

TIME - 23-SEP-2014 14:25

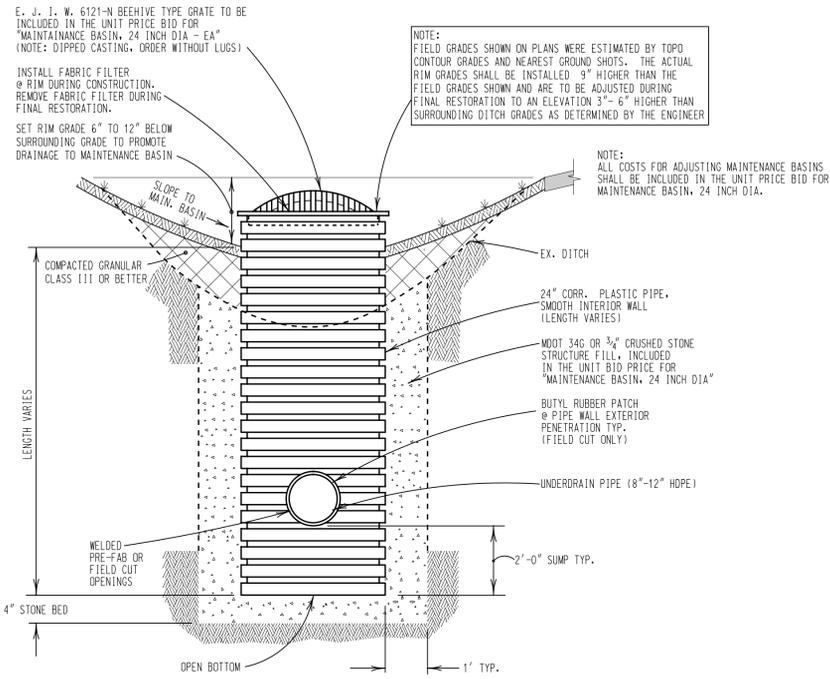
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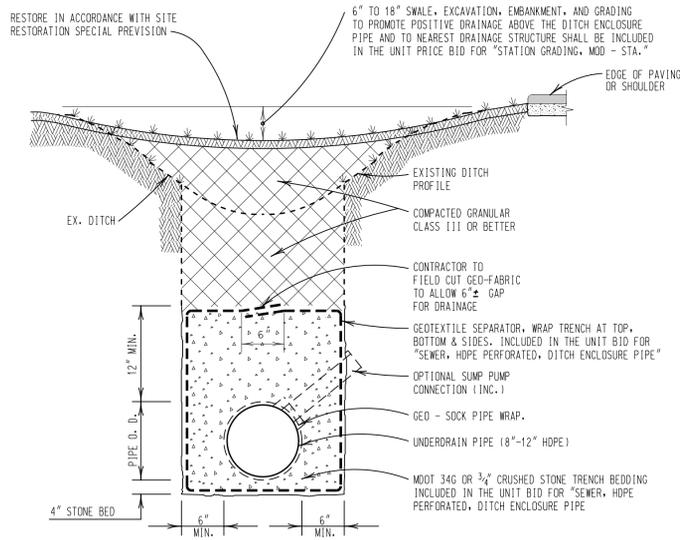
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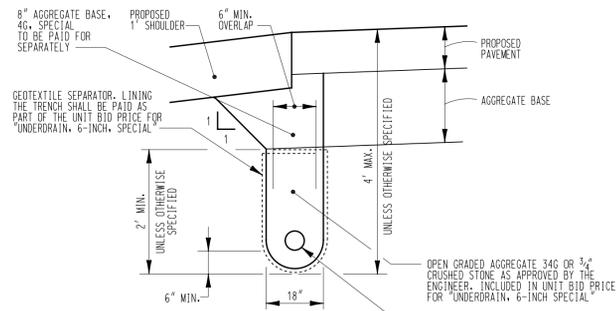
MAINTENANCE BASIN DETAIL (M.B.)

NO SCALE



SECTION B-B INFILTRATION TRENCH (DITCH ENCLOSURE PIPE)

NO SCALE



UNDERDRAIN, 6-INCH SPECIAL

NO SCALE

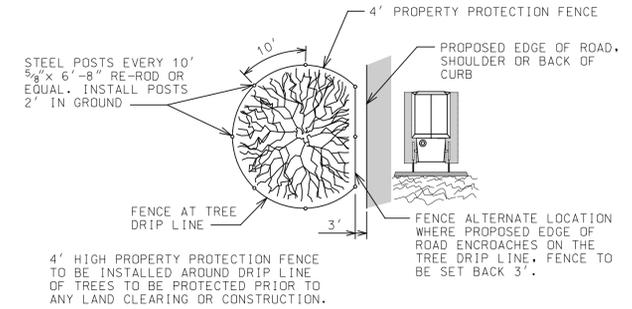
- NOTE:
- UNDERDRAIN SHALL BE PLACED IN CENTER OF TRENCH.
 - CENTER OF UNDERDRAIN TRENCH LOCATION SHALL BE ALLOWED WITH THE EDGE OF THE PROPOSED PAVED ROADWAY, BACK OF CURB OR AS SPECIFIED OTHERWISE.

MATERIALS

8" - 24" DITCH ENCLOSURE PIPE: (TO BE USED ONLY AS DIRECTED)	HDPE - CORRUGATED, PERFORATED, SMOOTH LINE DOUBLE WALL PIPE PER AASHTO M292 TYPE S, M294-94 TYPE SP CL 1 AND ASTM D3350 (ADS N-12 OR HANCOR HI-O, SURE-LOCK) WITH GEO-SOCK (ADS-"SOCK", HANCOR BIG "O" WRAP.
MAINTENANCE BASIN:	HDPE - CORRUGATED, PERFORATED SMOOTH LINE DOUBLE WALL 24" PIPE BARREL, PER AASHTO M-294-94 TYPE S, UNDERDRAIN PIPE CONNECTIONS TO BE CORE DRILLED WITH E.J.I.W. 6121 BEEHIVE GRATE. (ORDER W/O LUGS)
INSTALLATION	SHALL BE IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURER'S INSTALLATION GUIDELINES WITH THE EXCEPTION THAT MINIMUM COVER IN TRAFFICKED AREAS SHALL BE ONE FOOT AND BEDDING FOR NON-TRAFFICKED AREAS SHALL BE MDOT 34G STONE AGGREGATE AS DETAILED.
GEO-TEXTILE FABRIC:	THE GEO-TEXTILE SHALL BE MIRAFI 140N OR AN APPROVED EQUIVALENT. THE GEO-TEXTILE SHALL BE OF MECHANICALLY-BONDED NONWOVEN CONSTRUCTION AND CONSIST OF LONG-CHAIN POLYMERIC FIBERS.

