-01		12. CLEAN OUT AND RESTORE SEDIMENT FOREBAY AND DETENTION POND TO DESIGN SPECIFICATIONS.
11-30		13. REMOVE SILT FENCE FOLLOWING W.C.D.O.E. APPROVAL.

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SCRAPE STREETS		X	X	X	X	X	X
SWEEP STREETS				X			

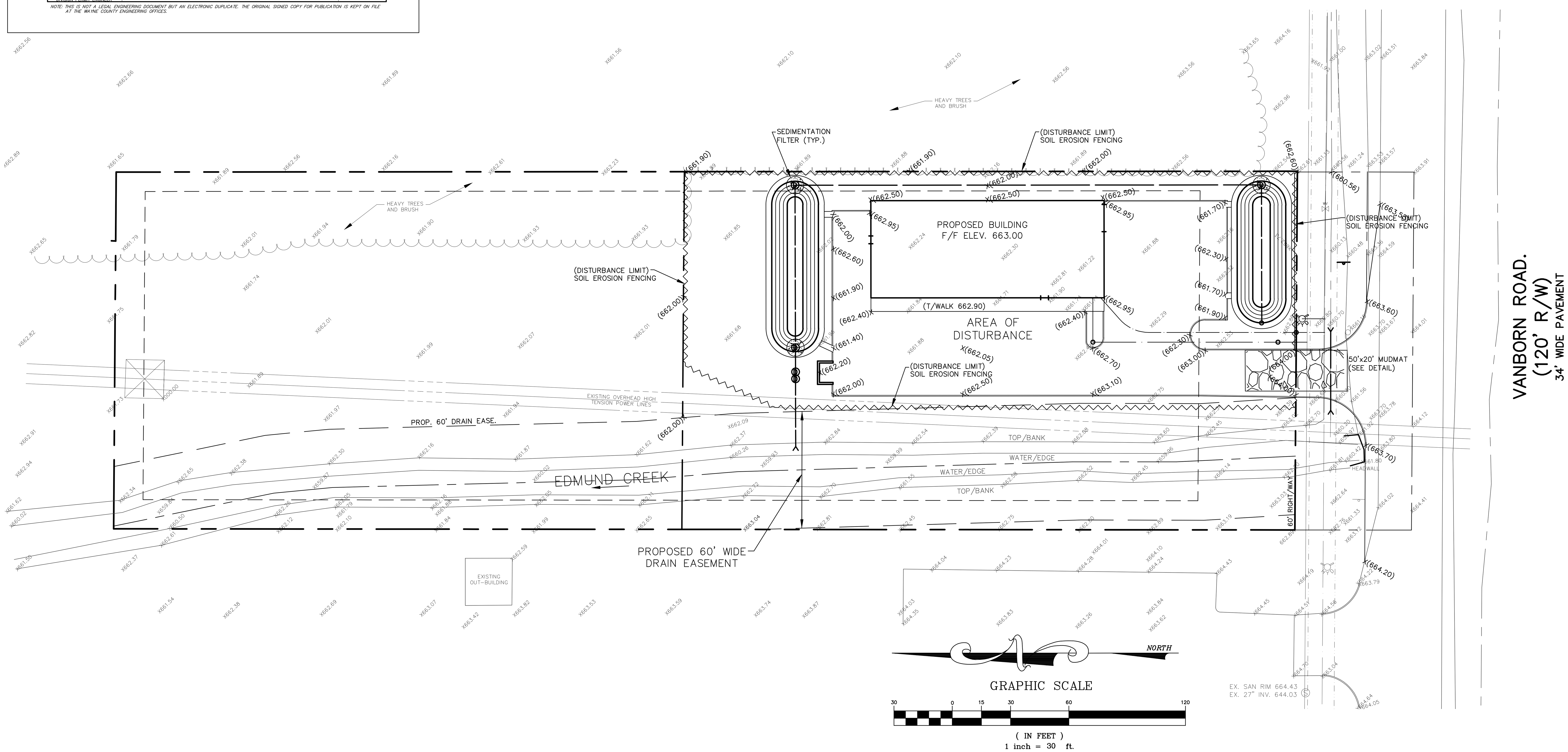


VICINITY MAP

NOT TO SCALE

WETALND INFORMATION

THERE ARE NO KNOWN WETLANDS OR FLOODPLAINS LOCATED WITHIN THE BOUNDARIES OF THE SUBJECT PROPERTY.



PROPERTY DESCRIPTION

(LEGAL DESCRIPTION SUPPLIED BY PROPERTY OWNER) LAND LOCATED IN THE CITY OF WAYNE, COUNTY OF WAYNE, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS:

PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWN 2 SOUTH, RANGE 9 EAST, DESCRIBED AS: BEGINNING AT A POINT S.89°44'28"E., 1133.00 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 31 TO THE POINT OF BEGINNING; THENCE N.00°00'06"E., 666.68 FEET; THENCE S.89°46'31"E., 183.51 FEET; THENCE DUE SOUTH 666.79 FEET; THENCE N.89°44'28"W., 183.50 FEET TO THE POINT OF BEGINNING. EXCEPT THE SOUTHERLY 60.00 FEET THEREOF.

PROPERTY OWNER

PURE CLOUDS of MICHIGAN
5895 N. CHRISTINE
WESTLAND, MI 48185
(313) 595-1747
pure_clouds_mi@yahoo.com
CONTACT: JUAN ELIZONDO

LEGEND

EX. SIGN
EX. SANITARY MANHOLE
EX. HYDRANT
EX. LIGHT POLE
EX. UTILITY POLE
EX. VALVE WELL
EX. FENCE
EX. CATCH BASIN
EX. STORM MANHOLE
EX. SHUT-OFF
X000.00 EX. SPOT ELEVATION

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST. WAYNE, MI 48184
(734) 756-2196
E-mail: kbhardy1964@hotmail.com

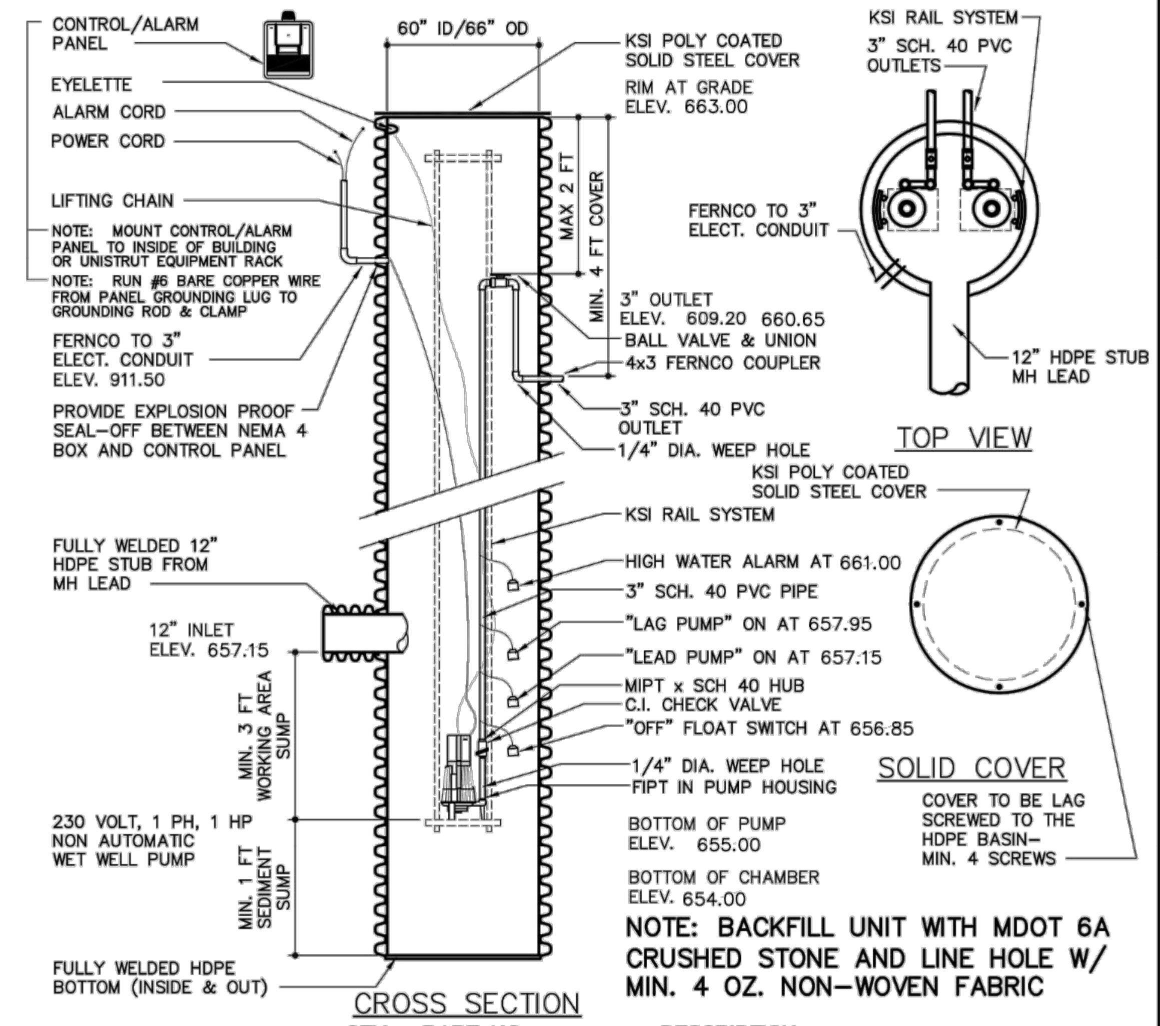
SOIL EROSION & SEDIMENTATION PLAN

38030 VANBORN
AWS - AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

REVISIONS
09-02-2021
10-25-2021
11-22-2021
12-21-2021

DATE 07-11-21
CHECKED BY:
DRAWING No. A-
K.B. HARDY
DRAWN BY:
JOB No. 2021-13
SHEET No. 4 OF 7

KSI CUSTOM DUPLEX WET WELL PUMP
60" DIA. x 12 FT DEEP HDPE CHAMBER



NOTE: BACKFILL UNIT WITH MDOT 6A CRUSHED STONE AND LINE HOLE W/ MIN. 4 OZ. NON-WOVEN FABRIC

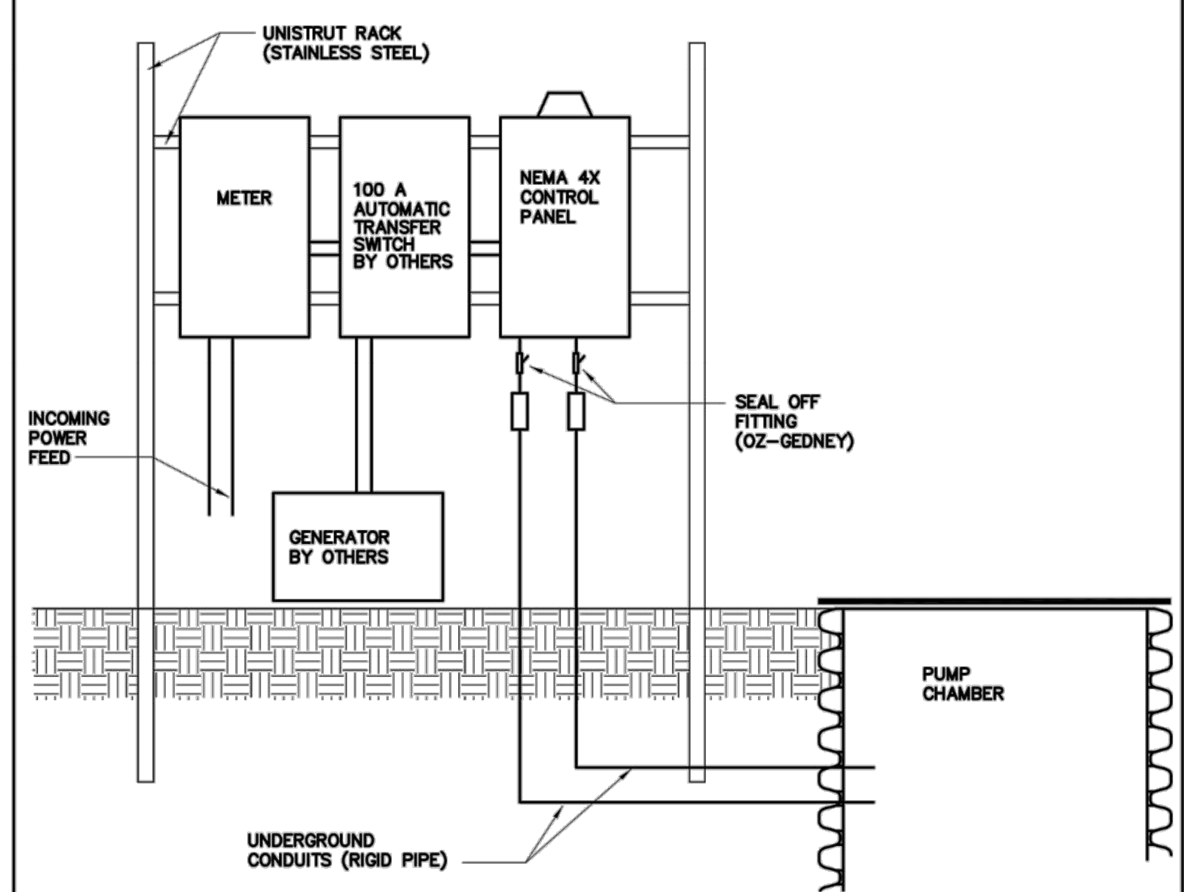
KSI MUST HAVE A REPRESENTATIVE ON-SITE DURING INSTALLATION TO CERTIFY INSTALLATION FOR KSI WARRANTY

QTY.	PART NO.	DESCRIPTION
2	KSI 611	230 VOLT, 1 PH, 1 HP, NON AUTOMATIC PUMP
2	–	3" CHECK VALVE
2	–	3" BALL VALVE & UNION
1	–	DUPLEX CONTROL PANEL W/ ALARM (NEMA 4X)
1	–	60" DIA. HDPE BASIN W/ SOLID COVER
1	–	KSI RAIL SYSTEM W/ SUSPENDED BASE

KSI PROVIDES A ONE YEAR EQUIPMENT WARRANTY

DESIGN BY: AG / RK | REV. DATE: 10-23-20 | 1 OF 1 | KSI | KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144
MANUF. APPROVAL BY: • | SCALE: NTS | SHEET NO.
DRAWING NO. PURE CLOUDS, WAYNE

KSI STANDARD PUMP CHAMBER AT GRADE COMPONENTS



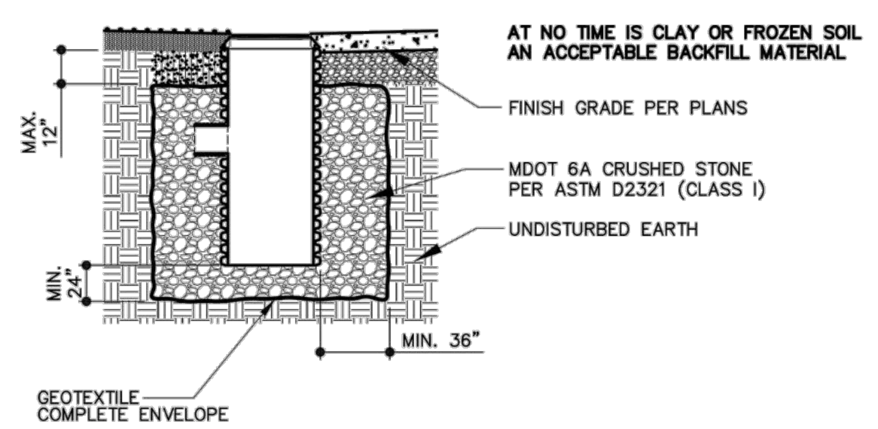
DESIGN BY: AG / RK | REVISED: 9-6-18 DATE: 12-1-09 | 1 OF 1 | KSI | KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144
MANUF. APPROVAL BY: • | SCALE: NTS | SHEET NO.
DRAWING NO. UNISTRUT RACK DETAIL

INSTALLATION INSTRUCTIONS
FOR KSI HDPE PUMP CHAMBER STRUCTURES
INSTALLATION GUIDELINES

1. EXCAVATE AREA FOR KSI STRUCTURE AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.
2. THE KSI STRUCTURE SHALL BE INSTALLED ON A BED OF NO LESS THAN 24" MDOT 6A CRUSHED STONE BEDDING MATERIALS COMPACTED TO 95% PROCTOR DENSITY.

