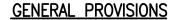
	INDEX OF SHEETS			
SHEET NO.	DESCRIPTION			
01	TITLE SHEET			
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13	SITE_FURNISHINGS			
14-17	AUBURN ROAD – GATEWAY DETAILS			



THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE PROPOSAL AND ACCOMPANYING SPECIFICATIONS FOR THIS PROJECT INCLUDING THE 2012 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, AASHTO'S 2011 A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AND MDOT'S 2017 GUIDELINES FOR GEOMETRICS ON LOCAL AGENCY PROJECTS, BOTH 3R AND 4R GUIDELINES.

PAVEMENT MARKING AND PLACING OF TRAFFIC CONTROL SIGNS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION. THIS WORK WILL BE DONE PRIOR TO THE FINAL ACCEPTANCE OF THIS PROJECT.

THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. THE CITY OF ROCHESTER HILLS WILL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATIONS SHOWN. PURSUANT TO ACT 174 OF THE P.A. OF 2013, AS A CONDITION OF THIS CONTRACT, NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT, PHONE (800) 482–7171. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THE PLANS AND ARE NOT THE RESPONSIBILITY OF THE CITY.

THE ELEVATIONS ON THESE PLANS ARE BASED ON NAVD 1988 VERTICAL DATUM.



# CITY OF ROCHESTER HILLS OAKLAND COUNTY, MICHIGAN EMMONS AVENUE PLAZA DESIGN

LOCATION MAP n.t.s.

## <u>CITY OF ROCHESTER HILLS</u>

BRYAN K. BARNETT • MAYOR •

MARK A. TISDEL STEPHANIE MORITA DALE A. HETRICK DAVID WALKER RYAN J. DEEL SUSAN BOWYER, Ph.D JAMES KUBICINA •COUNCIL MEMBERS•

ALLAN E. SCHNECK, P.E. • DIRECTOR OF PUBLIC SERVICES •

PAUL M. DAVIS, P.E. • CITY ENGINEER/DPS DEPUTY DIRECTOR •

CONTRACT FOR: DEVELOPMENT AND INSTALLATION OF EMMON AUBURN ROAD MEDIAN AND ROUNDABOUT ( HILLS, MI.	
	Advancing Communities
OHM	34000 Plymouth Road   Livonia, MI 48150 p (734) 522-6711   f (734) 522-6427
PREPARED UNDER T	HE SUPERVISION OF:
	50004
	56021 Registration No.
Timothy Juidici, P.E.	Date
CITY OF ROCHESTE	R HILLS APPROVAL:
ALLAN E. SCHNECK, P.E. Public Services Director	Date
PAUL M. DAVIS, P.E. City Engineer/DPS Deputy Dire	Date Date
REVIS	SIONS
PROJECT NO.	SHEET NO.
0190-17-0020	1 OF 17

#### GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR BEING FAMILIAR WITH ALL DOCUMENTED UNDERGROUND UTILITIES, PIPES AND STRUCTURES LOCATE AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION UNLESS OTHERWISE NOTED. CONTACT MISS DIG (811 OR 800-482-7171) A MINIMUM OF 3 DAYS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT 2 JNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS
- 4. ALL WORK TO BE PERFORMED BY LICENSED AND INSURED CONTRACTORS AND EXPERIENCED WORKERS.
- 5. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL KEEP ALL DRAINAGE FACILITIES (CATCH BASINS, YARD DRAINS, ETC.) AFFECTED BY THEIR 6 CONSTRUCTION OPERATIONS CLEAN AND FULLY OPERATIONAL AT ALL TIMES.
- CONTRACTOR SHALL REPAIR AT THEIR OWN EXPENSE, ANY DAMAGE, WHETHER INSIDE OR OUTSIDE OF THE PROJECT LIMITS, TO UTILITY SYSTEMS, SURFACE PAVEMENTS, FIXTURES, STRUCTURES, AND/OR EXISTING TREES OR LANDSCAPING THAT ARE NOT SPECIFICALLY INDICATED TO BE REMOVED OR RELOCATED AS PART OF THE PROJECT CONSTRUCTION. IN THE EVENT THAT ANY EXISTING DRAINAGE STRUCTURES OR UTILITIES ARE DAMAGED AND THE SERVICES DISRUPTED. THE LINES SHALL BE IMMEDIATELY REPAIRED AND THE SERVICES RESTORED AS DIRECTED BY THE ENGINEER
- IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN WHAT IS SHOWN ON THE DRAWINGS AND ACTUAL FIELD 8. CONDITIONS THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION
- THE CONTRACTOR IS RESPONSIBLE FOR CONSISTENCY OF THE ANGLE OF THE SCORING PATTERN AND JOINTING PATTERN IN THE CROSSWALKS. THE SCORING PATTERN IS SUBJECT TO THE ENGINEERS APPROVAL.