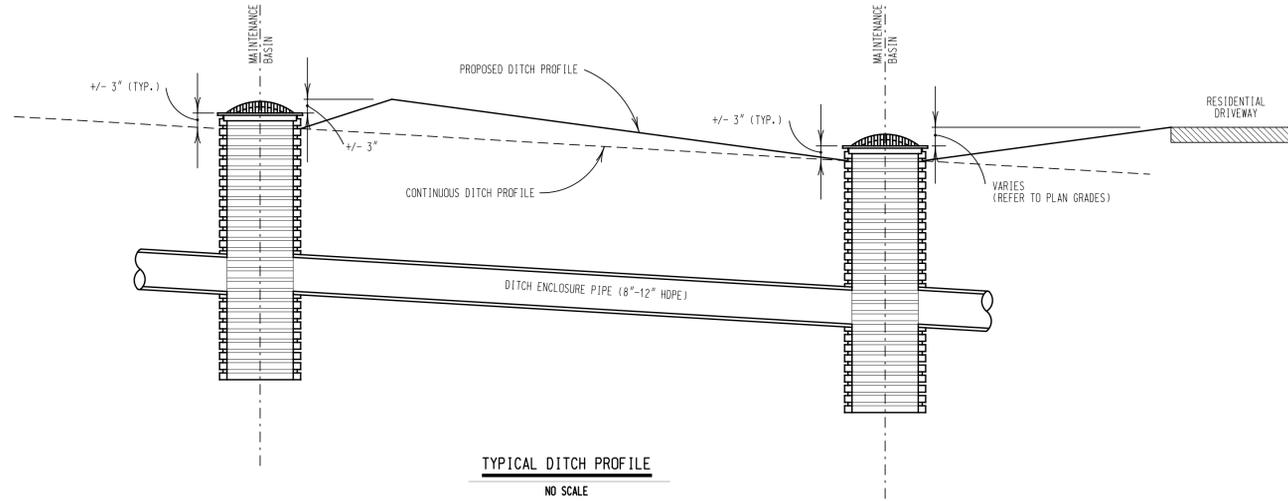
PROPERTY	TEST METHOD	MIN. AVE. ROLL VALUE (ENGLISH)	MIN. AVE. ROLL VALUE (METRIC)
GRAB TENSILE	ASTM D-4632	100 LBS	445 N
GRAB ELONGATION	ASTM D-4632	50%	50%
TRAPEZOID TEAR	ASTM D-4833	45 LBS	200 N
MULLEN BURST	ASTM D-3786	225 PSI	1550 KPa
PUNCTURE	ASTM D-4833	65 LBS	285 N
ADS (MAX.)	ASTM D-4751	70 SIEVE	0.212 MM
PERMEABILITY	ASTM D-4491	2.0 1/SEC	2.0 1/SEC
FLOW RATE	ASTM D-4491	140 GAL/MIN/FY 2	5700 L/MIN/FY 2
LIV RESISTANCE	ASTM D-4355	70/500 %/HRS	70/500 %/HRS
ROLL SIZE		12.5 X 360'	3.81 M X 109.7 M
		15' X 300'	4.57 M X 91.4 M

THE GEO-TEXTILE SHALL BE FURNISHED AND STORED IN A WRAP WHICH WILL PROTECT THE GEO-TEXTILE FROM ULTRAVIOLET RADIATION AND ABRASION.



TREE PROTECTION DETAILS

NO SCALE



TYPICAL DITCH PROFILE

NO SCALE

NOTE: GRADING ABOVE DITCH ENCLOSURE PIPE TO THE PROPOSED DITCH SECTION AND PROFILE IS CONSIDERED INCLUDED IN THE UNIT PRICE BID FOR "STATION GRADING, MOD - STA"

NOTICE:

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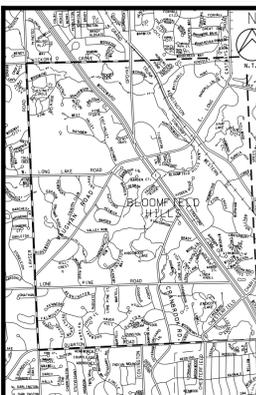


CALL MISS DIG 72 HOURS (3 WORKING DAYS) BEFORE YOU DIG 1-800-482-7171 or 811 CALL811.COM (TOLL FREE)



555 HULET DRIVE BLOOMFIELD HILLS, MICH. P.O. BOX 824 48303-0824 PHONE: (248) 454-6300 FAX (1st Floor): (248) 454-6312 FAX (2nd Floor): (248) 338-2592 WEB SITE: http://www.hrc-engr.com

DATE	ADDITIONS AND/OR REVISIONS
DESIGNED	M.A.C.
DRAWN	J.A.R.
CHECKED	B.W.S.
APPROVED	T.E.B.



CITY OF BLOOMFIELD HILLS 2015 ROAD IMPROVEMENT PROGRAM PRELIMINARY DRAFT

OAKLAND COUNTY MICHIGAN

SPECIAL PROJECT DETAILS

HRC JOB NO.	SCALE
20140487	NO SCALE
DATE	SHEET NO.
JULY 2014	02 OF

TIME - 23-SEP-2014 14:15

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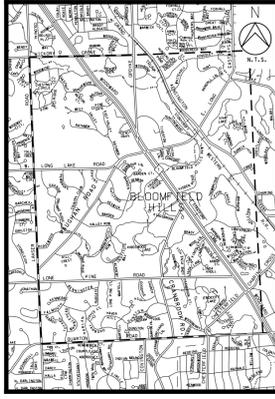
USER NAME - Jrc



555 HULET DRIVE BLOOMFIELD HILLS, MICH. P.O. BOX 824 48303-0824 PHONE: (248) 454-6300 FAX (1st Floor): (248) 454-6312 FAX (2nd Floor): (248) 338-2592 WEB SITE: http:// www.hrc-engr.com

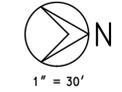
Table with 2 columns: DATE, ADDITIONS AND/OR REVISIONS. Includes rows for DESIGNED, DRAWN, CHECKED, and APPROVED.

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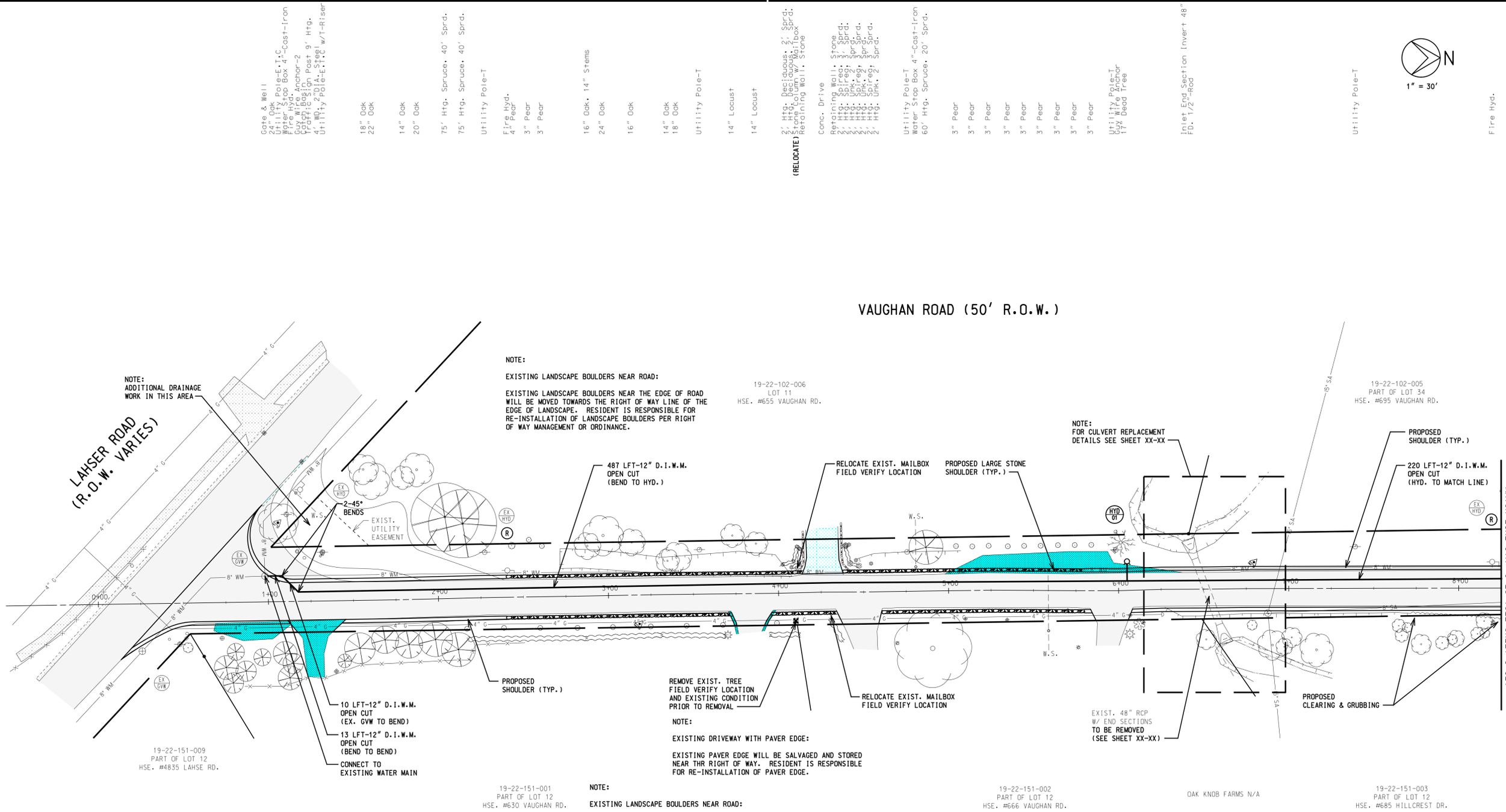


CITY OF BLOOMFIELD HILLS 2015 ROAD IMPROVEMENT PROGRAM PRELIMINARY DRAFT

Table with project details: OAKLAND COUNTY MICHIGAN, DIVISION I VAUGHAN ROAD PAVING STA. 0+00 TO STA. 8+25, HRC JOB NO. 20140487, SCALE 1" = 30', DATE JULY 2014, SHEET NO. I-01 OF 10.