WRAP STRUCTURE ENVELOPE IN GEOTEXTILE (8 OZ. NON-WOVEN FABRIC)

3. INSTALL KSI STRUCTURES AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET STUBS WITH APPROPRIATE PIPE COUPLINGS, FERNCOS OR HDPE DOUBLE BELL GASKETED COUPLERS TO CONVEYANCE PIPE.
4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE PER ASTM D2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.
5. DURING INSTALLATION, IT MAY BE NECESSARY TO FILL THE PUMP CHAMBER WITH WATER TO ASSIST WITH PLACEMENT. UPON COMPLETION OF INSTALL – FILL CHAMBER WITH WATER UP TO OUTLET ELEVATION.
6. INSTALL SAFETY FENCE – SEE NOTE BELOW.



INSTALLATION NOTE:
PUMP CHAMBER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321. CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE CHAMBER FROM DAMAGE DUE TO POINT AND IMPACT LOADING. BACKFILL THE CHAMBER WITH MDOT 6A CRUSHED STONE. UPON INSTALLTION, THE CHAMBER SHALL BE FILLED WITH WATER TO THE OUTLET ELEVATION. ONCE THE CHAMBER IS INSTALLED, PLACE AN ORANGE SAFETY FENCE 4-5 FT HIGH WITH TEE POSTS AROUND THE CHAMBER. PLACE FENCE MIN. 3 FT BEYOND THE PUMP CHAMBER EXCAVATION AREA. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THE REPAIR COST. IF GIVEN IN WRITING, A 3-4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.

DESIGN BY: AG / RK | REV. DATE: 8-27-19 | 1 OF 1 | KSI | KENNEDY SOLUTIONS, INC. 2111 Sage Lake Road Prescott, MI 48756 Ph: 800-699-4046 Fx: 248-375-8144
MANUF. APPROVAL BY: • | SCALE: NTS | SHEET NO.
DRAWING NO. PC INSTALL

Blakney Farms – TDH calculations

Q = 0.507 cfs (0.507 cfs x 7.481 gal/cf x 60 sec/min) = 227.6 gpm
Divided by 2 pumps set at same elevations = 113 gpm

The pump chamber package is designed as a duplex system (2 pumps and a duplex alternating control panel with 4 floats). The maximum discharge for Pump Chamber system is 227 gpm. Based on the total dynamic head of 13 ft., each pump will pump at a maximum rate of 113 gpm. Therefore, if the "LAG" float is activated and the second pump kicks on while the initial pump is running, the total discharge will not exceed 227 gpm. Both pumps will have identical elevations.

Static Head Calculations
3" dia. HDPE outlet invert = 609.2 (highest point = 611.0)
Bottom of pump = 602.0
Static Head = 9 ft

Dynamic Head Calculations

Pipe	
Length of 3" HDPE pipe	10
Chamber	
3-3" 90 degree elbows 3(7.7)	23.1
1 – 3" check valve 1(25.5)	25.5
1 – 3" ball/gate valve 1(2.0)	2.0
Length of 3" pipe in chamber	12.0
	72.6

Zoeller friction head loss chart
~110 gpm V=4.77 f/s H_{Loss} = 2.51

Use 72.6 ft (2.51 ft/100 ft) = 1.82 = Dynamic Head

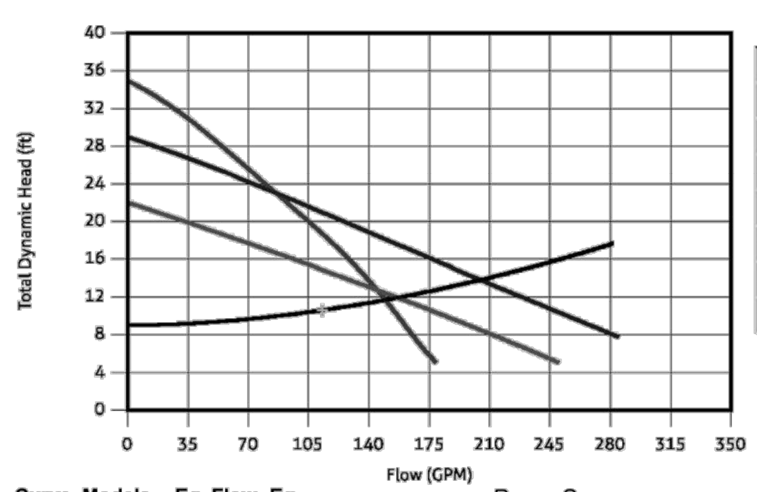
Total Dynamic Head = 9 + 1.82 = 10.82 therefore, use 11' at 110 gpm

Hand calcs are within 5% of system curve generated by the Zoeller pump program

Known Flow

Dewatering
Sizing ID: N58-4CO-AKF

ZOELLER



System Curve

GPM	TDH (ft)
0.00	9.00
58.00	9.47
116.00	10.68
174.00	12.56
232.00	15.06
290.00	18.17
348.00	21.85

Fittings

90° Elbows	3
Gate Valves	1
Check Valves	1

Flow (GPM)*: 113.00
TDH (ft)*: 10.60
*Per user data

Curve	Models	Eq. Flow	Eq. Head
	611	156.75	11.93
	284	149.55	11.69
	621	204.92	13.82

Pump Specs

Electrical	230 volt, 1 phase, 60 Hertz
Physical	
Discharge Size	3.00" NPT
Pipe Size	3.00"
Pipe Length (ft)	10.0000
Pipe Type	Plastic
Solids Handling (in.)	0
Static Head (ft)	9.0000
Discharge Pressure	0 PSI

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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP COMPANY

SECTION: 2.20.880
FM2794
0818
Supersedes
0318

TECHNICAL DATA SHEET
SEWAGE WASTE SERIES
Models 611, 621, 631, 641, 651, 661 Submersible Sewage Pumps

PRODUCT SPECIFICATIONS

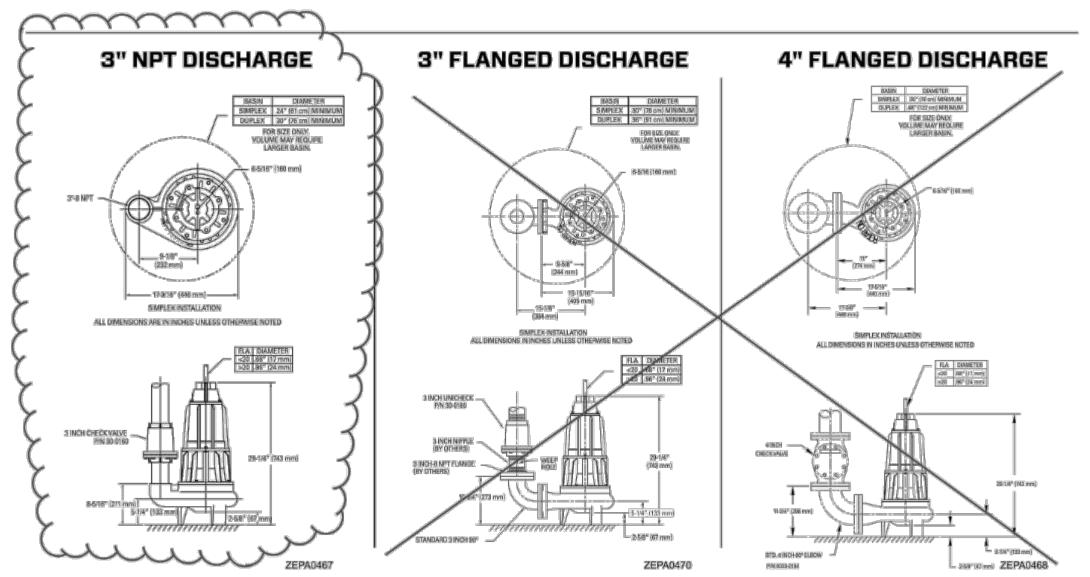
MOTOR	Horse Power	1 (611), 1-1/2 (621), 2 (631), 3 (641), 5 (651), 7-1/2 (661)
	Voltage	230, 200 - 575
	Phase	1, 3 Ph
	Hertz	60 Hz
	RPM	1750
	Type	Capacitor start capacitor run or 3 Ph
	Insulation	Class F
	Amps	1.7 - 28.0
PUMP	Operation	Nonautomatic
	Discharge Size	3" NPT (optional 3" or 4" flange available)
	Solids Handling	2-1/2" (63 mm) spherical solids
	Cord Length	25' (8 m) standard
	Cord Type	UL listed 3-wire cord
	Max. Head	65' (19.8 m)
	Max. Flow Rate	590 GPM (2,233 LPM)
	Max. Operating Temp.	104 °F (40 °C)
	Cooling	Oil filled
	Motor Protection	Thermal sensors with automatic reset

MATERIALS	Upper Bearing	Ball bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Tandem carbon and ceramic
	Impeller Type	Semi-open
	Impeller	Ductile iron
	Hardware	Stainless steel
	Motor Shaft	Stainless steel
	Gasket	Buna-N square ring seals

All Class 30 cast iron construction.

NOTE: See model comparison chart for specific details.

3" NPT DISCHARGE | 3" FLANGED DISCHARGE | 4" FLANGED DISCHARGE



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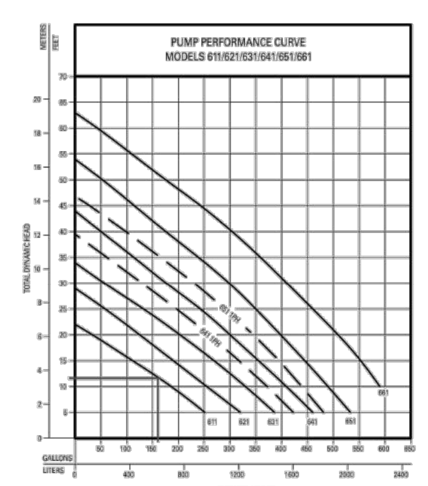
TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODEL		611		621		631		641 (1PH)	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	250	946	320	1211	390	1476	420	1590
10	3.0	185	700	255	965	335	1268	370	1401
15	4.6	110	416	190	719	272	1030	319	1208
20	6.1	35	132	125	473	200	757	260	984
25	7.6	–	–	60	227	130	492	198	750
30	9.1	–	–	–	–	55	208	130	492
35	10.7	–	–	–	–	–	–	62	235
40	12.2	–	–	–	–	–	–	–	–
45	13.7	–	–	–	–	–	–	–	–
50	15.2	–	–	–	–	–	–	–	–
55	16.7	–	–	–	–	–	–	–	–
60	18.2	–	–	–	–	–	–	–	–
Shut-off Head:		22 ft.(6.7m)		29 ft.(8.8m)		34 ft.(10.4m)		39.5 ft.(12.0m)	

MODEL		641		651 (1PH)		651		661	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	460	1741	475	1798	533	2018	–	–
10	3.0	410	1552	440	1666	490	1855	590	2233
15	4.6	355	1343	395	1495	445	1685	555	2101
20	6.1	300	1136	345	1306	398	1507	510	1931
25	7.6	245	927	290	1098	350	1325	460	1741
30	9.1	175	662	232	878	300	1136	410	1552
35	10.7	115	435	165	625	240	908	360	1363
40	12.2	50	189	95	360	175	662	305	1155
45	13.7	–	–	25	95	115	435	245	927
50	15.2	–	–	–	–	55	208	175	662
55	16.7	–	–	–	–	–	–	110	416
60	18.2	–	–	–	–	–	–	45	170
Shut-off Head:		44 ft.(13.4m)		46.5 ft.(14.2m)		54 ft.(16.5m)		63 ft.(19.2m)	



Model	Seal	Mode	Volts	Ph	Amps	HP	Hz	Lbs	Kg
	MODEL COMPARISON								
*E611	Double	Non	230	1	6.9	1	60	245	111
J611	Double	Non	200	3	4.8	1	60	245	111
F611	Double	Non	230	3	4.2	1	60	245	111
G611	Double	Non	460	3	2.1	1	60	245	111
BA611	Double	Non	575	3	1.7	1	60	245	111
*E621	Double	Non	230	1	8.9	1-1/2	60	245	111
J621	Double	Non	200	3	5.9	1-1/2	60	245	111
F621	Double	Non	230	3	5.1	1-1/2	60	245	111
G621	Double	Non	460	3	2.6	1-1/2	60	245	111
BA621	Double	Non	575	3	2.0	1-1/2	60	245	111
*E631	Double	Non	230	1	14.5	2	60	245	111
J631	Double	Non	200	3	7.8	2	60	245	111
F631	Double	Non	230	3	6.8	2	60	245	111
G631	Double	Non	460	3	3.4	2	60	245	111
BA631	Double	Non	575	3	2.7	2	60	245	111
*E641	Double	Non	230	1	17.0	3	60	245	111
J641	Double	Non	200	3	11.0	3	60	245	111
F641	Double	Non	230	3	9.6	3	60	245	111
G641	Double	Non	460	3	4.8	3	60	245	111
BA641	Double	Non	575	3	3.9	3	60	245	111
*E651	Double	Non	230	1	28.0	5	60	245	111
J651	Double	Non	200	3	17.5	5	60	245	111
F651	Double	Non	230	3	15.2	5	60	245	111
G651	Double	Non	460	3	7.6	5	60	245	111
BA651	Double	Non	575	3	6.1	5	60	245	111
J661	Double	Non	200	3	25.3	7-1/2	60	245	111
F661	Double	Non	230	3	22.0	7-1/2	60	245	111
G661	Double	Non	460	3	11.0	7-1/2	60	245	111
BA661	Double	Non	575	3	9.0	7-1/2	60	245	111

* All single phase units require external starting capacitor and relay circuits.
Additional cord lengths are available in 35' (11 m) and 50' (15 m).