#### LAYOUT NOTES

- 1. ALL DIMENSIONS SHOWN ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
- 2. DO NOT SCALE DRAWINGS. UTILIZE DIMENSIONS INDICATED ON THE PLANS
- 3. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT, FACE OF WALL, OR FACE OF CURB UNLESS OTHERWISE NOTED.
- 4. WALKWAYS AND HARDSCAPE ELEMENTS INDICATED AS CURVILINEAR SHALL HAVE SMOOTH CONTINUOUS CURVES.
- 5. UNLESS INDICATED OTHERWISE, ALL WALKWAYS ABUT AT 90 DEGREE ANGLES.
- ALL CONCRETE SCORING SHALL BE PARALLEL, PERPENDICULAR OR TANGENT TO ADJACENT IMPROVEMENTS UNLESS OTHERWISE NOTED AND AS APPROVED BY THE ENGINEER
- LAYOUT ALL CONSTRUCTION LINES AND VERIFY LAYOUT WITH THE ENGINEER PRIOR TO BEGINNING ANY CONSTRUCTION WORK.
- 8. DIMENSIONS FOR PLANT BEDS ARE APPROXIMATE. STAKE PLANT BEDS ON-SITE FOR FINAL APPROVAL BY ENGINEER.
- 9. REFER TO GENERAL NOTES FOR ADDITIONAL INSTRUCTIONS.
- 10. FIELD VERIFY ALL PROPOSED AND EXISTING UTILITY LOCATIONS.
- 11. THE CONTRACTOR SHALL COORDINATE ALL WORK AND BE RESPONSIBLE FOR ALL METHODS, MEANS, SEQUENCE, AND PROCEDURES OF THE WORK.