VAUGHAN ROAD (50' R.O.W.)



NOTE: ADDITIONAL DRAINAGE WORK IN THIS AREA

NOTE: EXISTING LANDSCAPE BOULDERS NEAR ROAD: EXISTING LANDSCAPE BOULDERS NEAR THE EDGE OF ROAD WILL BE MOVED TOWARDS THE RIGHT OF WAY LINE OF THE EDGE OF LANDSCAPE. RESIDENT IS RESPONSIBLE FOR RE-INSTALLATION OF LANDSCAPE BOULDERS PER RIGHT OF WAY MANAGEMENT OR ORDINANCE.

NOTE: FOR CULVERT REPLACEMENT DETAILS SEE SHEET XX-XX

NOTE: REMOVE EXIST. TREE FIELD VERIFY LOCATION AND EXISTING CONDITION PRIOR TO REMOVAL. EXISTING DRIVEWAY WITH PAVER EDGE: EXISTING PAVER EDGE WILL BE SALVAGED AND STORED NEAR THR RIGHT OF WAY. RESIDENT IS RESPONSIBLE FOR RE-INSTALLATION OF PAVER EDGE.

NOTE: EXISTING LANDSCAPE BOULDERS NEAR ROAD: EXISTING LANDSCAPE BOULDERS NEAR THE EDGE OF ROAD WILL BE MOVED TOWARDS THE RIGHT OF WAY LINE OF THE EDGE OF LANDSCAPE. RESIDENT IS RESPONSIBLE FOR RE-INSTALLATION OF LANDSCAPE BOULDERS PER RIGHT OF WAY MANAGEMENT OR ORDINANCE.

QUANTITIES THIS SHEET table with columns: NO., DESCRIPTION, UNIT, QTY. Lists items like 12" D.I.W.M. OPEN CUT, FIRE HYDRANT, etc.

NOTICE: ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.



CALL MISS DIG 72 HOURS (3 WORKING DAYS) BEFORE YOU DIG 1-800-482-7171 or 811

Gate & Well
24" Oak pole E.T.C
Water Stop Box 4"-Cast-Iron
Fire Hyd.
Catch Basin
Traffic Sign Post 9' Htg.
Utility Pole-12' w/7-Riser

18" Oak
22" Oak
14" Oak
20" Oak

75' Htg. Spruce, 40' Sprd.
75' Htg. Spruce, 40' Sprd.

Utility Pole-T
Fire Hyd.
4" Pear
3" Pear
3" Pear

16" Oak, 14" Stems
24" Oak
16" Oak

14" Oak
18" Oak

Utility Pole-T
14" Locust
14" Locust

(RELOCATE)
2' Htg. Deciduous, 2' Sprd.
Stone Column w/10" Box
Retaining Wall, Stone

Conc. Drive
Retaining Wall, Stone
Htg. Spruce, 3' Sprd.
Htg. Oak, 2' Sprd.
Htg. Oak, 2' Sprd.
Htg. Oak, 2' Sprd.
Htg. Spruce, 3' Sprd.
Htg. Oak, 2' Sprd.
Htg. Oak, 2' Sprd.

Utility Pole-T
Water Stop Box 4"-Cast-Iron
60' Htg. Spruce, 20' Sprd.

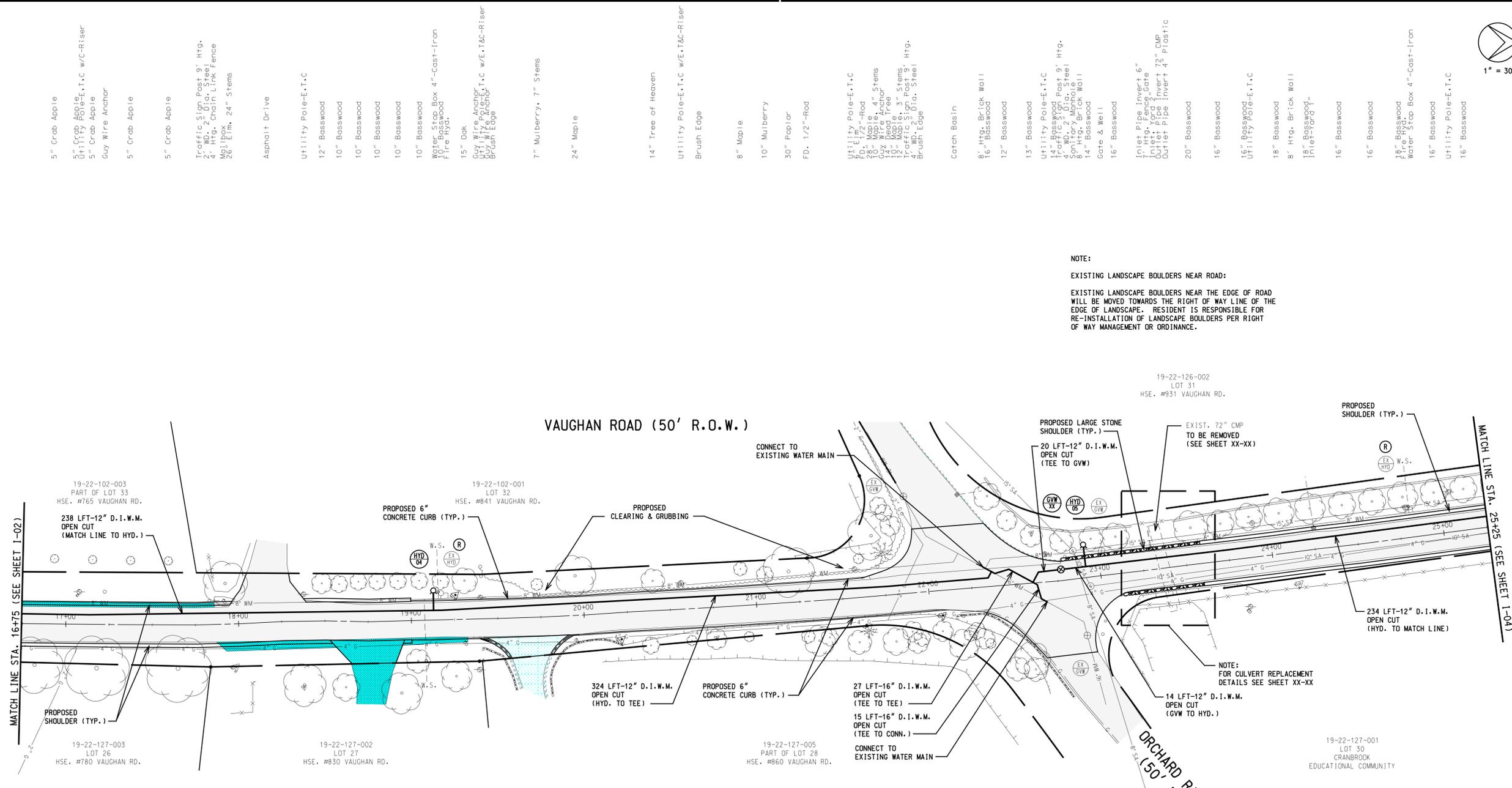
3" Pear
3" Pear

Utility Pole-T
1 1/2" Dead Tree

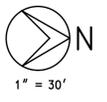
Inlet End Section Invert 48"
FD, 1/2"-Rod

Utility Pole-T

Fire Hyd.