CAUTION All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP COMPANY

SECTION: 2.50.040
FM0486
0717
Supersedes
0414

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SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
TEL: (502) 778-2731 • 1 (800) 928-PUMP • FAX: (502) 774-3624

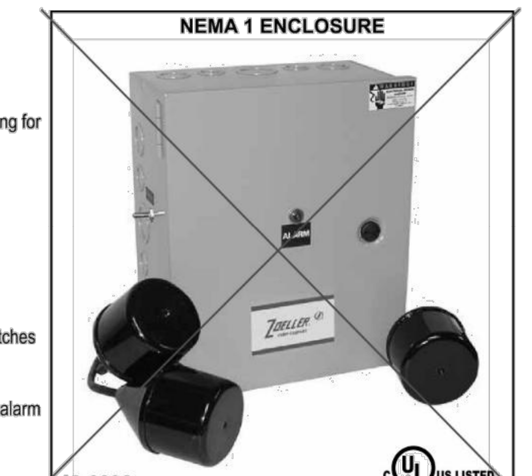
Visit our web site: zoellerpumps.com

ELECTRICAL ALTERNATOR CONTROL PANEL - FOR DUPLEX INSTALLATIONS

An Electrical Alternator is used on a Duplex pump application where automatic alternation of the pumps is desired for added protection in residential or commercial applications. With one pump operating to handle normal flow, a second pump becomes operational in the event the water level continues to rise. The built-in alarm system, a standard feature, can be connected to sound when the second pump becomes operational (3-float switch system) or independently (4-float switch system). All electrical systems must be installed by a qualified electrician and according to the National Electrical Code. (See Section 430-71 though 430-113, plus any others that apply.)

Control Panel Features:
- Hand-Off-Auto Toggle Switch for each pump
- Green pump run pilot light for each pump
- Alarm test and silence switches
- Red pilot light (Nema 1 Only) and audible alarm with 83 to 85 decibel rating for a high water condition
- Red Alarm Beacon included with Nema 4X enclosure
- Auxiliary Dry Contact
- High Water Alarm
- On Single Phase - Circuit breaker for each pump
- On Three Phase - Motor protective switch with overload protection
- Magnetic starter for each pump
- Alternating mechanism
- Numbered terminal strip for connecting pumps and variable level float switches
- Nema 1 - general purpose or
  Nema 4X - Watertight enclosures available
- Integral auxiliary terminal board connections (dry contact) for remote alarm devices
- 3 or 4 variable level float switch control operation
- Three 20' float switches included with single phase panels
- 2 Year Warranty
- The use of off-the-shelf components provide for relatively easy field maintenance and repair
- Float switches not included with three phase panels (See FM0526)

NEMA 1 ENCLOSURE



NEMA 4X ENCLOSURE

Products may not be exactly as illustrated

CONTROL PANEL USED WITH SINGLE PHASE PUMPS

NEMA 1 ENCLOSURE WITH 20' FLOAT SWITCH			
Item No.	Dimensions H x W x D	Volts	Amp Range
10-1039	12" x 10" x 6"	115	7-15
10-1040	12" x 10" x 6"	115	15-20
10-0092	12" x 10" x 6"	115/200/230	0-20

NEMA 4X ENCLOSURE WITH 20' FLOAT SWITCH			
Item No.	Dimensions H x W x D	Volts	Amp Range
10-1041	12" x 10" x 6"	115	7-15
10-1042	12" x 10" x 6"	115	15-20
10-1043	12" x 10" x 6"	115/200/230	0-7
10-1044	12" x 10" x 6"	115/200/230	7-15
10-1045	12" x 10" x 6"	115/200/230	15-20
10-1046	12" x 10" x 6"	115/200/230	20-30
10-0093	12" x 10" x 6"	115/200/230	0-20

* Branch circuit protection provided by installing electrician.

NOTE: 600 and X600 Series single phase pumps require special panels that include start components. See Selection Guide FM0712 for correct panel selection.
NOTE: All variable level float switches in this section are mechanically activated and do not contain mercury.

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST. WAYNE, MI 48184
(734) 756-2196
E-mail: kbhardy1964@hotmail.com

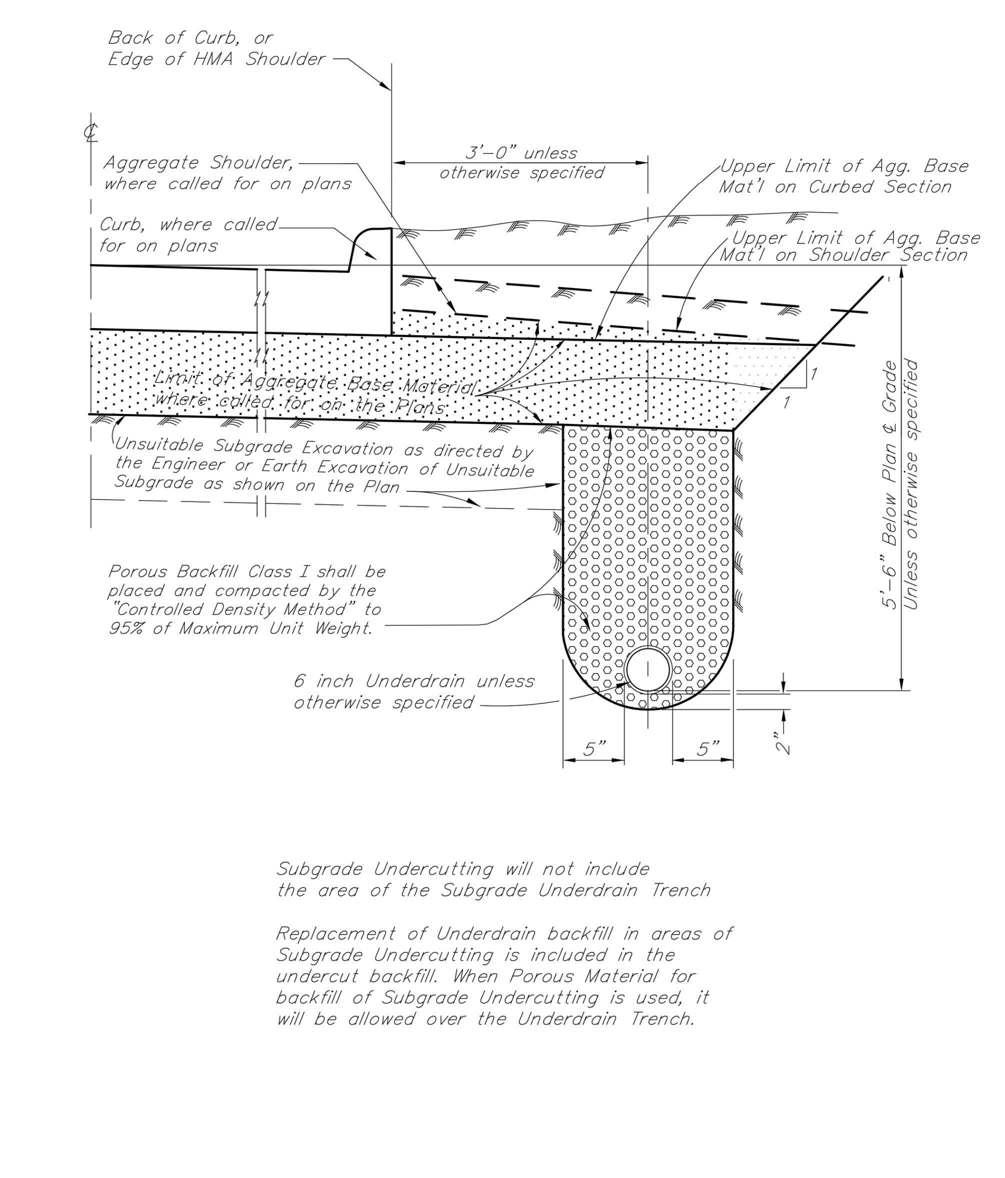
PUMP STATION DETAILS

38030 VANBORN
ASW-AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

REVISIONS
08-23-2021
09-02-2021
10-25-2021
11-22-2021

SHEET No.	JOB No.	DRAWING No.	DATE
5 OF 7	2021-13	A-	07-11-21

DRAWN BY: K.B. HARDY
CHECKED BY:



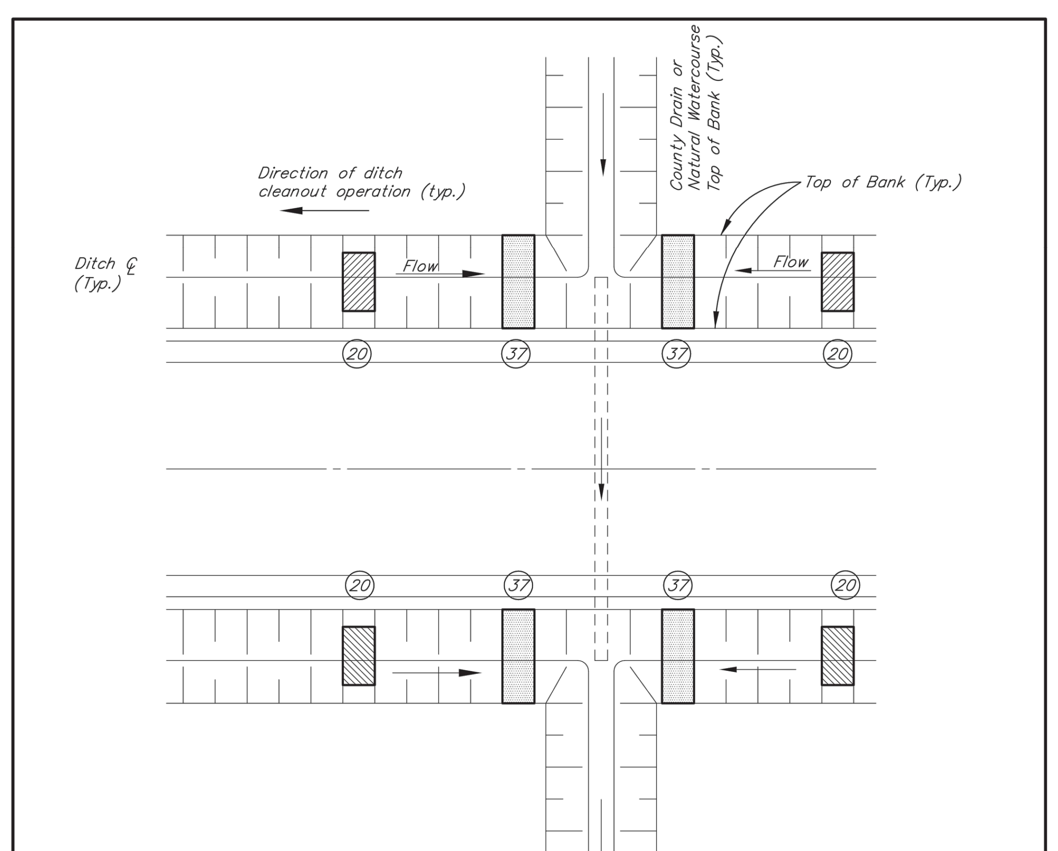
Subgrade Undercutting will not include the area of the Subgrade Underdrain Trench

Replacement of Underdrain backfill in areas of Subgrade Undercutting is included in the undercut backfill. When Porous Material for backfill of Subgrade Undercutting is used, it will be allowed over the Underdrain Trench.

Work this Sheet with the General Notes on Standard Plan S-1

REVISION DATE: 08/01/07		
DIRECTOR OF ENGINEERING	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE S-14
DIVISION PERMIT ENGINEER	UNDERDRAIN	SHEET 1 OF 2

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.



DITCH CLEANOUT SEQUENCE

1– Place Check Dam (37) and sediment trap (20) at ditch outlet prior to start of construction.

2– Ditch cleanout operations shall start at the low point of the ditch and proceed upstream.

3– Sediment Traps (20) shall be constructed at 300 foot centers for all ditches with a slope greater than 1%

4– Ditch cleanout spoils shall be removed from the right-of-way and disposed of to not erode into any Watercourse.

5– Within five days after ditching, stabilize the disturbed ground with hydroseeding, either seed mix THM and mulch over 3" topsoil or sod over 2" of topsoil, substantial growth must be achieved.

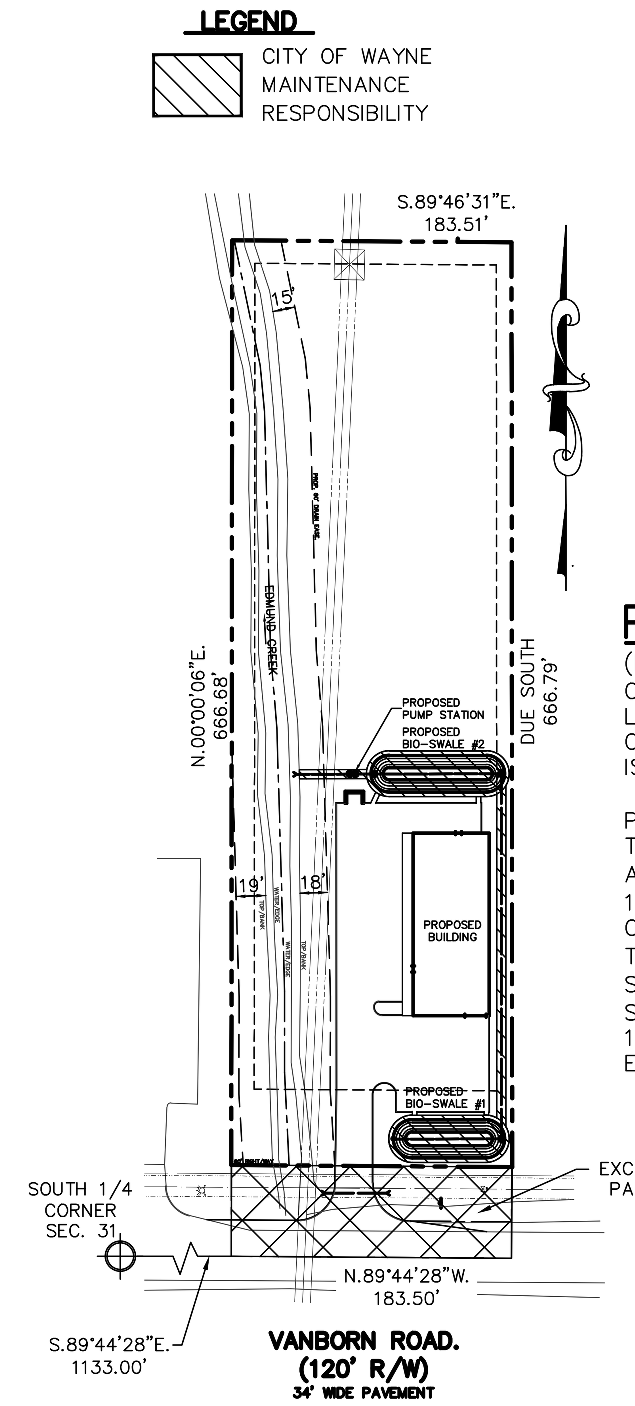
6– After turf is established, remove temporary erosion controls, regrade ditch and stabilize remaining bare ground, and restore the right-of-way.