#### PLANTING NOTES

- STAKE ALL BED LINES AND TREE LOCATIONS FOR THE ENGINEER'S REVIEW PRIOR TO INSTALLATION. ALL PLANTING PROCEDURES ARE SUBJECT TO THE REVIEW OF THE ENGINEER AND THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES FOUND AT NO ADDITIONAL COST TO THE OWNER.
- 2. SECURE PLANT MATERIAL AS SPECIFIED ON PLANS. IN THE EVENT THAT PLANT MATERIALS SPECIFIED ARE NOT AVAILABLE, CONTRACTOR SHALL SUBMIT ALTERNATES TO ENGINEER FOR APPROVAL PRIOR TO SUBMITTING A BID. NO SUBSTITUTIONS FOR PLANT MATERIALS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
- 3. VERIFY THAT ALL PLANTING PRODUCTS, PLANT MATERIAL, AND PLANT QUANTITIES DELIVERED TO THE SITE MATCH WHAT INDICATED ON THE PLANS AND SPECIFICATIONS.
- 4 PROTECT ALL PLANT MATERIAL DURING DELIVERY TO PREVENT DAMAGE TO ROOT BALLS. TRUNKS, BRANCHES AND THE DESIGCATION OF LEAVES. REDOKING DELANT MATERIAL DURING SHIPPING WITH SHADE CLOTH OR SHIP WITH ENCLOSED TRANSPORT. MAINTAIN PROTECTIONS AND HEALTH OF PLANT MATERIAL STORED ON SITE. HANDLE ALL TREES WITH NYLON STRAPS. NO CHAINS OR CABLES ALLOWED. REMOVE UNACCEPTABLE PLANT MATERIAL IMMEDIATELY FROM THE SITE
- 5. ALL PLANT MATERIAL SHALL BE NURSERY GROWN, WELL FORMED, TRUE TO SPECIES, HARDENED OFF WITH VIGOROUS ROOT SYSTEMS, FULL CROWN AND CANOPIES, AND FREE FROM DISEASE, PESTS AND INSECTS, AND DEFECTS SUCH AS KNOTS, SUN SCALD, WINDBURN, LEAF DISCOLORATION, IRREGULAR BRANCHING OR INJURIES
- 6. ALL ROOT BALLS SHALL CONFORM TO THE SIZE STANDARDS SET FORTH IN 'AMERICAN STANDARDS FOR NURSERY STOCK'.
- 7. PROVIDE SOURCE INFORMATION AND PLANT SAMPLES OR PHOTOGRAPHS OF EACH PLANT SPECIFIED TO THE ENGINEER FOR COMPLIANCE REVIEW PRIOR TO INSTALLATION.
- 8. ALL PLANT MATERIAL DELIVERED TO THE SITE IS SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER BEFORE, DURING AND AFTER INSTALLATION.
- 9. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT AND/OR SELECT ANY AND ALL PLANT MATERIAL AT THE JRSERY PRIOR TO DELIVERY TO THE SITE
- 10. TEST FILL ALL TREE PITS, PLANTING BEDS AND RAIN GARDENS WITH WATER, PRIOR TO PLANTING TO ASSURE PROPER SOIL PERCOLATION, PITS WHICH DO NOT ADEQUATELY DRAIN SHALL BE FURTHER EXCAVATED TO A DEPTH SUFFICIENT FOR DRAINAGE TO OCCUR AND/OR BACKFILLED WITH SUITABLE DRAINAGE GRAVEL. NO ALLOWANCES SHALL BE MADE FOR PLANT MATERIAL LOSS DUE TO IMPROPER DRAINAGE.
- 11. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANT MATERIAL WITH SAME SIZE AND SPECIES AT NO ADDITIONAL COST TO OWNER.
- 12. ALL PLANT MATERIALS, INCLUDING RELOCATED PLANT MATERIAL, SHALL BE PLANTED IN A PROFESSIONAL MANNER TYPICAL TO THE INDUSTRY STANDARDS TO ASSURE COMPLETE SURVIVABILITY OF ALL INSTALLED PLANT MATERIALS AS WELL AS TO PROVIDE AN AESTHETICALLY APPROVED PROJECT. CONTRACTOR SHALL REFER TO THE PLANTING DETAILS TOR MINUM SIZE AND WIDTH OF TREE PITS, PLANTING BEDS, RAIN GARDENS, GUYING AND STAKING, MULCHING, ANI OTHER PLANTING REQUIREMENTS.
- 13. LAWN AREAS TO PROVIDE A SMOOTH AND CONTINUAL GRADE.
- 14. PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF DOUBLE SHREDDED HARDWOOD MULCH AND SHALL BE CONSISTENT WITH PLANTING DETAILS AND SPECIAL PROVISIONS.
- 15. PLANTING MIX AND/OR TOPSOIL SHALL BE PROVIDED AND BLENDED AS DESCRIBED IN THE PLANTING DETAILS AND SPECIAL PROVISIONS.
- 16. ALL PLANTING AREAS SHALL BE WEED FREE PRIOR TO PLANTING INSTALLATION.
- 17. REMOVE ALL PLANTING AND LANDSCAPE DEBRIS FROM THE PROJECT SITE AND SWEEP AND WASH CLEAN ALL PAVED AND FINISHED SURFACES AFFECTED BY THE LANDSCAPE INSTALLATION.
- 18. THE CONTRACTOR SHALL COORDINATE PLANTING PERIODS WITH INITIAL MAINTENANCE PERIODS TO PROVIDE THE REQUIRED MAINTENANCE FROM THE DATE OF PLANTING COMPLETION. ALL PLANTING SHALL OCCUR DURING ONE OF THE FOLLOWING PERIODS SPRING PLANTING: APRIL 15 - JUNE 1
  - B. FALL PLANTING: SEPTEMBER 1 OCTOBER 15
- 20. FERTILIZER SHALL NOT BE USED WITHIN 50 FEET OF ANY PLANTING BED OR RAIN GARDEN, FERTILIZER SHALL BE CLEANED OFF OF ALL HARD SURFACES AFTER APPLICATION TO ENSURE IT DOES NOT WASH INTO RAIN GARDENS DURING A STORM
- 21. SEE TURF ESTABLISHMENT, PERFORMANCE SPECIAL PROVISION FOR LAWN SEEDING INFORMATION.
- 22. REFER TO GENERAL NOTES FOR ADDITIONAL INSTRUCTIONS.
- 23. SEE SHEET 12 FOR PLANTING DETAILS