- 5" Crab Apple
- Traffic Sign Post 9' Htg.
- 2" WD, 2" Dia. Steel
- 4" Htg. Chain Link Fence
- 24" Elm, 24" Stems
- Asphalt Drive
- Utility Pole-E, T, C
- 12" Basswood
- 10" Basswood
- 10" Basswood
- 10" Basswood
- 10" Basswood
- Water Stop Box 4"-Cast-Iron
- 15" Oak
- Guy Wire Anchor
- Utility Pole-E, T, C w/E, T&C-Riser
- Brush Edge
- 7" Mulberry, 7" Stems
- 24" Maple
- 14" Tree of Heaven
- Utility Pole-E, T, C w/E, T&C-Riser
- Brush Edge
- 8" Maple
- 10" Mulberry
- 30" Poplar
- FD, 1/2"-Rod
- Utility Pole-E, T, C
- 9" Elm
- 2" WD, 2" Dia. Steel
- 10" Maple, 4" Stems
- 12" Maple, 12" Stems
- Traffic Sign Post 9' Htg.
- 4" WD, 2" Dia. Steel
- Brush Edge
- Catch Basin
- 8" Htg. Brick Wall
- 16" Basswood
- 12" Basswood
- 13" Basswood
- Utility Pole-E, T, C
- 14" Basswood
- 4" WD, 2" Dia. Steel
- Sanitary Manhole
- 8" Htg. Brick Wall
- 14" Basswood
- Gate & Well
- 16" Basswood
- Inlet Pipe Invert 6"
- Outlet Pipe Invert 72" CMP
- Outlet Pipe Invert 72" CMP
- Outlet Pipe Invert 4" Plastic
- 20" Basswood
- 16" Basswood
- 16" Basswood
- Utility Pole-E, T, C
- 18" Basswood
- 8" Htg. Brick Wall
- 18" Basswood
- 16" Basswood
- 16" Basswood
- 18" Basswood
- Water Stop Box 4"-Cast-Iron
- 16" Basswood
- Utility Pole-E, T, C
- 16" Basswood



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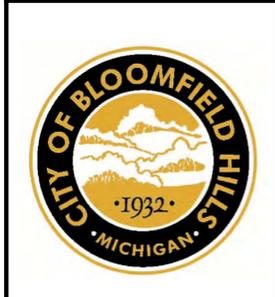
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NO.	DESCRIPTION	UNIT	QTY.
1	12" D.I.W.M. OPEN CUT	LFT	830
2	FIRE HYDRANT	EA	2
3	REMOVE EX. HYDRANT	EA	2
4	WATER SERVICE CONNECTION	EA	2
5	12" GATE VALVE & WELL	EA	1
6	16" D.I.W.M. OPEN CUT	LFT	42
7	CONNECT TO EXIST. WATER MAIN	EA	2
8	CLEARING & GRUBBING	LSUM	1
9			
10			

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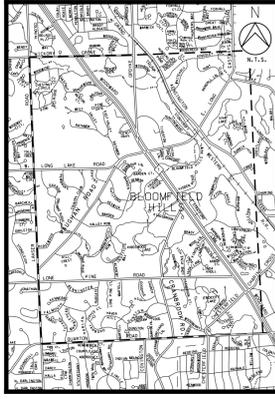


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 or 811
 CALL811.COM (TOLL FREE)



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 BLOOMFIELD HILLS, MICH. 48303-0824
 PHONE: (248) 454-6300
 FAX (1st Floor): (248) 454-6312
 FAX (2nd Floor): (248) 338-2592
 WEB SITE: http://www.hrc-engr.com

DATE	ADDITIONS AND/OR REVISIONS
DESIGNED	M.A.C.
DRAWN	J.A.R.
CHECKED	B.W.S.
APPROVED	T.E.B.



CITY OF BLOOMFIELD HILLS
2015 ROAD IMPROVEMENT PROGRAM
 PRELIMINARY DRAFT

OAKLAND COUNTY MICHIGAN

DIVISION I
 VAUGHAN ROAD PAVING
 STA. 16+75 TO STA. 25+25

HRC JOB NO. 20140487	SCALE 1" = 30'
DATE JULY 2014	SHEET NO. I-03 OF

TIME - 23-SEP-2014 14:15

FEIN TEL - JMSW@bloomfieldhills.com

DIR TEL - JMSW@bloomfieldhills.com

DATE - 11/10/2014

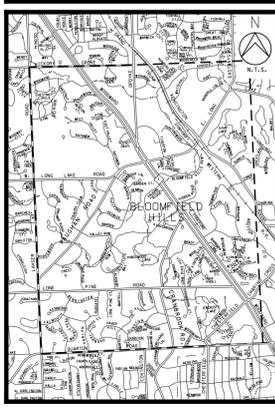
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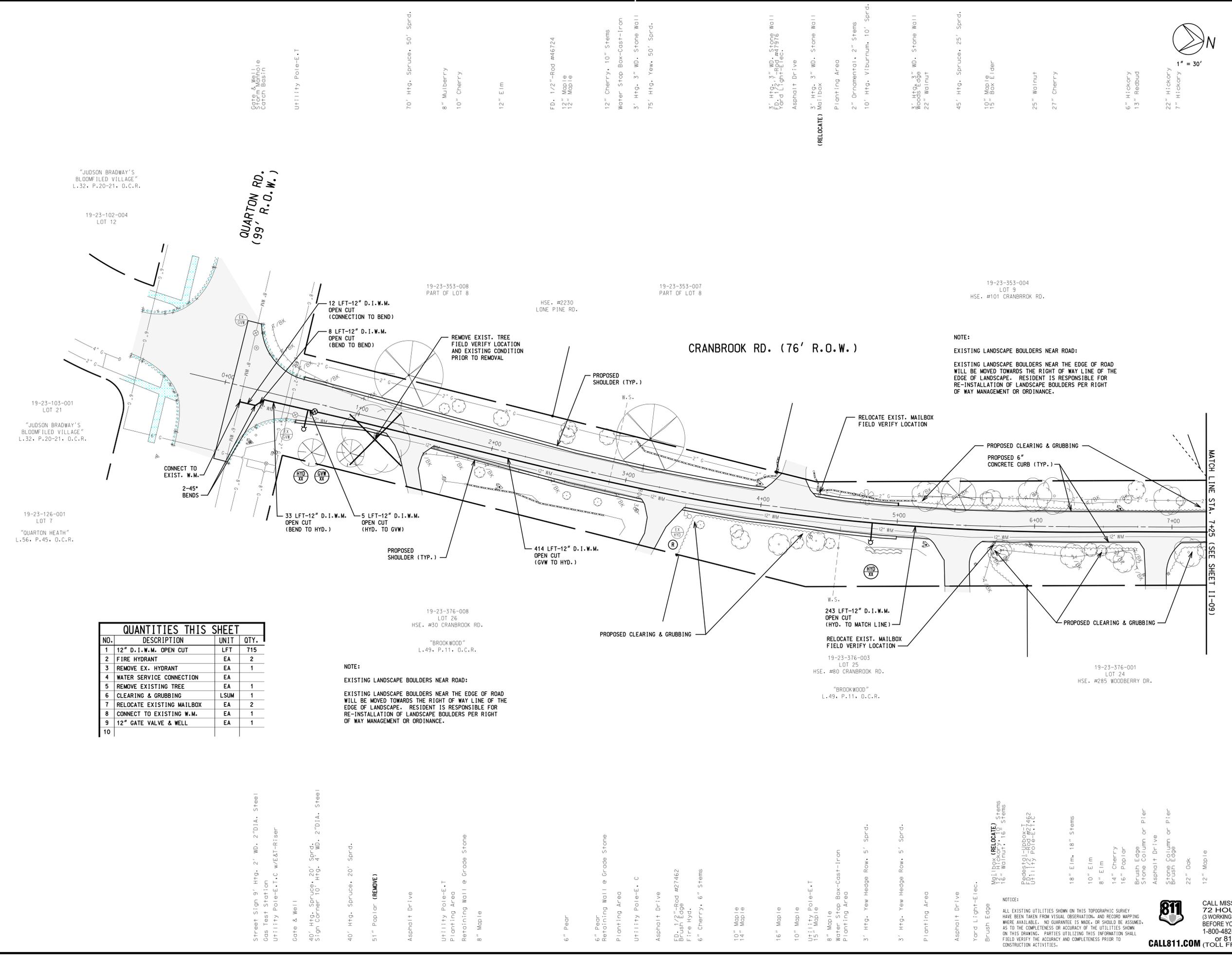