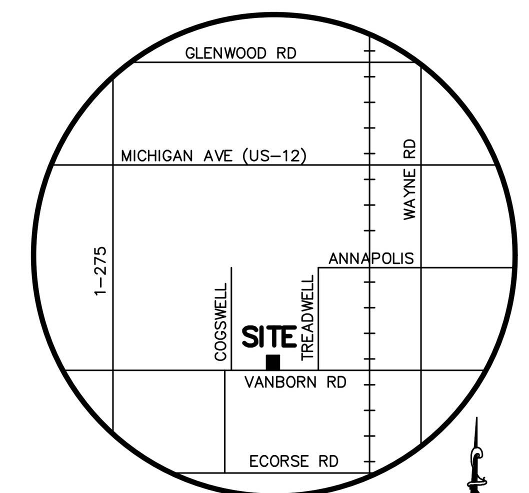
REVISION DATE:		
DIRECTOR OF ENGINEERING	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE M-2
DIVISION PERMIT ENGINEER	DITCH CLEANOUT	SHEET 1 OF 1

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.

EXHIBIT "A"

PHYSICAL LIMITS OF STORM WATER MANAGEMENT SYSTEM



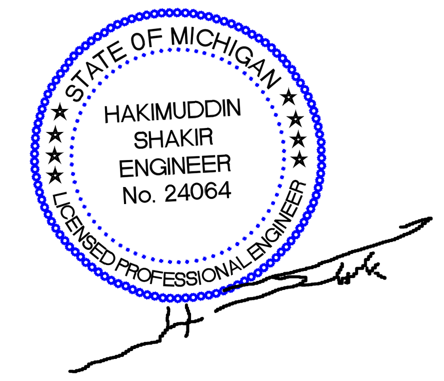


VICINITY MAP
NOT TO SCALE

PROPERTY DESCRIPTION

(LEGAL DESCRIPTION SUPPLIED BY PROPERTY OWNER)
LAND LOCATED IN THE CITY OF WAYNE, COUNTY OF WAYNE, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS:

PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWN 2 SOUTH, RANGE 9 EAST, DESCRIBED AS: BEGINNING AT A POINT S.89°44'28"E., 1133.00 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 31 TO THE POINT OF BEGINNING; THENCE N.00°00'06"E., 666.68 FEET; THENCE S.89°46'31"E., 183.51 FEET; THENCE DUE SOUTH 666.79 FEET; THENCE N.89°44'28"W., 183.50 FEET TO THE POINT OF BEGINNING. EXCEPT THE SOUTHERLY 60.00 FEET THEREOF.



PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

DATE: 07-15-21 JOB No. 2021-13 DWG No. D- SHEET: 1 of 1 SCALE: 1"=100'	EXHIBIT "A" STORM MAINENANCE PURE CLOUD 38030 VANBORN, WAYNE COUNTY, MICHIGAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com

EXHIBIT "B"

LONG TERM MAINTENANCE SCHEDULE CHART

MAINTENANCE ACTIVITIES	CATCH BASINS, INLETS AND STORM SEWERS	CHANNELS AND SWALES	INLETS TO BIORETENTION	BIORETENTION AREA	BUFFER STRIP	OVERFLOW STRUCTURES OUTLET PIPE	PAVEMENT AREAS			FREQUENCY
MONITORING/INSPECTION										
INSPECT FOR SEDIMENT ACCUMULATION	X	X	X	X	X	X				AS NEEDED / SEMI-ANNUALLY
INSPECT FOR FLOATABLES, DEAD VEGETATION AND DEBRIS	X	X	X	X	X	X				ANNUALLY & AFTER MAJOR EVENTS
INSPECT FOR EROSION AND INTEGRITY OF SYSTEM	X	X	X	X	X	X				ANNUALLY & AFTER MAJOR EVENTS
INSPECT ALL COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	X	X	X	X	X	X				ANNUALLY
ENSURE MAINTENANCE ACCESS REMAIN OPEN/CLEAR	X	X	X	X	X	X				ANNUALLY
PREVENTATIVE MAINTENANCE										
REMOVE ACCUMULATED SEDIMENTS	X	X	X	X	X	X				AS NEEDED, SELECT AREAS ONLY
REMOVE FLOATABLES, INVASIVE & DEAD VEGETATION & DEBRIS	X	X	X	X	X	X				AS NEEDED
RE-APPLY / REPLACE MULCH LAYER				X						RE-APPLY EVERY 6 MONTHS, REPLACE EVERY 2-YEARS
REPLACE SUBSURFACE COMPONENTS (SOILS, STONES, 6" UNDERDRAIN)				X						EVERY 5-YEARS, OR WHEN WATER PONDS MORE THAN 6 HOURS
SWEEPING OF PAVED SURFACES							X			AS NEEDED / SEMI-ANNUALLY
REMEDIAL ACTIONS										
REPAIR/STABILIZE AREAS OF EROSION, RESEED BARE AREAS	X	X	X	X	X	X				AS NEEDED
REPLACE DEAD PLANTINGS, LAWN				X	X					AS NEEDED
STRUCTURAL REPAIRS	X	X	X			X	X			AS NEEDED
MAKE ADJUSTMENTS/REPAIRS TO ENSURE PROPER FUNCTIONING	X	X	X	X	X	X	X			AS NEEDED

* NOT TO EXCEED THE LENGTH ALLOWED BY LOCAL COMMUNITY ORDINANCE.

A. PHYSICAL LIMITS OF THE STORM WATER MANAGEMENT SYSTEM
THE STORM WATER MANAGEMENT SYSTEM (SWMS) SUBJECT TO THIS LONG-TERM MAINTENANCE PLAN (PLAN) IS DEPICTED ON EXHIBIT A TO THE PERMIT AND INCLUDES WITHOUT LIMITATION THE STORM SEWERS, CATCH BASINS, MANHOLES, INLETS, SWALES, SPILLWAYS, FOREBAY, DETENTION BASIN, OUTLET CONTROL STRUCTURE AND OUTLET PIPE THAT CONVEYS FLOW FROM THE DETENTION BASIN INTO THE EDMUND CREEK. FOR PURPOSES OF THIS PLAN, THIS STORM WATER MANAGEMENT SYSTEM AND ALL OF ITS COMPONENTS AS SHOWN ON EXHIBIT A IS REFERRED TO AS PURE CLOUD LLC SWMS.

B. TIME FRAME FOR LONG-TERM MAINTENANCE RESPONSIBILITY
PURE CLOUD LLC IS RESPONSIBLE FOR MAINTAINING THE PURE CLOUD LLC SWMS, INCLUDING COMPLYING WITH APPLICABLE REQUIREMENTS OF THE LOCAL OR WAYNE COUNTY SOIL EROSION AND SEDIMENTATION CONTROL PROGRAM, UNTIL WAYNE COUNTY RELEASES THE CONSTRUCTION PERMIT. LONG-TERM MAINTENANCE RESPONSIBILITY FOR THE PURE CLOUD LLC SWMS COMMENCES WHEN DEFINED BY THE MAINTENANCE PERMIT ISSUED BY THE COUNTY. LONG-TERM MAINTENANCE CONTINUES IN PERPETUITY.

C. MANNER OF ENSURING MAINTENANCE RESPONSIBILITY
THE CITY OF WAYNE HAS ASSUMED RESPONSIBILITY FOR LONG-TERM MAINTENANCE OF PURE CLOUD LLC SWMS. THE RESOLUTION BY WHICH THE CITY HAS ASSUMED MAINTENANCE RESPONSIBILITY IS ATTACHED TO THE PERMIT AS EXHIBIT C. PURE CLOUD THROUGH A MAINTENANCE AGREEMENT WITH THE CITY, HAS AGREED TO PERFORM THE MAINTENANCE ACTIVITIES REQUIRED BY THIS PLAN. CITY OF WAYNE RETAINS THE RIGHT TO ENTER THE PROPERTY AND PERFORM THE NECESSARY MAINTENANCE OF THE PURE CLOUD LLC SWMS IF PURE CLOUD LLC FAILS TO PERFORM THE REQUIRED MAINTNANCE ACTIVITIES. TO ENSURE THAT THE PURE CLOUD LLC SWMS IS MAINTAINED IN PERPETUITY, THE MAP OF THE PHYSICAL LIMITS OF THE STORM WATER MANAGEMENT SYSTEM (EXHIBIT A), THIS PLAN (EXHIBIT B), THE RESOLUTION ATTACHED AS EXHIBIT C, AND THE MAINTENANCE AGREEMENT BETWEEN THE CITY OF WAYNE AND THE PROPERTY OWNER(S) WILL BE RECORDED WITH THE WAYNE COUNTY REGISTER OF DEEDS. UPON RECORDING, A COPY OF THE RECORDED DOCUMENTS WILL BE PROVIDED TO THE COUNTY.

D. LONG TERM MAINTENANCE PLAN AND SCHEDULE
TABLE 1 IDENTIFIES THE MAINTENANCE ACTIVITIES TO BE PERFORMED, ORGANIZED BY CATEGORY (MONITORING/INSPECTION, PREVENTATIVE MAINTENANCE, AND REMEDIAL ACTIONS). WHILE PERFORMING MAINTENANCE, CHEMICALS SHOULD NOT BE APPLIED TO THE FOREBAY, DETENTION BASIN, BUFFER STRIP, OR WATERCOURSES. TABLE 1 ALSO IDENTIFIES SITE-SPECIFIC WORK NEEDED TO ENSURE THAT THE STORM WATER MANAGEMENT SYSTEM FUNCTION PROPERLY AS DESIGNED.

PROPERTY OWNER

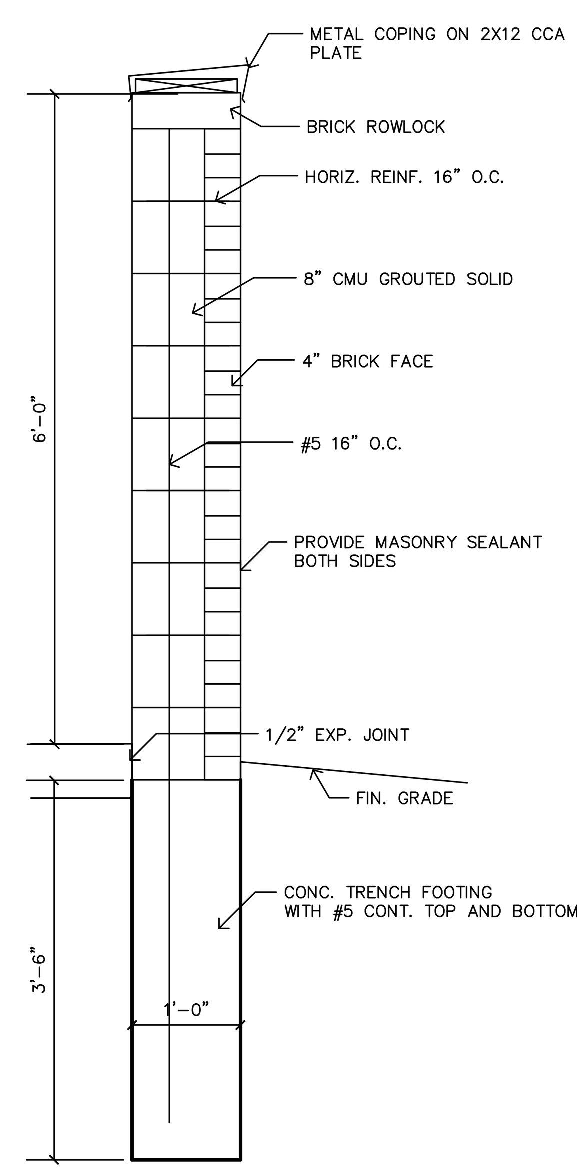
PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

ENGINEER

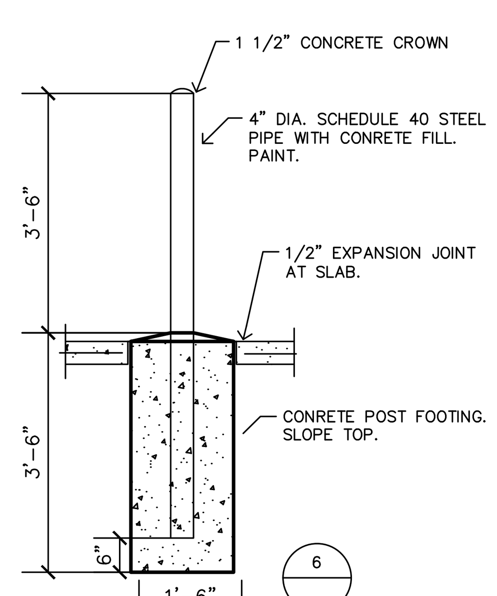
ALLSTATE ENGINEERING
17060 CEDARCROFT
SOUTHFIELD, MI 48076
CONTACT: KEVIN HARDY
(734) 756-2196

DATE: 03-09-2021 JOB No. 2020-11 DWG No. D- SHEET: 1 of 1 SCALE: 1"=100'	EXHIBIT "B" STORM MAINENANCE PURE CLOUD LLC 36450 ANNAPOLIS, WAYNE COUNTY MICHIGAN

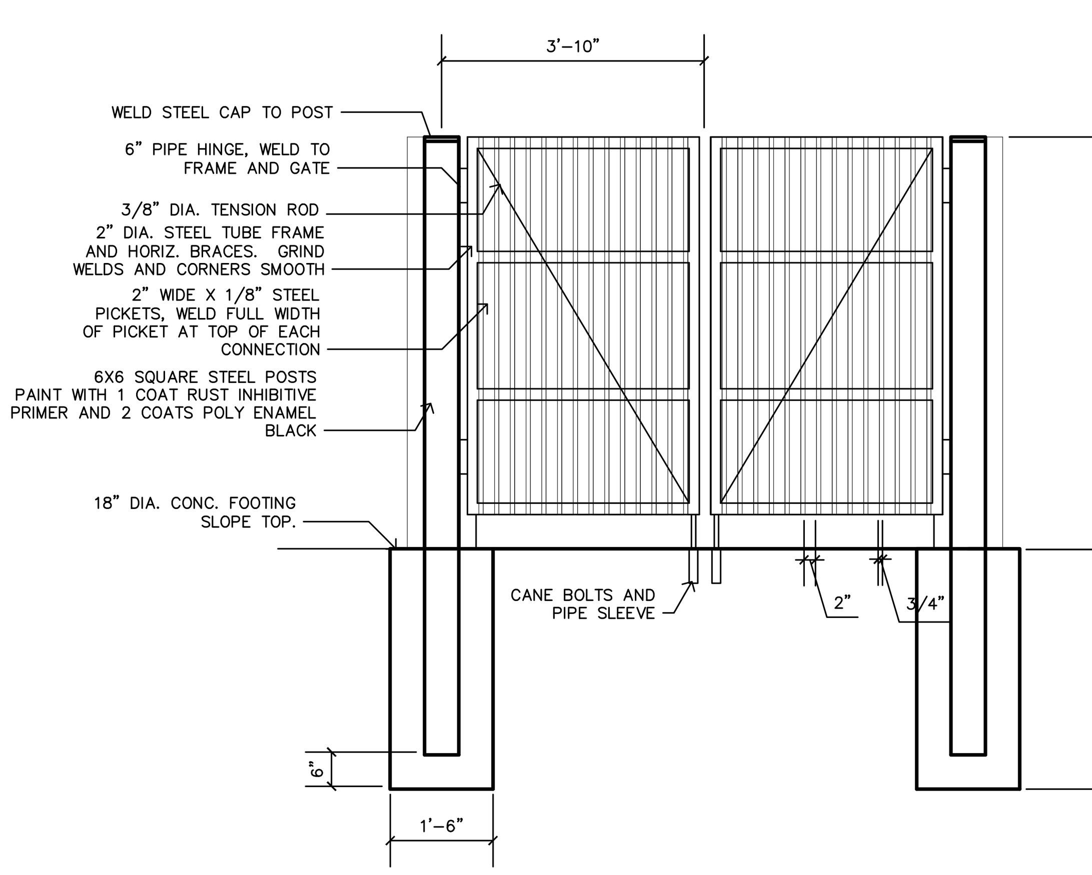
HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com