#### IRRIGATION NOTES

- SPECIAL PROVISION.
- WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
- VALVE OR SPLICE BOX
- 6. SEE IRRIGATION SPECIAL PROVISION FOR ADDITIONAL INFORMATION

1. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.

2. CONTRACTOR WILL ARRANGE INSPECTIONS FOR IRRIGATION REQUIRED BY THE SPECIAL PROVISION DURING THE COURSE OF CONSTRUCTION. ALL WIRING AND BACKFLOW PREVENTION TO BE PER LOCAL CODE AND AS DESCRIBED IN THE

3. INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS

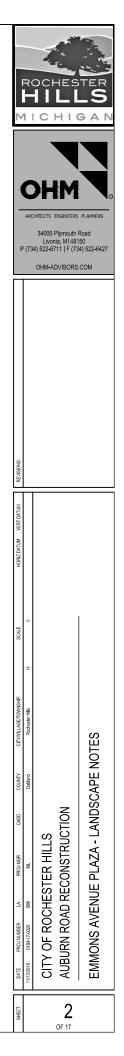
4. ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A

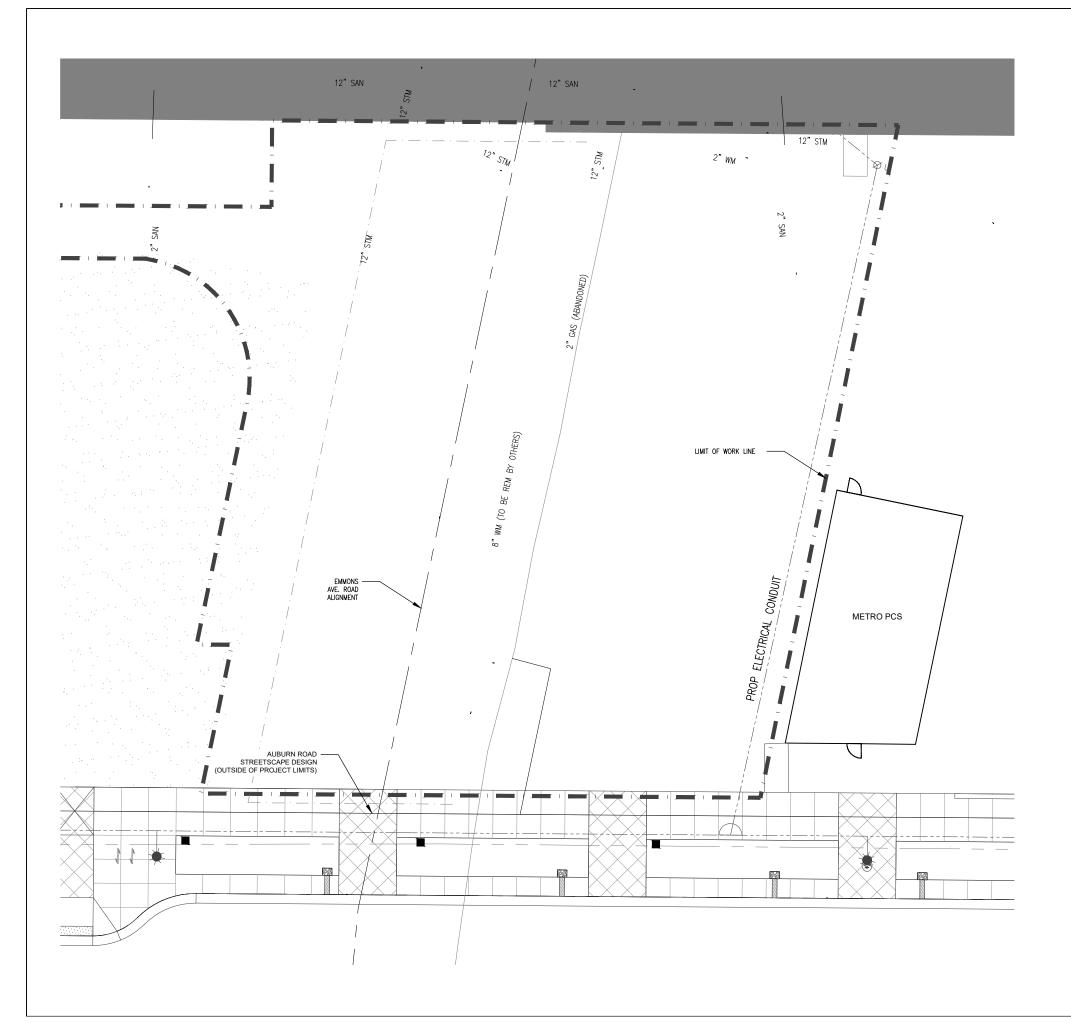
5. ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 14 AWG, UL APPROVED DIRECT BURY.