CITY OF BLOOMFIELD HILLS
2015 ROAD IMPROVEMENT PROGRAM
PRELIMINARY DRAFT

OAKLAND COUNTY MICHIGAN	
DIVISION 11 CRANBROOK ROAD PAVING STA. 0+00 TO STA. 7+25	
HRC JOB NO. 20140487	SCALE 1" = 30'
DATE JULY 2014	SHEET NO. 11-08 OF



1" = 30'



QUANTITIES THIS SHEET

NO.	DESCRIPTION	UNIT	QTY.
1	12" D.I.W.M. OPEN CUT	LFT	715
2	FIRE HYDRANT	EA	2
3	REMOVE EX. HYDRANT	EA	1
4	WATER SERVICE CONNECTION	EA	1
5	REMOVE EXISTING TREE	EA	1
6	CLEARING & GRUBBING	LSUM	1
7	RELOCATE EXISTING MAILBOX	EA	2
8	CONNECT TO EXISTING W.M.	EA	1
9	12" GATE VALVE & WELL	EA	1
10			

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MATCH LINE STA. 7+25 (SEE SHEET 11-09)



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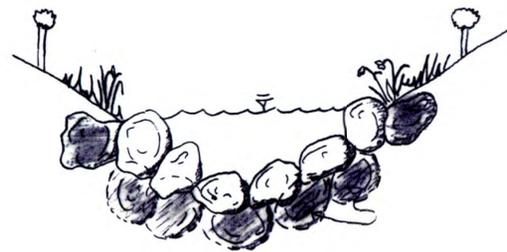
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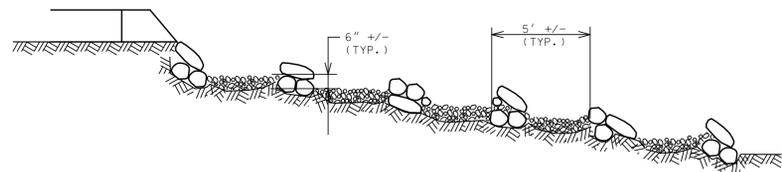


PLAN VIEW



CROSS SECTION

WEIR WIDTH = 3 FT
POOL WIDTH = 6-8 FT
WEIR SPACING = 5 FT
STEP HEIGHT = 0.5 FT
MAX POOL DEPTH = 1 FT
BOULDER SIZE = 12" FIELD STONE
MAX SLOPE = 8%
CHANNEL LENGTH = APPROX 25 FT
NUMBER OF STEPS = 5



PROFILE

STEP POOL CHANNEL NOTES:

- 1. STEP STRUCTURES CONSIST OF BOULDERS AND LARGER KEYSTONES STRATEGICALLY PLACED ALONG THE BED TO CONTROL THE GRADE AND DIRECT THE FLOWS.
2. EACH STEP ROCK SHALL BE PLACED ON FOOTER STONES AND SHINGLED UPSTREAM APPROX. 8-12 INCHES. BACKFILL THE STEP STRUCTURE WITH GRAVEL AND COBBLE PROVIDED BY THE EXCAVATION FOR THE FOOTERS.
3. THE STEP STRUCTURE SHOULD GENERALLY BE LAID OUT IN ACCORDANCE WITH THE STEP POOL STRUCTURE DETAIL. THE CONFIGURATION OF EACH STRUCTURE IS LAID OUT TO ALTERNATE THE BASE FLOWS BACK AND FORTH ACROSS THE CHANNEL. DURING AND FOR A PERIOD AFTER CONSTRUCTION, SIGNIFICANT ADJUSTMENT OF THE STRUCTURES WILL TYPICALLY BE REQUIRED TO APPROPRIATELY ADJUST THE FLOWS AS DIRECTED BY THE ENGINEER IN THE FIELD.
4. DIFFERENT STEP STRUCTURE CONFIGURATIONS MAY BE USED BASED ON SITE CONDITIONS. DIAGONAL STEP STRUCTURES SHOULD BE USED PREDOMINANTLY WITH THE STEP STRUCTURE INCREASING IN ELEVATION AT A 3-7 DEGREE SLOPE SIMILAR TO A VANE STRUCTURE. STEP STRUCTURES SHOULD ALTERNATE LEFT TO RIGHT TO VARY THE FLOW DIRECTION (SEE DETAIL).
5. THE BOULDERS SHALL BE MANUALLY CHINKED AND BACKFILLED WITH A COBBLE AND GRAVEL MIX FROM STREAMBED EXCAVATION FOR THE FOOTER STONES.
6. THE PROJECT ENGINEER WILL STAKE THE LOCATIONS OF THE STEP STRUCTURES FOR THE CONTRACTOR.

STEP POOL CHANNEL QUANTITIES (FOR INFORMATIONAL PURPOSES ONLY)

Table with 4 columns: NO., DESCRIPTION, UNIT, QTY. containing quantities for 12" field stone, on-site gravel, and excavation.

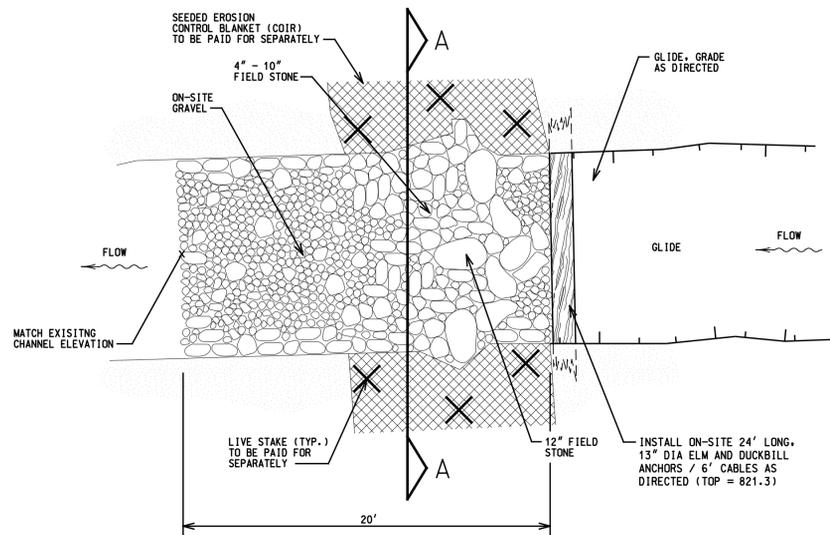
STEP POOL CHANNEL NO SCALE

NOTES:

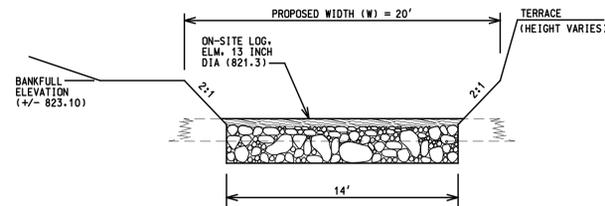
- 1. CONTRACTOR SHALL PERFORM WORK SO THAT FLOW WITHIN THE STREAM IS AT NO TIME HINDERED OR INTERRUPTED. ALL WORK NECESSARY TO MAINTAIN FLOW IN THE STREAM SHALL BE PAID FOR AT THE LUMP SUM BID PRICE FOR "MAINTAINING FLOW".
2. WITH PROPER ADVANCED NOTIFICATION, CONTRACTOR MAY CLOSE KENSINGTON ROAD DURING CULVERT INSTALLATION. CONDITIONED THAT ALL EXCAVATIONS ARE BACK FILLED, PROPER TRAFFIC SAFETY MEASURES ARE IN PLACE, AND THE ROADWAY CAN BE OPENED TO TRAFFIC AT THE END OF THE WORK DAY.
3. ALL EXPOSED, DISTURBED SURFACES SHALL BE PREPARED ACCORDING TO SECTION 02930, SEEDING WITH "VIRGINIA WILD RYE" SEED MIXTURE, AND COVERED WITH COIR BLANKET. COIR BLANKETS SHALL BE KEPT IN AT THE TOE OF SLOPE TO THE STREAM. REFER TO "SPECIAL PROVISION FOR ROLLED EROSION CONTROL PRODUCTS" FOR MORE DETAIL ON INSTALLATION PROCEDURES.
4. "VIRGINIA WILD RYE" SEED SHALL BE APPLIED AT A RATE OF 50 LBS/ACRE (+/- 1 LB/1000 SFT).
5. LIVE STAKES SHALL BE PLACED WITHIN THE AREAS COVERED BY THE COIR BLANKET AS DIRECTED BY THE ENGINEER.