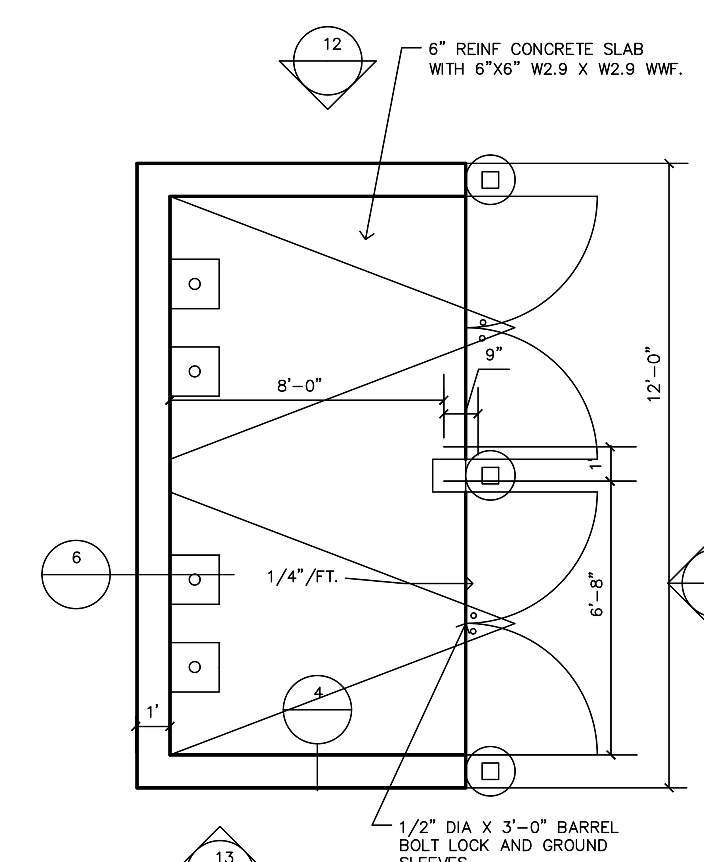
4 SCREEN SECTION



BUMPER POST



14 SCREEN ELEVATION



10 SCREEN PLAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST. WAYNE, MI 48184
(734) 756-2196
E-mail: kbhardy1964@hotmail.com

DETAILS - 2

38030 VANBORN
AWS - AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

SHEET No.	JOB No.	DRAWING No.	DATE	REVISIONS
7 OF 7	2021-13	A-	07-11-21	09-02-2021 10-25-2021 11-22-2021 12-21-2021

DRAWN BY: K.B. HARDY
CHECKED BY:

PROPOSED DRAIN EASEMENT

EXHIBIT 'A'

PROPERTY DESCRIPTION

(LEGAL DESCRIPTION SUPPLIED BY PROPERTY OWNER, PER DEED RECORDED IN LIBER 54266, PAGE 393 WCR)

LAND LOCATED IN THE CITY OF WAYNE, COUNTY OF WAYNE, STATE OF MICHIGAN, AND IS DESCRIBED AS FOLLOWS:

PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWN 2 SOUTH, RANGE 9 EAST, DESCRIBED AS: BEGINNING AT A POINT S.89°44'28"E., 1133.00 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 31 TO THE POINT OF BEGINNING; THENCE N.00°00'06"E., 666.68 FEET; THENCE S.89°46'31"E., 183.51 FEET; THENCE DUE SOUTH 666.79 FEET; THENCE N.89°44'28"W., 183.50 FEET TO THE POINT OF BEGINNING. EXCEPT THE SOUTHERLY 60.00 FEET THEREOF. SAID PARCEL CONTAINING 111,848 S/F – 2.57 AC.

TAX ID 55–012–99–0011–003

STATE OF MICHIGAN ★ SOMAYAJULU P. YEDAVALLY PROFESSIONAL SURVEYOR No. 22824 ★ LICENSED PROFESSIONAL SURVEYOR

Somayajulu P. Yedavally

PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313–595–1747
pure_clouds_mi@yahoo.com

DATE:	03–07–22
JOB No.	2021–13
DWG No.	D–
SHEET:	1 of 3
SCALE:	1"=100'

PROP. EASE.
60' DRAIN EASEMENT
38030 VANBORN, WAYNE COUNTY, MICHIGAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756–2196 // kbhardy1964@hotmail.com

PROPOSED DRAIN EASEMENT

EXHIBIT 'B'

DRAIN EASE. DESCRIPTION

CENTERLINE OF A PROPOSED 60' WIDE DRAIN EASEMENT FOR EDMUND CREEK AS IT AFFECTS THE ABOVE DESCRIBED PROPERTY.

SAID EASEMENT BEING LOCATED IN THE SOUTHEAST 1/4 OF SECTION 31, TOWN 2 SOUTH, RANGE 9 EAST, DESCRIBED AS: BEGINNING AT A POINT S.89°44'28"E., 1167.98 FEET AND N.00°00'06"E., 60.00 FEET FROM THE SOUTH 1/4 CORNER OF SECTION 31 TO THE POINT OF BEGINNING; THENCE N.02°45'44"W., 61.33 FEET; THENCE NORTH 53.42 FEET; THENCE N.01°40'47"W., 172.37 FEET; THENCE N.04°39'11"W., 50.44 FEET; THENCE N.01°27'32"W., 158.29 FEET; THENCE N.05°30'03"W., 30.36 FEET; THENCE N.11°37'28"W., 84.11 FEET TO THE POINT OF ENDING. SAID POINT OF ENDING BEING S.89°46'31"E., 1.40' EAST OF THE NORTHWEST CORNER OF THE SUBJECT PROPERTY. SAID EASEMENT CONTAINING 33,436 S/F – 0.77 ACRES.

PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

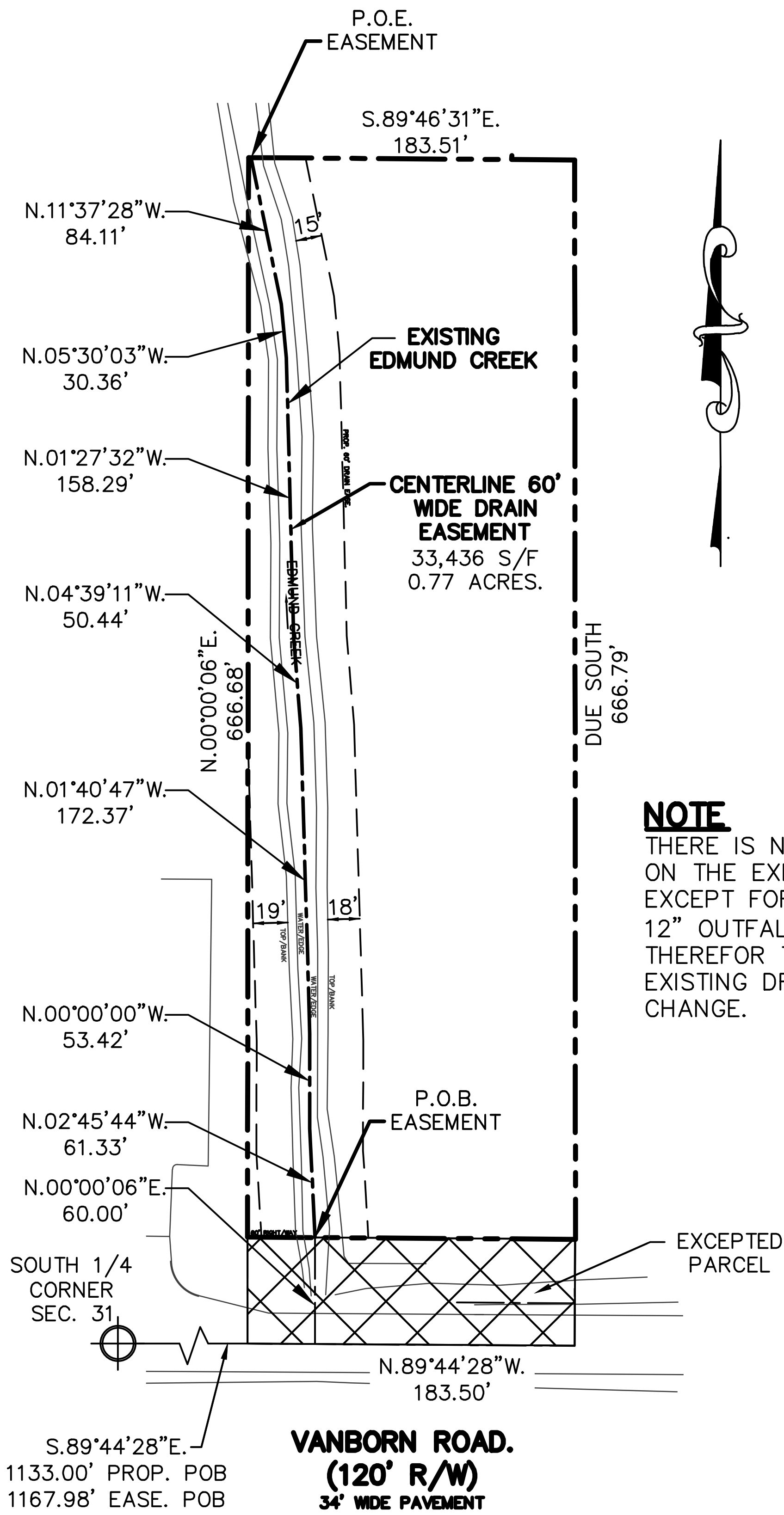
DATE:	03-07-22
JOB No.	2021-13
DWG No.	D-
SHEET:	2 of 3
SCALE:	1"=100'

PROP. EASE.
60' DRAIN EASEMENT
38030 VANBORN, WAYNE COUNTY, MICHIGAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com

PROPOSED DRAIN EASEMENT

EXHIBIT 'C'



NOTE

THERE IS NO WORK PROPOSED ON THE EXISTING DRAIN EXCEPT FOR THE PROPOSED 12" OUTFALL FROM THE SITE. THEREFOR THE WIDTH OF THE EXISTING DRAIN WILL NOT CHANGE.

PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

DATE:	03-07-22	PROP. EASE. 60' DRAIN EASEMENT 38030 VANBORN, WAYNE COUNTY, MICHIGAN
JOB No.	2021-13	
DWG No.	D-	
SHEET:	3 of 3	
SCALE:	1"=100'	

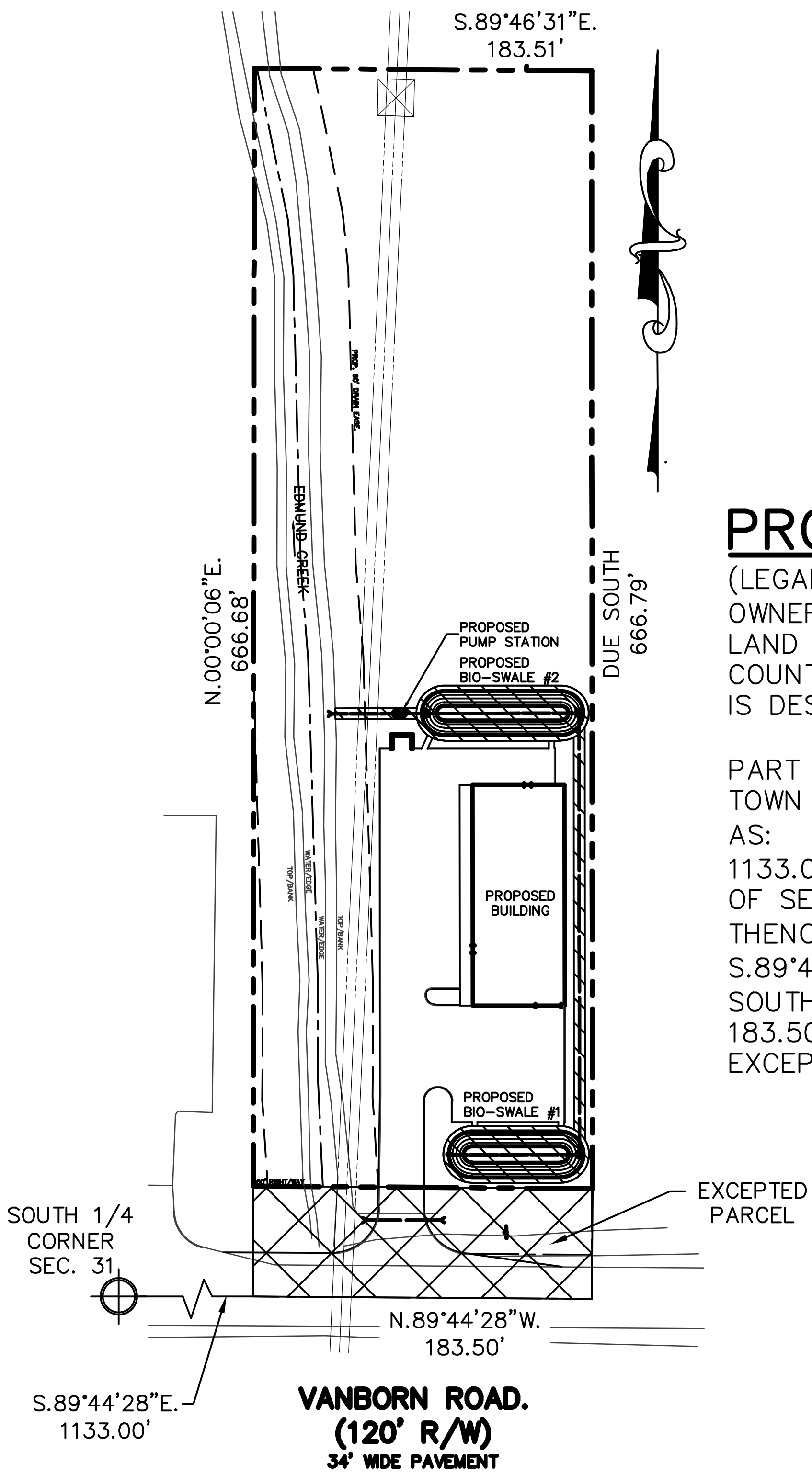
HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com