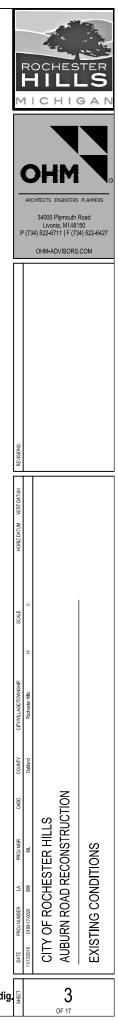
7. SHOP DRAWINGS SHALL BE REQUIRED FOR IRRIGATION PLANS AS DESCRIBED IN THE SPECIAL PROVISIONS, AND SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

8. THE CONTRACTOR SHALL DESIGN THE SYSTEM TO PROVIDE HEAD TO HEAD COVERAGE IN THE PLANTING AREAS DEFINED THE CONTRACTOR STALL DESIGN THE STOTEM TO FROM THE ADDITION TO THE DAY THE PLANTING AREAS DEFINED ON SHEET 9 OF THIS PLAN SET. THE SYSTEM SHALL ALSO BE CONFIGURED SO THAT IRRIGATION ZONES ARE NOT SHARED BETWEEN THE DIFFERENT PLANTING AND LAWN AREAS (LE. RAIN GARDEN AREAS SHALL NOT BE COMBINED WITH OTHER PLANTING BEDS AND/OR LAWN AREAS, AND PLANTING BEDS SHALL NOT BE COMBINED WITH RAIN GARDENS AND/OR LAWN