ARMORED RIFFLE NOTES:

- 1. CONTRACTOR TO MAINTAIN FLOW IN STREAM DURING CONSTRUCTION.
2. EXCAVATE A 12" - 18" DEEP TRENCH ALONG THE UPSTREAM EDGE OF THE RIFFLE.
3. USE 12" NATURAL OR EXISTING FIELD STONE ON THE UPSTREAM EDGE OF THE RIFFLE AT A 4:1 SLOPE TO DIRECT FLOW TO THE CENTER OF THE CHANNEL.
4. POSITION STONES IN A V-SHAPE TOWARD THE CREST OF THE CHANNEL AND ARMOR THE TOE WITH SMALLER COBBLE RANGING FROM 4" - 10" IN DIAMETER TO PREVENT SUBSEQUENT BANK EROSION.
5. BE SURE TO ALLOW WATER TO SPILL OVER THE RIFFLE STRUCTURE DURING HIGH FLOW PERIODS.
6. CHOKER RIFFLE AND FILL GLIDE WITH ON-SITE RIVER RUN GRAVEL PER PROFILE.



ARMORED RIFFLE PLAN VIEW N.T.S.



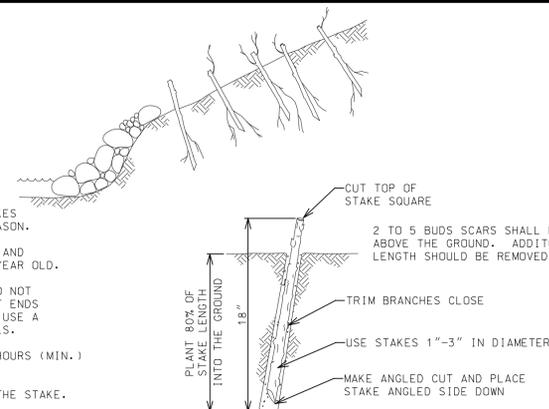
SECTION A N.T.S.

ARMORED RIFFLE QUANTITIES (FOR INFORMATIONAL PURPOSES ONLY)

Table with 4 columns: NO., DESCRIPTION, UNIT, QTY. containing quantities for on-site log, duckbill anchors, cables, field stone, gravel, and excavation.

NOTES:

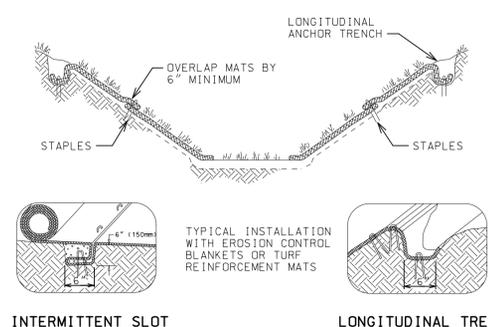
- 1. HARVEST AND PLANT STAKES DURING THE DORMANT SEASON.
2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
3. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION. USE A PILOT BAR IN FIRM SOILS.
4. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
5. TAMP THE SOIL AROUND THE STAKE.
6. PLANT STAKES 1'-3' AWAY FROM EACH OTHER.



LIVE STAKING NO SCALE

NOTE:

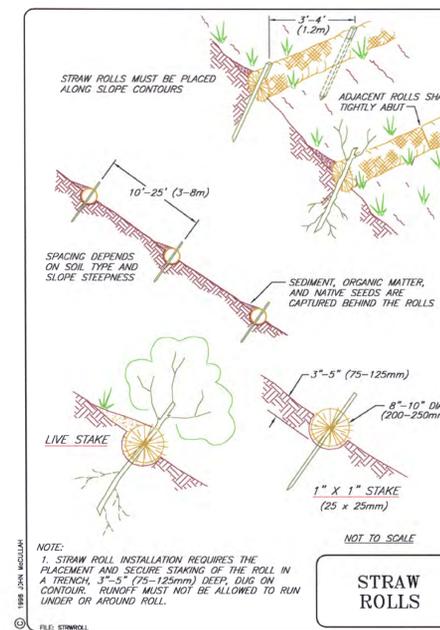
ALL LIVE STAKES, JOINT PLANTINGS, & 1 GALLON CONTAINERIZED SHRUBS SHALL CONSIST OF THE FOLLOWING SPECIES TO BE INSTALLED IN THE LISTED LOCATIONS PER THE PLAN DETAILS AND SPECIFICATIONS.



INTERMITTENT SLOT

LONGITUDINAL TRENCH

ROLLED EROSION CONTROL BLANKET NO SCALE



NOTICE: 1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH 3'-5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

STRAW ROLLS

NOTICE:

ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.



CALL MISS DIG 72 HOURS (3 WORKING DAYS) BEFORE YOU DIG 1-800-482-7171 or 811

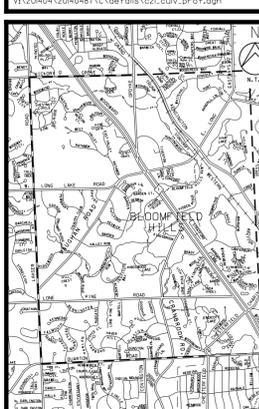
CALL811.COM (TOLL FREE)



555 HULET DRIVE P.O. BOX 824 BLOOMFIELD HILLS, MICH. 48303-0824 PHONE: (248) 454-6300 FAX (1st Floor): (248) 454-6312 FAX (2nd Floor): (248) 338-2592 WEB SITE: http://www.hrc-engr.com

Table with 2 columns: DATE, ADDITIONS AND/OR REVISIONS. Contains revision history.

Table with 2 columns: DATE, ADDITIONS AND/OR REVISIONS. Contains design, draw, check, and approval dates.