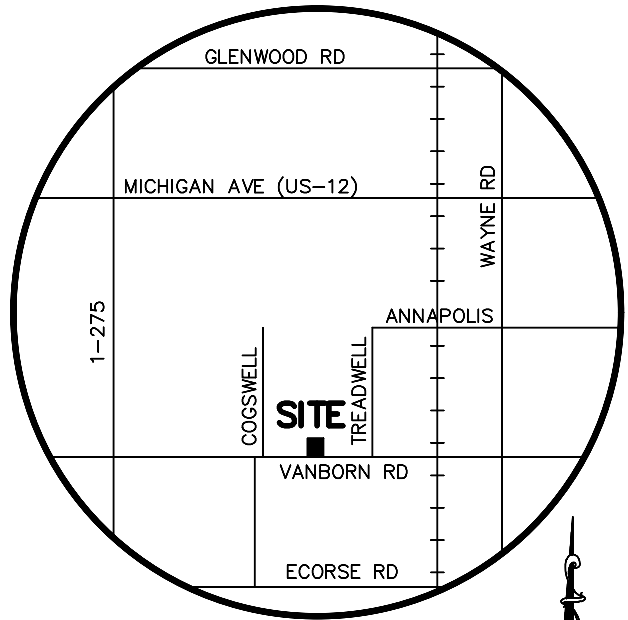
EXHIBIT "A"

PHYSICAL LIMITS OF STORM WATER MANAGEMENT SYSTEM

LEGEND

CITY OF WAYNE MAINTENANCE RESPONSIBILITY





VICINITY MAP

NOT TO SCALE

PROPERTY DESCRIPTION

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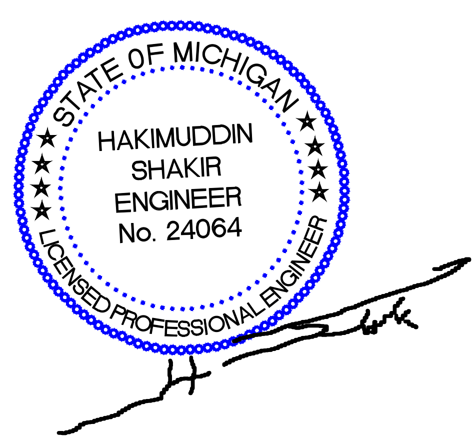

PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

DATE:	07-15-21	EXHIBIT "A"
JOB No.	2021-13	STORM MAINENANCE
DWG No.	D-	PURE CLOUD LLC
SHEET:	1 of 1	38030 VANBORN, WAYNE
SCALE:	1"=100'	COUNTY, MICHIGAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com

EXHIBIT "B"

LONG TERM MAINTENANCE SCHEDULE CHART

MAINTENANCE ACTIVITIES	CATCH BASINS, INLETS AND STORM SEWERS	CHANNELS AND SWALES	INLETS TO BIORETENTION	BIORETENTION AREA	BUFFER STRIP	OVERFLOW STRUCTURES OUTLET PIPE	PAVEMENT AREAS			FREQUENCY
MONITORING/INSPECTION										
INSPECT FOR SEDIMENT ACCUMULATION	X	X	X	X	X	X				AS NEEDED / SEMI-ANNUALLY
INSPECT FOR FLOATABLES, DEAD VEGETATION AND DEBRIS	X	X	X	X	X	X				ANNUALLY & AFTER MAJOR EVENTS
INSPECT FOR EROSION AND INTEGRITY OF SYSTEM	X	X	X	X	X	X				ANNUALLY & AFTER MAJOR EVENTS
INSPECT ALL COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	X	X	X	X	X	X				ANNUALLY
ENSURE MAINTENANCE ACCESS REMAIN OPEN/CLEAR	X	X	X	X	X	X				ANNUALLY
PREVENTATIVE MAINTENANCE										
REMOVE ACCUMULATED SEDIMENTS	X	X	X	X	X	X				AS NEEDED, SELECT AREAS ONLY
REMOVE FLOATABLES, INVASIVE & DEAD VEGETATION & DEBRIS	X	X	X	X	X	X				AS NEEDED
RE-APPLY / REPLACE MULCH LAYER				X						RE-APPLY EVERY 6 MONTHS, REPLACE EVERY 2-YEARS
REPLACE SUBSURFACE COMPONENTS (SOILS, STONES, 6" UNDERDRAIN)				X						EVERY 5-YEARS, OR WHEN WATER PONDS MORE THAN 6 HOURS
SWEEPING OF PAVED SURFACES							X			AS NEEDED / SEMI-ANNUALLY
REMEDIAL ACTIONS										
REPAIR/STABILIZE AREAS OF EROSION, RESEED BARE AREAS	X	X	X	X	X	X				AS NEEDED
REPLACE DEAD PLANTINGS, LAWN				X	X					AS NEEDED
STRUCTURAL REPAIRS	X	X	X			X	X			AS NEEDED
MAKE ADJUSTMENTS/REPAIRS TO ENSURE PROPER FUNCTIONING	X	X	X	X	X	X	X			AS NEEDED

*** NOT TO EXCEED THE LENGTH ALLOWED BY LOCAL COMMUNITY ORDINANCE.**

A. PHYSICAL LIMITS OF THE STORM WATER MANAGEMENT SYSTEM

THE STORM WATER MANAGEMENT SYSTEM (SWMS) SUBJECT TO THIS LONG-TERM MAINTENANCE PLAN (PLAN) IS DEPICTED ON EXHIBIT A TO THE PERMIT AND INCLUDES WITHOUT LIMITATION THE STORM SEWERS, CATCH BASINS, MANHOLES, INLETS, SWALES, SPILLWAYS, FOREBAY, DETENTION BASIN, OUTLET CONTROL STRUCTURE AND OUTLET PIPE THAT CONVEYS FLOW FROM THE DETENTION BASIN INTO THE EDMUND CREEK. FOR PURPOSES OF THIS PLAN, THIS STORM WATER MANAGEMENT SYSTEM AND ALL OF ITS COMPONENTS AS SHOWN ON EXHIBIT A IS REFERRED TO AS PURE CLOUD LLC SWMS.

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C. MANNER OF ENSURING MAINTENANCE RESPONSIBILITY

THE CITY OF WAYNE HAS ASSUMED RESPONSIBILITY FOR LONG-TERM MAINTENANCE OF PURE CLOUD LLC SWMS. THE RESOLUTION BY WHICH THE CITY HAS ASSUMED MAINTENANCE RESPONSIBILITY IS ATTACHED TO THE PERMIT AS EXHIBIT C. PURE CLOUD THROUGH A MAINTENANCE AGREEMENT WITH THE CITY, HAS AGREED TO PERFORM THE MAINTENANCE ACTIVITIES REQUIRED BY THIS PLAN. CITY OF WAYNE RETAINS THE RIGHT TO ENTER THE PROPERTY AND PERFORM THE NECESSARY MAINTENANCE OF THE PURE CLOUD LLC SWMS IF PURE CLOUD LLC FAILS TO PERFORM THE REQUIRED MAINTNANCE ACTIVITIES. TO ENSURE THAT THE PURE CLOUD LLC SWMS IS MAINTAINED IN PERPETUITY, THE MAP OF THE PHYSICAL LIMITS OF THE STORM WATER MANAGEMENT SYSTEM (EXHIBIT A), THIS PLAN (EXHIBIT B), THE RESOLUTION ATTACHED AS EXHIBIT C, AND THE MAINTENANCE AGREEMENT BETWEEN THE CITY OF WAYNE AND THE PROPERTY OWNER(S) WILL BE RECORDED WITH THE WAYNE COUNTY REGISTER OF DEEDS. UPON RECORDING, A COPY OF THE RECORDED DOCUMENTS WILL BE PROVIDED TO THE COUNTY.

D. LONG TERM MAINTENANCE PLAN AND SCHEDULE

TABLE 1 IDENTIFIES THE MAINTENANCE ACTIVITIES TO BE PERFORMED, ORGANIZED BY CATEGORY (MONITORING/INSPECTION, PREVENTATIVE MAINTENANCE, AND REMEDIAL ACTIONS). WHILE PERFORMING MAINTENANCE, CHEMICALS SHOULD NOT BE APPLIED TO THE FOREBAY, DETENTION BASIN, BUFFER STRIP, OR WATERCOURSES. TABLE 1 ALSO IDENTIFIES SITE-SPECIFIC WORK NEEDED TO ENSURE THAT THE STORM WATER MANAGEMENT SYSTEM FUNCTION PROPERLY AS DESIGNED.

PROPERTY OWNER

PURE CLOUDS LLC
JUAN ELIZONDO
5895 N CHRISTINE
WESTLAND, MI 48185
313-595-1747
pure_clouds_mi@yahoo.com

ENGINEER

ALLSTATE ENGINEERING
17060 CEDARCROFT
SOUTHFIELD, MI 48076
CONTACT: KEVIN HARDY
(734) 756-2196

DATE: 03-09-2021
JOB No. 2020-11
DWG No. D-
SHEET: 1 of 1
SCALE: 1"=100'

EXHIBIT "B"
STORM MAINENANCE
PURE CLOUD LLC
36450 ANNAPOLIS, WAYNE COUNTY MICHIGAN

HARDY CIVIL DESIGN SERVICES LLC
4996 MOORE ST.
WAYNE, MI 48184
(734) 756-2196 // kbhardy1964@hotmail.com

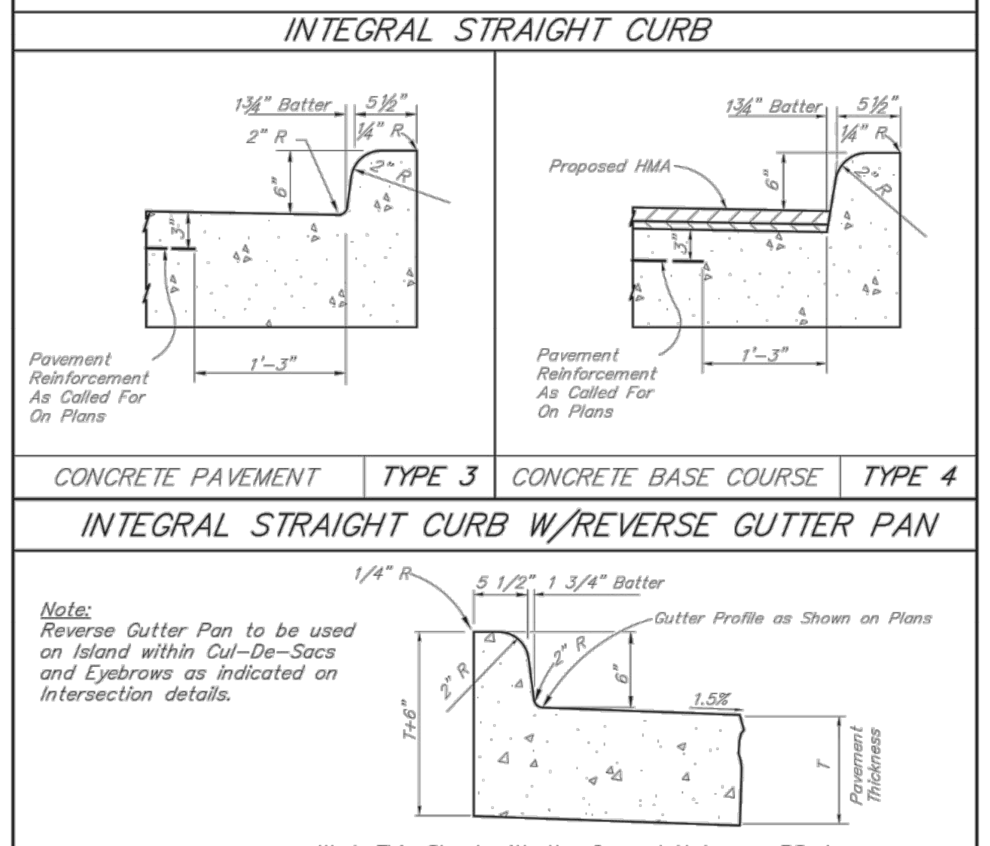
All transverse joints in the concrete pavement shall extend entirely through the integral curb and be of the same kind and thickness as provided for the pavement.

The joint material shall be pre-cut so as to conform to the geometric shape and cross sectional area of the curb, and shall be placed in contact with the filler material in the pavement.

Integral curbs, which are placed as part of a concrete base course pavement shall have transverse plane of weakness joints, formed by placing a pre-molded bituminous filler 1/4 inch thick, entirely through the curb, in exact alignment with all joints in the base course pavement. The joint material shall be pre-cut so as to conform to the geometric shape and cross sectional area of the curb.

The edges of all transverse joints in the integral curb shall be rounded with an approved finishing tool having a radius of 1/4 inch.

INTEGRAL STRAIGHT CURB



Work This Sheet with the General Notes on RS-1

REVISION DATE: 08/01/07 | DIRECTOR OF ENGINEERING | DIVISION PERMIT ENGINEER

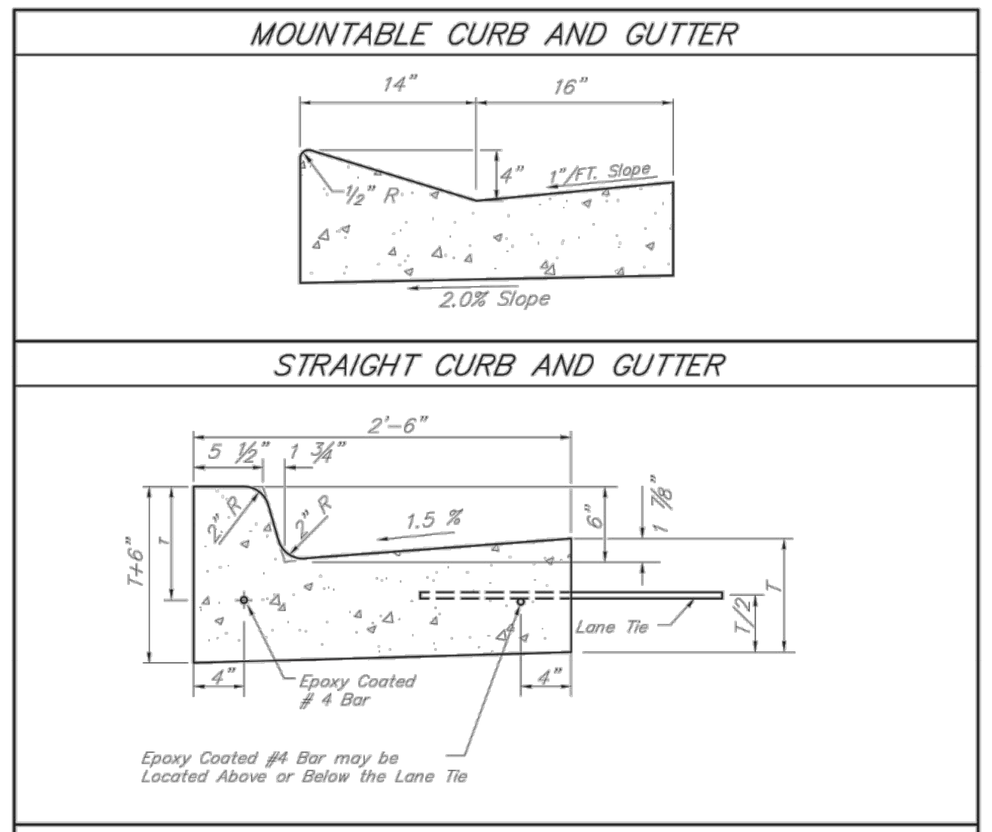
WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

CURB AND CURB & GUTTER DETAILS

SCALE NOT TO SCALE | RS-3 | SHEET 1 OF 3

NOTE: THIS IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL SIGNED COPY FOR PUBLICATION IS KEPT ON FILE AT THE WAYNE COUNTY ENGINEERING OFFICES.