9. ALL IRRIGATION SHALL BE PAID AS "UNDERGROUND AUTOMATIC IRRIGATION SYSTEM".

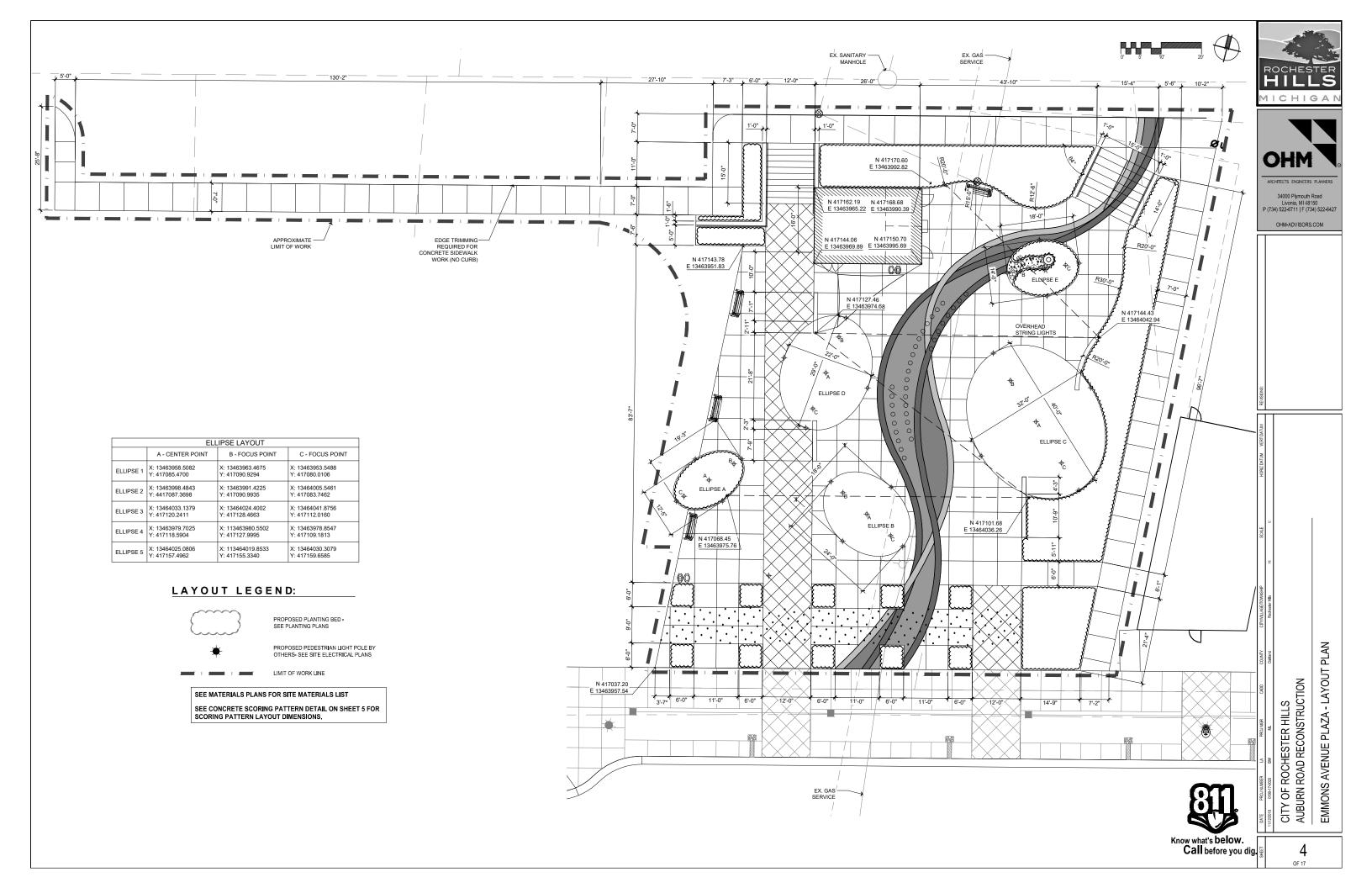


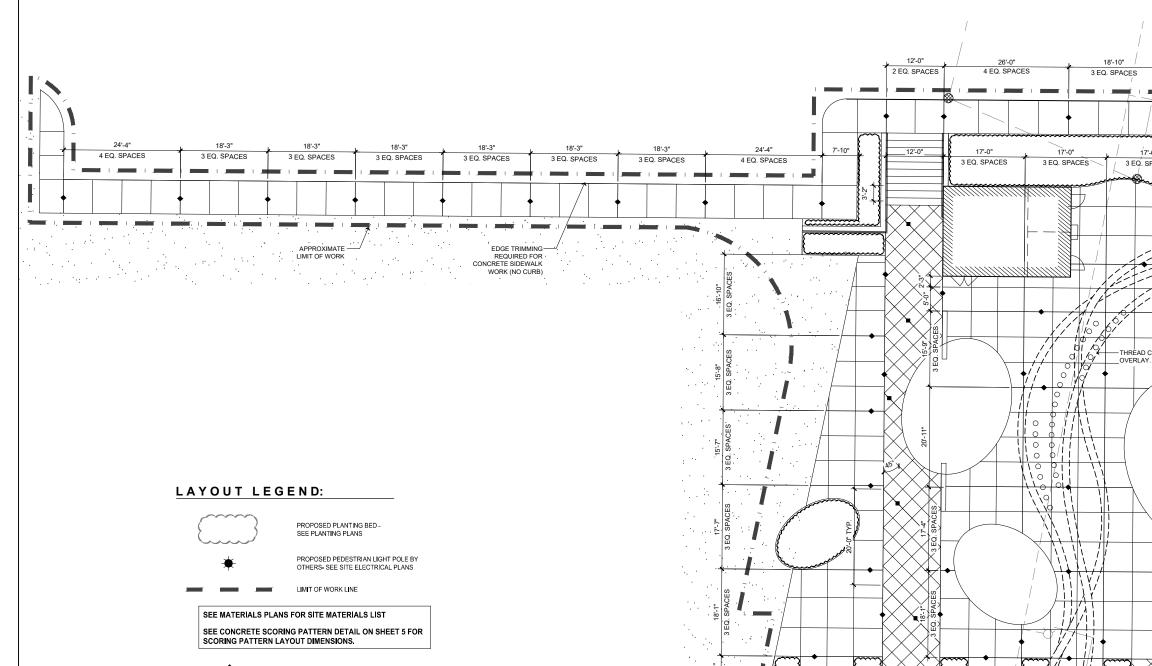






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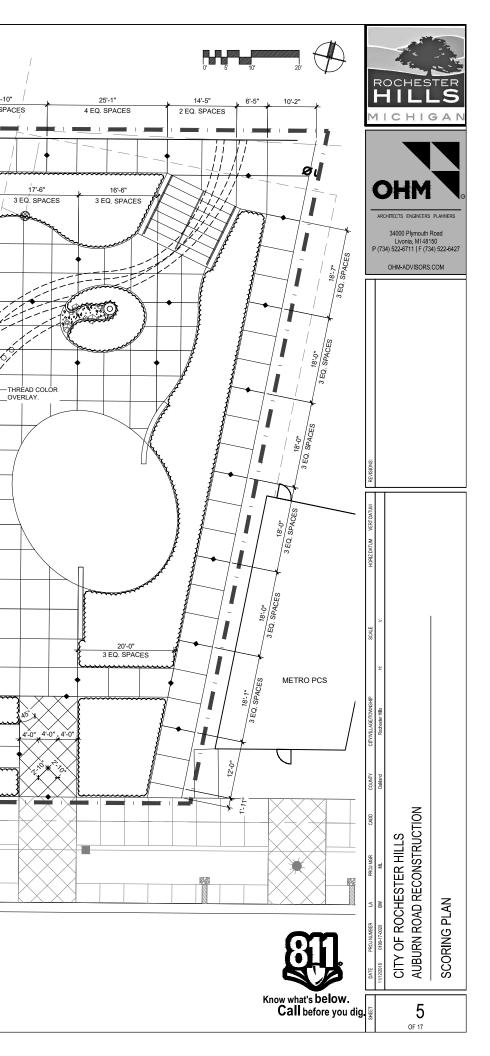
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3'-7" 6'-0" 11'-0" 2 EQ. SPACES

6'-0"

9-0-0

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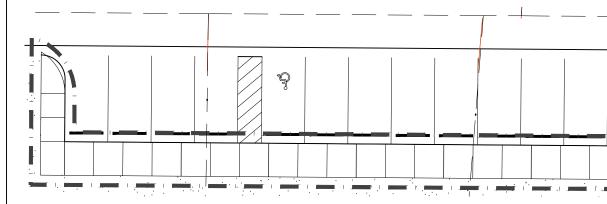


17'-6"