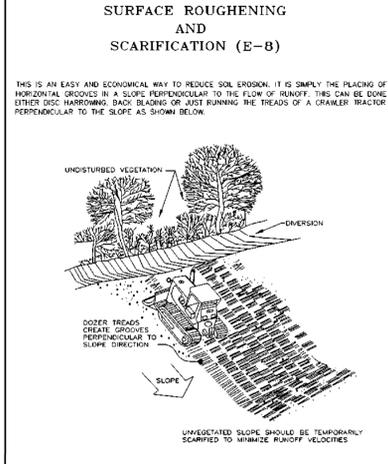
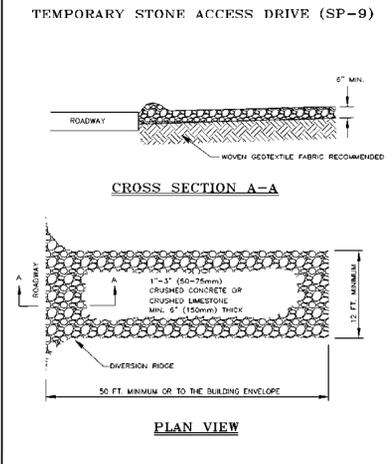
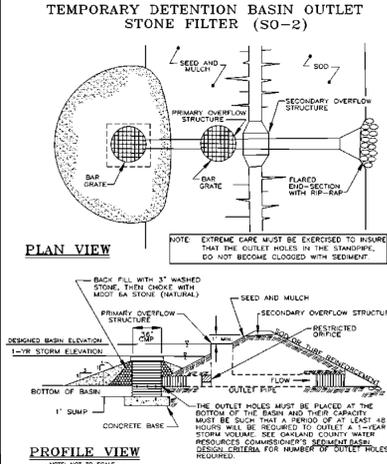
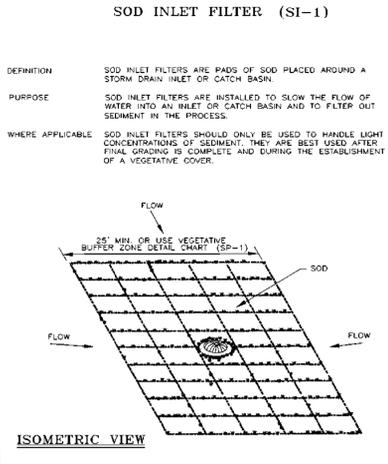
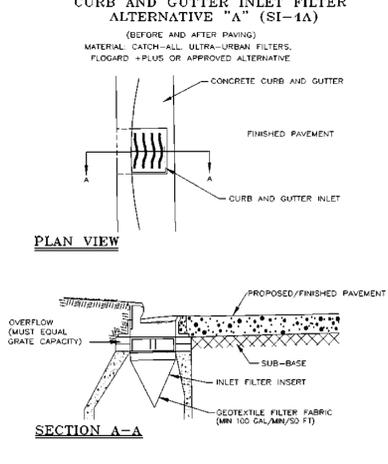
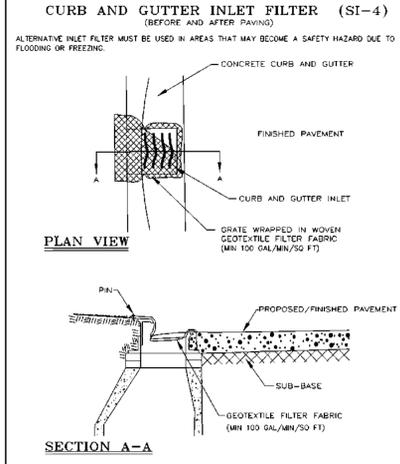
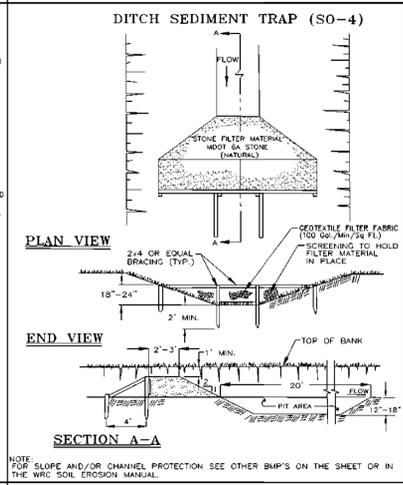
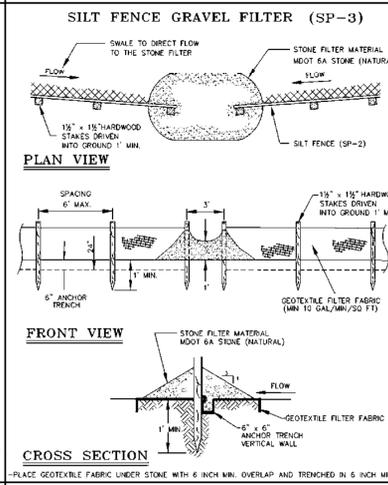
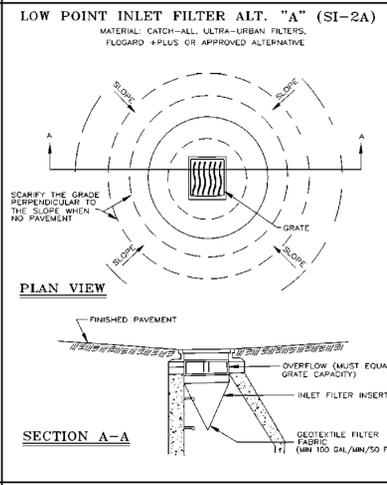
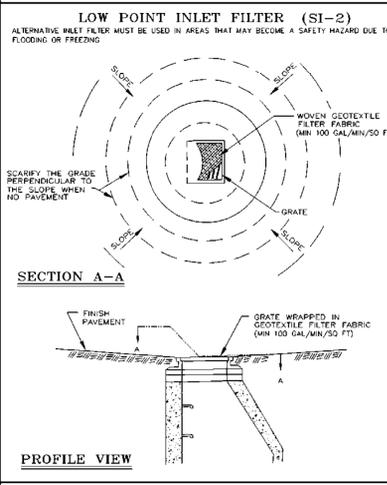
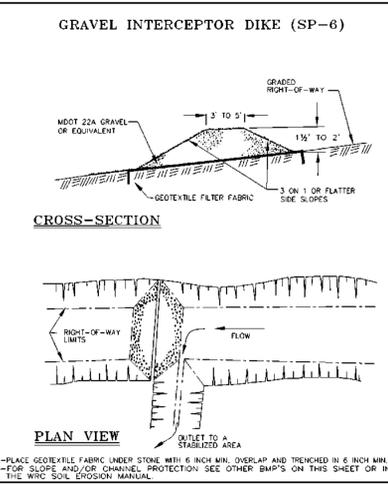
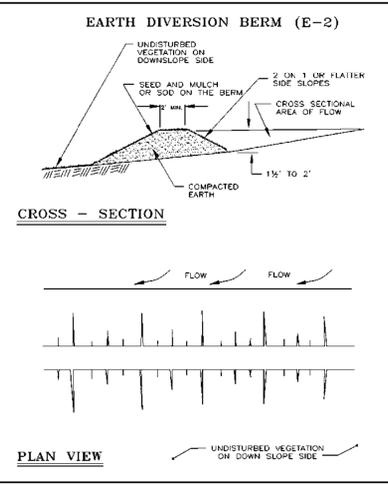
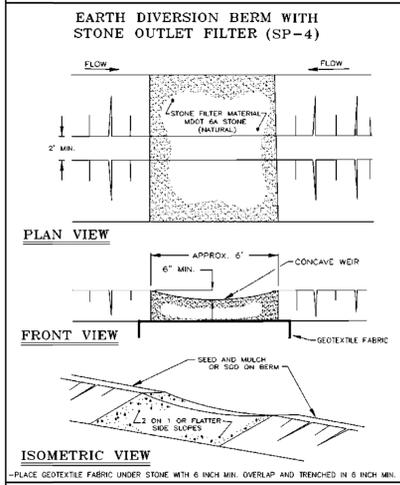
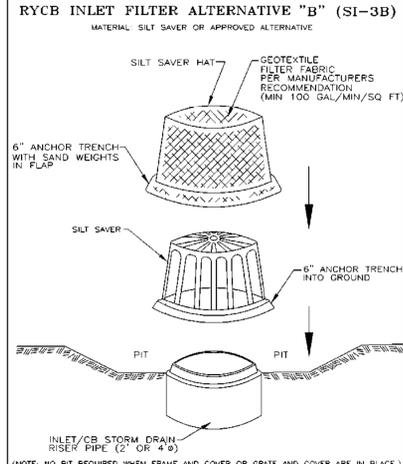
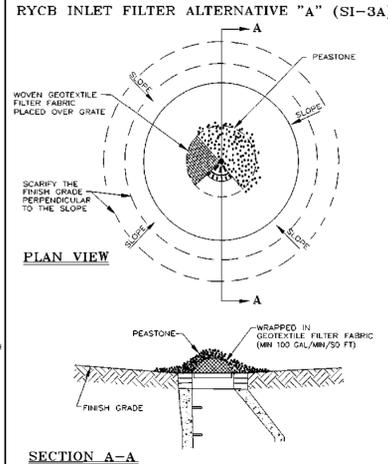
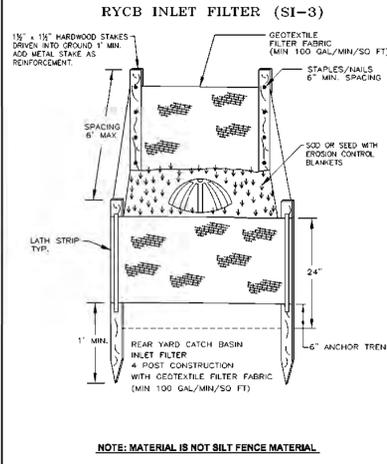
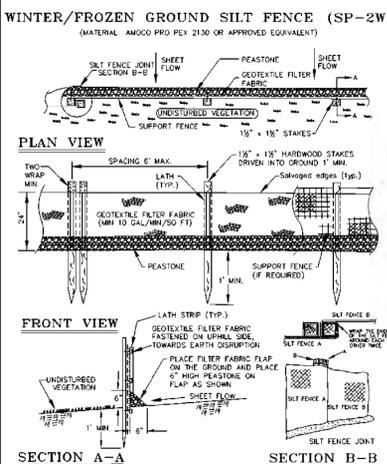
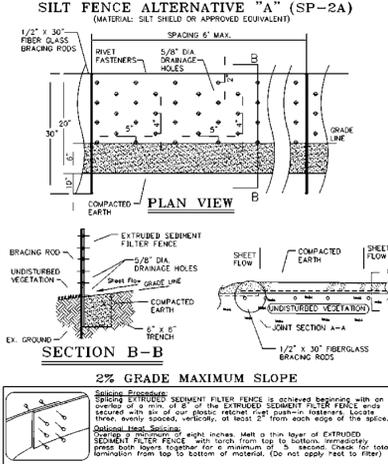
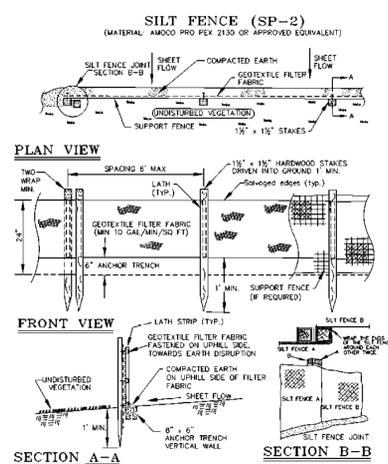
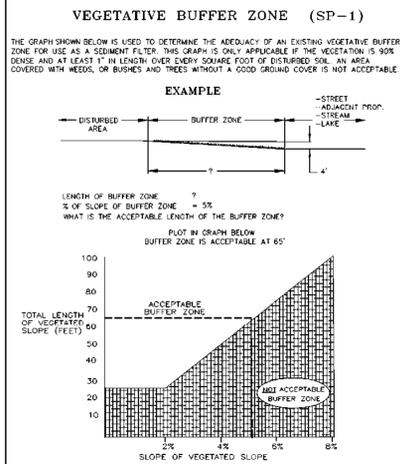
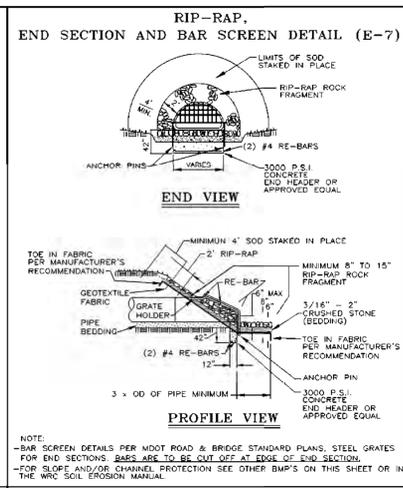
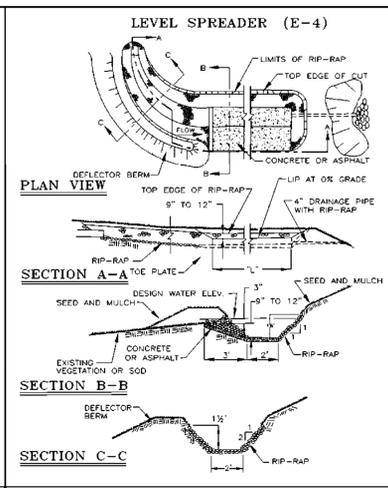
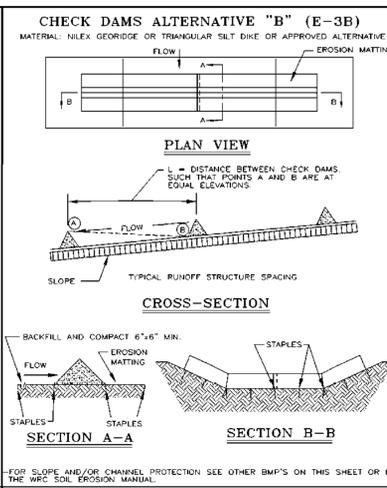