MOUNTABLE CURB AND GUTTER



NOTES:

PLANE OF WEAKNESS JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT APPROXIMATELY 10' INTERVALS.

EXPANSION JOINTS SHALL BE PLACED 10' EACH SIDE OF ALL CATCH BASINS AND AT THE ENDS OF RADII AT ALL STREET RETURNS AND SEALED WITH HOT-POURED RUBBER ASPHALT COMPOUND.

MATCH CONCRETE PAVEMENT JOINTS NOT TO EXCEED 25' SPACINGS.

"T" IS THE DEPTH OF PROPOSED CURB AND GUTTER SECTION THAT SHALL MATCH THE THICKNESS OF PROPOSED PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE WAYNE COUNTY ENGINEER OR AS SHOWN ON APPROVED PLANS.

OMIT LANE TIES WHEN PLACING CURB NEXT TO HMA PAVEMENT.

PLACE 1" FIBER JOINT FILTER AT 400' MAXIMUM INTERVALS.

WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1

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WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

CURB AND CURB & GUTTER DETAILS

SCALE NO SCALE | RS-3 | SHEET 2 OF 3

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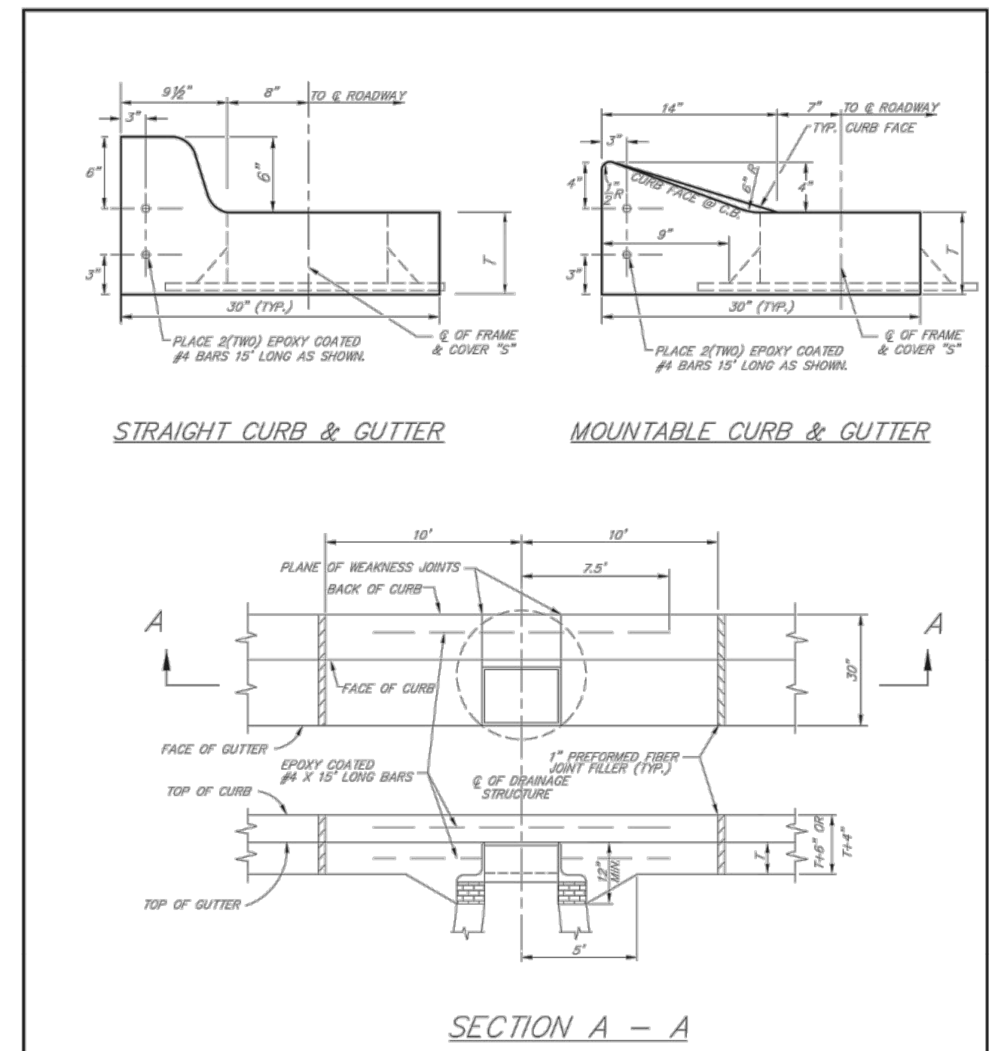

WORK THIS SHEET WITH "S" SERIES STANDARDS.

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WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

CURB AND CURB & GUTTER DETAILS

SCALE NO SCALE | RS-3 | SHEET 3 OF 3

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WAYNE COUNTY DRIVE APPROACH NOTES

1. CONSTRUCT THE DRIVE APPROACH OPENING PER WAYNE COUNTY STANDARD DETAIL D-6 AND/OR AS DIRECTED BY THE COUNTY ENGINEER.
2. CONSTRUCT DRIVE APPROACH WITH MINIMUM 8" NON-REINFORCED CONCRETE OVER 6" MINIMUM 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE TO A MINIMUM OF 95% MAXIMUM DENSITY UNIT WEIGHT AND INTEGRAL CURB TYPE (3) AS PER WAYNE COUNTY STANDARD DETAIL (RS-3) AND/OR AS DIRECTED BY THE COUNTY ENGINEER.
3. PLACE 1" EXPANSION JOINT BEHIND THE CURB THROUGHOUT THE DRIVE APPROACH OR AS DIRECTED BY THE COUNTY ENGINEER.
4. STRUCTURES ADJUSTMENT SHALL BE DETERMINED ON SITE BY THE COUNTY ENGINEER.

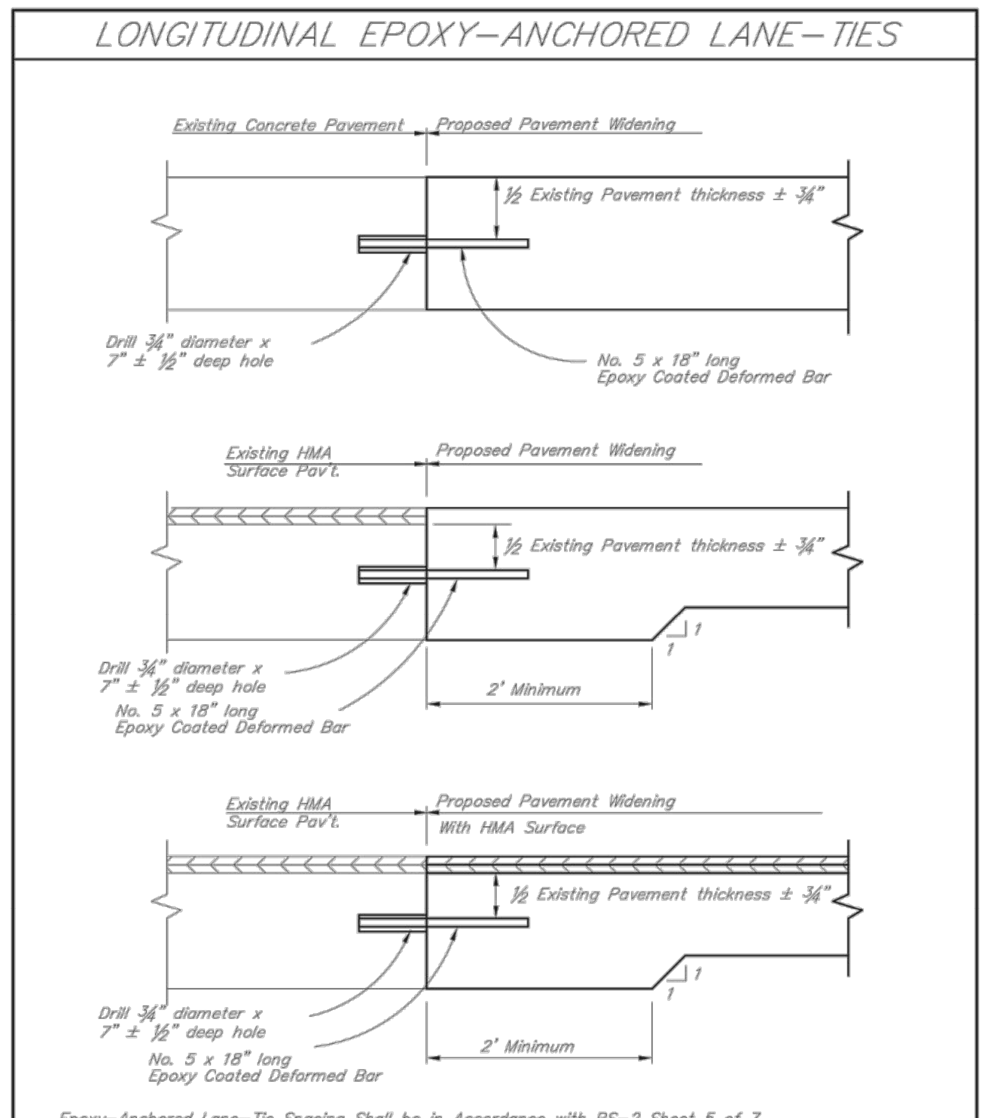
WAYNE COUNTY CONSTRUCTION NOTES

1. PRIOR TO PAVEMENT REMOVAL, THE CONTRACTOR SHALL CONTACT WAYNE COUNTY ENGINEER/INSPECTOR TO VERIFY IF THE EXISTING GRADES OF THE GUTTER LINES AND THE TOP OF CURBS ARE NEEDED AND TO BE PROVIDED AS REQUESTED.
2. SAW-CUT FULL DEPTH THE EXISTING PAVEMENT WITHIN WAYNE COUNTY ROAD RIGHT-OF-WAY AND REMOVE THE EXISTING PAVEMENT OR AS DIRECTED BY WAYNE COUNTY ENGINEER.
3. ANY DAMAGED UNDERDRAIN AS A RESULT OF THIS PROJECT ACTIVITY SHALL BE RECONSTRUCTED AS PER WAYNE COUNTY DETAIL "S-14 OR AS DIRECTED BY THE COUNTY ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE TO RESOLVE ANY WATER PONDING ISSUES AND MAINTAIN A POSITIVE FLOW ALONG THE GUTTER LINE WITHIN THE LIMIT OF THE PROJECT.
5. RELOCATE, RESTORE, OR REPLACE ANY TRAFFIC SIGNS THAT ARE AFFECTED BY THE CONSTRUCTION AS DIRECTED BY THE COUNTY ENGINEER.

WAYNE COUNTY DPS GENERAL NOTES

1. ALL WORK WITHIN WAYNE COUNTY ROAD RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS, INCLUDING SOIL EROSION AND SEDIMENTATION CONTROL OF THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES, AND MDOT 2013 SPECIFICATIONS FOR CONSTRUCTION.
2. THESE PLANS ARE NOT VALID WITHOUT ATTACHMENT OF THE WAYNE COUNTY PERMIT SPECIFICATIONS FOR CONSTRUCTION WITHIN THE ROAD RIGHT OF WAY, (7-01-93) REVISED 12-15-2004.
3. CONTRACTOR SHALL CONTACT MISSDIG AT 811 TO IDENTIFY AND FLAG/MARK THE LOCATIONS OF ALL UNDERGROUND UTILITIES AT THE PROPOSED CONSTRUCTION AREAS PRIOR TO START OF CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES, AND RESOLVE ANY CONFLICT BETWEEN THE PROPOSED WORK AND THE EXITING UNDERGROUND OR ABOVEGROUND UTILITIES.
4. CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AND 3 FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES, ANY PROPOSED UTILITY PERMITTED TO CROSS UNDER THE ROAD OR DRAIN, MUST BE PLACED A MINIMUM OF 7 FEET BELOW THE LOWEST POINT OF THE ROAD, OR 6 FEET BELOW THE DRAIN BOTTOM. TO RELOCATE ANY UTILITY WITHIN THE ROAD RIGHT OF WAY, THE CONTRACTOR SHALL COORDINATE THE RELOCATION WITH THE UTILITY COMPANY AND AS DIRECTED BY THE COUNTY ENGINEER.
5. ALL SURVEY MONUMENTS/CORNERS AND BENCHMARKS LOCATED WITHIN THE CONSTRUCTION AREA MUST BE PRESERVED IN ACCORDANCE WITH PUBLIC ACT 74 AS AMENDED (INCLUDING ACT 34, P.A. 2000) AND AS PER WAYNE COUNTY PERMIT RULE 1.5. THE PERMIT HOLDER AND CONTRACTOR SHALL COORDINATE THE WORK WITH A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF MICHIGAN DURING CONSTRUCTION ACTIVITIES FOR THE PURPOSE OF WITNESSING, PRESERVING OR REPLACING SURVEY MONUMENTS AND MONUMENT BOXES.
6. EXPOSURE OF ANY UTILITIES UNDER THE PAVEMENT WILL NOT BE PERMITTED, UNLESS APPROVED BY THE WAYNE COUNTY ENGINEER. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PERFORMED PER APPLICABLE WAYNE COUNTY STANDARD DETAILS AND AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
7. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITHIN THE WAYNE COUNTY ROAD RIGHT OF WAY WITH 3" TOPSOIL, THM SEED MIX AND MULCH. SLOPES STEEPER THAN 1 OF 3 SHALL BE RESTORED BY PLACING SOD ON 2" TOPSOIL.
8. ALL BACKFILLS UNDER OR WITHIN 3 FEET OF THE PROPOSED OR EXISTING PAVEMENT, CURB OR SIDEWALK SHALL CONFORM TO THE WAYNE COUNTY TRENCH "B" BACKFILL REQUIREMENTS. TRENCH "A" BACKFILL MAY BE USED WITHIN THE ROAD RIGHT OF WAY AREAS UNDER CONDITIONS OTHER THAN THOSE SPECIFIED FOR TRENCH "B".
9. CONTRACTOR IS RESPONSIBLE FOR RESTORING OR REPLACING ALL DISTURBED LANDSCAPED AREAS, SPRINKLER SYSTEMS, FENCES, SIGNS, MAIL BOXES, ETC.. WITHIN THE WAYNE COUNTY ROAD RIGHT OF WAY OR AS DIRECTED BY THE COUNTY ENGINEER.
10. CONTRACTOR SHALL MAINTAIN TWO=WAY TRAFFIC AT ALL TIMES. OTHERWISE, APPROVED TRAFFIC DETOUR PLANS MUST BE PROVIDED. ALL SIGNING AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MUTCD AND SHALL BEET THE REQUIREMENTS OF THE AMERICAN TRAFFIC SAFETY ASSOCIATION, (ASTA) "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES 1992.
11. MAINTAIN A SAFE AND ADEQUATE TRAVEL ROUTE FOR PEDESTRIANS AT ALL TIMES THROUGHOUT THE PROJECT DURATION.
12. TUNNELING, BORING AND JACKING OPERATIONS SHALL BE IN ACCORDANCE WITH THE WAYNE COUNTY SPECIFICATIONS AND DETAILS. BORE PITS SHALL BE PLACED AT MINIMUM 10 FEET FROM THE BACK OF CURB OR EDGE OF PAVEMENT.
13. REMOVE ALL ABANDONED CONDUITS FROM THE COUNTY ROADS R.O.W. OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
14. CONTRACTOR SHALL PROVIDE COLD WEATHER PROTECTION FOR ALL PROPOSED CONCRETE WORK (PAVEMENTS, SIDEWALKS, DRIVE APPROACHES, ETC..) AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
15. CONSTRUCT THE PROPOSED STORM SEWER MANAGEMENT SYSTEM IN ACCORDANCE WITH THE CURRENT WAYNE COUONTY STORM WATER MANAGEMENT PROGRAM.
16. OVERNIGHT VEHICLE PARKING AND STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENTS ARE NOT PERMITTED WITH THE WAYNE COUNTY ROADS RIGHT OF WAY.
17. CONTRACTOR SHOULD OBTAIN SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE WAYNE COUNTY DOE. CONTACT MR. DPS AT (734) 326-5565.
18. CONTRACTOR SHALL NOTIFY THE WAYNE COUNTY TRAFFIC SIGNAL SHOP AT (734) 955-2154 AS LEAST 72 HOURS PRIOR TO START OF WORK AT OR NEAR ANY SIGNALIZED INTERSECTIONS.
19. CONTRACTOR SHALL NOTIFY WAYNE COUNTY 3 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION. CONTACT THE PERMIT OFFICE AT (734) 595-6504 EXTENTION 2009.

LONGITUDINAL EPOXY-ANCHORED LANE-TIES



Epoxy-Anchored Lane-Tie Spacing Shall be in Accordance with RS-2 Sheet 5 of 7.

Work This Sheet with the General Notes on RS-1

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WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

PAVEMENT JOINTS

SCALE NOT TO SCALE | RS-2 | SHEET 2 OF 7

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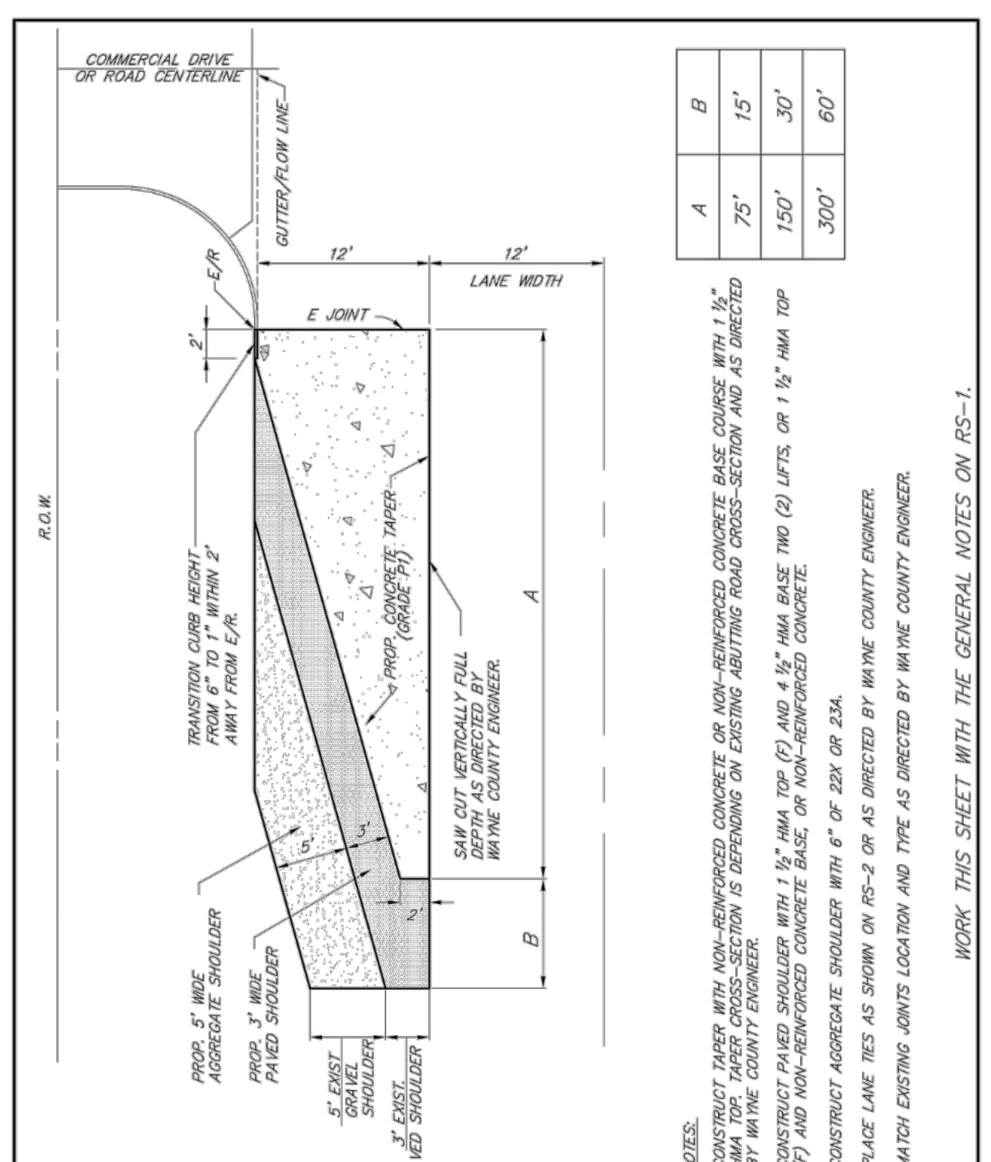

WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1.

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WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

TYPICAL CONCRETE TAPER

SCALE NOT TO SCALE | P-2 | SHEET 1 OF 1

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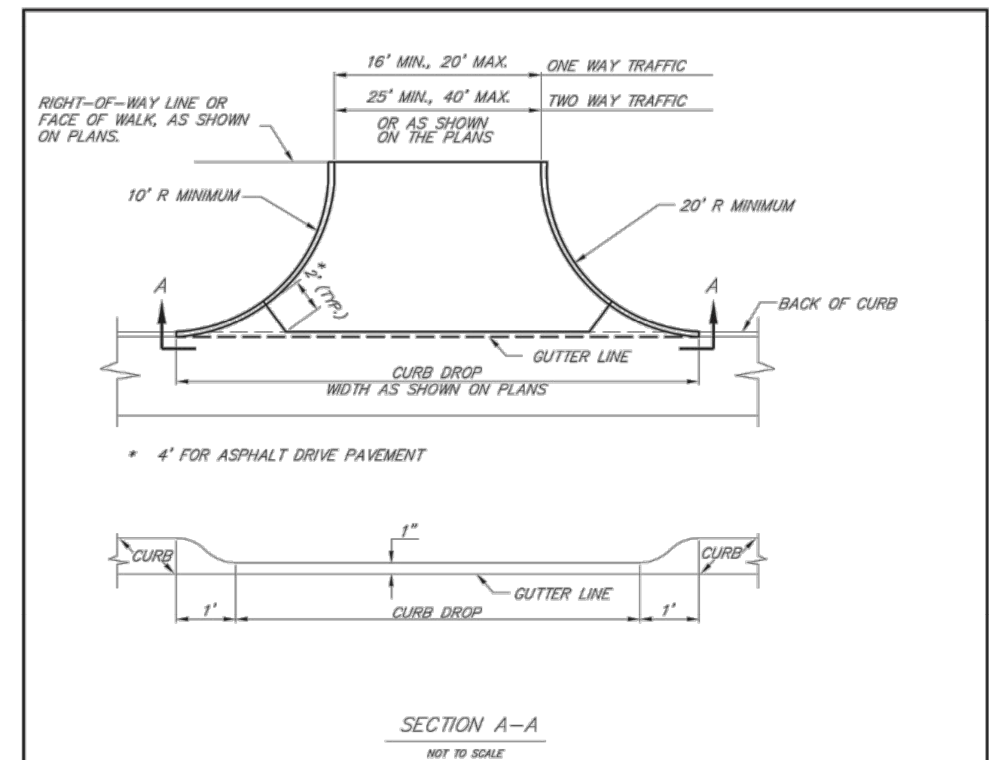

SECTION A-A
NOT TO SCALE

NOTES:

CONSTRUCT THE DRIVE APPROACH WITH 8" NON-REINFORCED CONCRETE ON 6" OF 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE (CIP) OR 6" HMA LEVELING ON 9" OF 21AA AGGREGATE BASE COURSE (CIP).

CURBS SHALL BE CONSTRUCTED WITH HEIGHT VARYING FROM 6" AT BACK OF CURB TO 0" HEIGHT AT FACE OF SIDEWALK OR RIGHT-OF-WAY LINE.

AT ALL CONCRETE DRIVES, PLACE A 1" EXPANSION JOINT AT BACK OF CURB AND 1/2" EXPANSION JOINT AT FACE OF SIDEWALK OR RIGHT-OF-WAY LINE. MAINTAIN NORMAL SIDEWALK GRADE ACROSS DRIVE, 2% SLOPE UP FROM FACE OF SIDEWALK.

INBOUND OR OUTBOUND RADIUS SHALL BE REDUCED TO 5' FOR ONE-WAY TRAFFIC DRIVE APPROACH.

DRIVE APPROACH SHALL NOT ENCROACH ACROSS PROPERTY LINE EXTENDED WITHOUT WRITTEN APPROVAL FROM THE ADJOINING PROPERTY OWNER.

WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1 AND D-6 SHEET 2-2.

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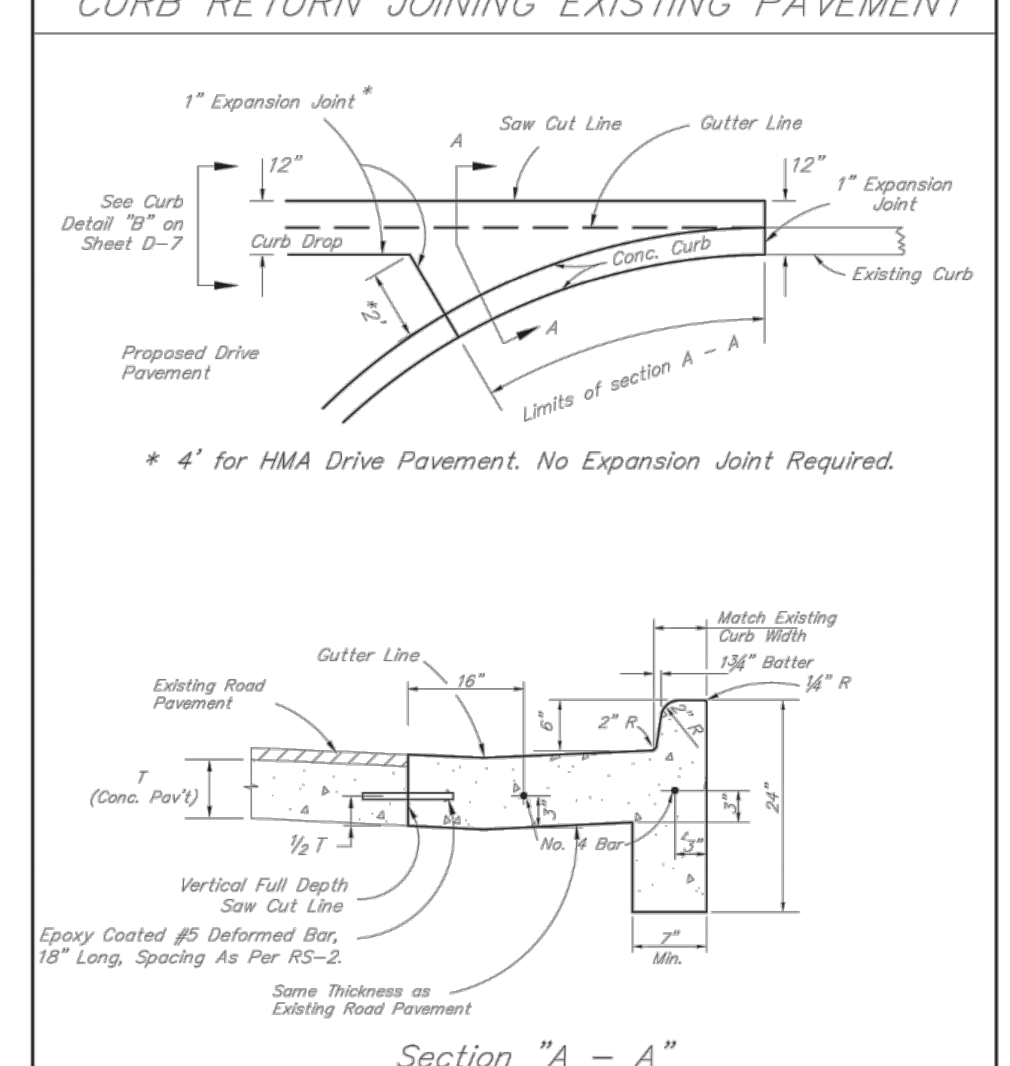
WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

COMMERCIAL DRIVE APPROACH

SCALE NOT TO SCALE | D-6 | SHEET 1 OF 2

CURB RETURN JOINING EXISTING PAVEMENT



* 4' for HMA Drive Pavement. No Expansion Joint Required.

Section "A - A"

WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1.

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WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION/PERMIT OFFICE
PERMIT STANDARDS

COMMERCIAL DRIVE APPROACH

SCALE NOT TO SCALE | D-6 | SHEET 2 OF 2

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HARDY CIVIL DESIGN SERVICES LLC
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E-mail: kbhardy1964@hotmail.com

DETAILS - 1

38030 VANBORN
ASW-AMERICA
CITY of WAYNE
WAYNE COUNTY, MI

SHEET No.	JOB No.	DRAWING No.	DATE	REVISIONS
6 OF 7	2021-13	A-	07-11-21	08-23-2021
		K.B. HARDY DRAWN BY:	CHECKED BY:	09-02-2021
				10-25-2021
				11-22-2021