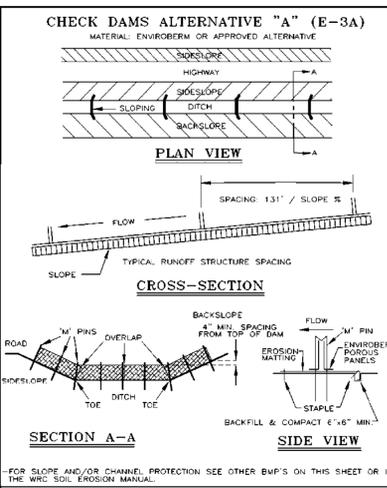
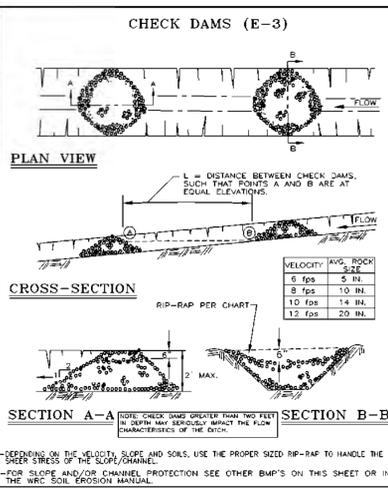
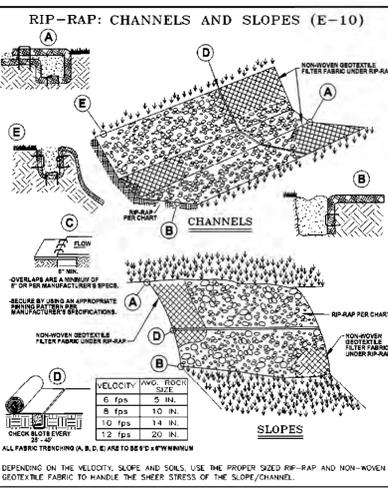
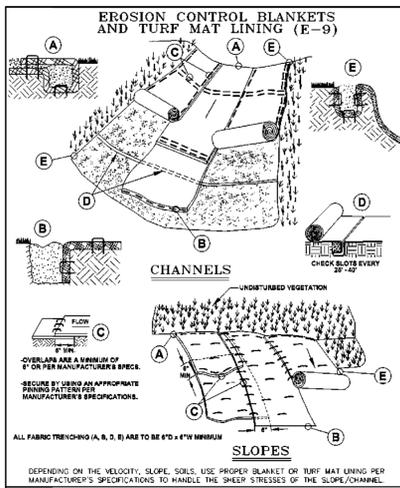


CITY OF BLOOMFIELD HILLS 2015 ROAD IMPROVEMENT PROGRAM PRELIMINARY DRAFT

OAKLAND COUNTY MICHIGAN

CULVERT CROSSING DETAILS

Table with 2 columns: HRC JOB NO., SCALE, DATE, SHEET NO. OF. Contains project identification and sheet numbering.



NOTE:

WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPs), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPs SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

REVISION BLOCK

NO.	DATE	DESCRIPTION
1		ISSUED FOR CONSTRUCTION
2		ISSUED FOR CONSTRUCTION
3		ISSUED FOR CONSTRUCTION
4		ISSUED FOR CONSTRUCTION
5		ISSUED FOR CONSTRUCTION

ORIG. DATE: 01/01/01

SCALE: NONE

DESIGNED BY: WRC

DRAWN BY: Mapco

ONE PUBLIC WORKS DRIVE, 6303 NE 96TH WATERLOO HIGHWAY 4610-907

WRC WATER RESOURCES COMMISSION

SHEET NO.: 1 of 1