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	MATERIALS LIST - STREETSCAPE						
CODE	ITEM	FINISH	NOTES				
BE	REST BENCH	80 INCH LENGTH, TITANIUM POWDERCOAT, WITH BACK AND ARMS, SURFACE MOUNT	SEE DETAIL 1, SHEET 13				
CS	CHARGING STATION	LEGRAND OUTDOOR CHARGING STATION WITH AREA LIGHT; BRONZE FINISH AND EQUIPPED WITH 2-GANG, ONE DUPLEX GFCI RECEPTACLE, ONE 4-PORT USB. CHARGING STATION TO BE PROVIDED BY CITY.	SEE DETAIL 4, SHEET 13				
CW	CHEEK WALL	BUFF WASHED FINISH CONCRETE WITH INTEGRAL DARK GULL GRAY COLOR (FEDERAL STANDARD CODE #36231)	SEE DETAIL 5, SHEET 11				
DW	DRY WELL	CONCRETE WITH WEEP HOLES AND OVER FLOW PIPE CONNECTED TO ADJACENT STORM SEWER.	SEE DETAIL 7, SHEET 10				
FO	FIBER OPTIC LIGHTING	MULTI-COLORED AND SOUND COORDINATED FIXTURES EMBEDDED IN CONCRETE, SPACED ON 24-36* CENTERS. REFER TO MATERIALS LIST, THIS SHEET.	SEE SPECIAL PROVISION AND DETAIL 11, SHEET 11				
HR	HAND RAIL	STYLE TO MATCH RAIN GARDEN FENCING ALONG AUBURN ROAD	SEE DETAIL 9, SHEET 11				
LP	STRING LIGHT POLE	ALCOTT LIGHT POLE (WITHOUT LUMINAIRE), 16' HEIGHT, TITANIUM POWDERCOAT FINISH, MOUNTED PER MANUFACTURER'S SPECIFICATIONS	SEE DETAILS 6 & 8, SHEET 10				
LR	COLLECT LITTER RECEPTACLE	30 GALLON CAPACITY, TOP OPENING, SURFACE MOUNT, TITANIUM POWDERCOAT WITH BLACK POLYETHYLENE BIN	SEE DETAIL 2, SHEET 13				
P-1	CONCRETE PAVEMENT (PEDESTRIAN)	STANDARD BROOM FINISH	SEE DETAIL 1, SHEET 11				
P-2	CONCRETE PAVEMENT (PEDESTRIAN)	BUFF WASHED FINISH WITH INTEGRAL DARK GULL GRAY COLOR (FEDERAL STANDARD CODE #36231)	SEE DETAIL 2, SHEET 11				
P-3	COLOR "WAVE" CONCRETE	POLYMER CEMENT SURFACING APPLIED TO STANDARD CONCRETE FINISH	SEE DETAIL 3, SHEET 11				
PB	PLANTING BED	N/A	SEE PLANTING PLAN AND DETAILS				
RG	RAIN GARDEN	N/A	SEE PLANTING PLAN AND DETAILS				
RR	COLLECT RECYCLE RECEPTACLE	30 GALLON CAPACITY, TOP OPENING, SURFACE MOUNT, TITANIUM POWDERCOAT WITH PINE POLYETHYLENE BIN	SEE DETAIL 2, SHEET 13				
RW	RETAINING WALL	POURED IN PLACE CONCRETE, REFER TO GRADING PLAN FOR ELEVATIONS.	SEE DETAIL 5, SHEET 10				
SB	COBBLESTONE SPLASH BLOCK	WASHED COBBLE STONE OVER WEED BARRIER	SEE PLANS & DETAIL 4, SHEET 10				
SC	STORM SEWER CONNECTION	12" DIAMETER CONCRETE OUTFLOW CONNECTION	DETAIL 6, SHEET 10				
SL	STRING LIGHTING	CABLE LIGHT ATTACHED TO AIRCRAFT CABLE FOR SUPPORT, 24" O.C. SOCKET SPACING, LED LAMP WITH RETRO VINTAGE STYLE, 2200° K COLOR TEMPERATURE	SEE DETAIL 10, SHEET 11				
SP	SPLASH PAD	APPROXIMATELY 36 SPRAY HEADS OF VARIOUS STYLES TO BE COORDINATED WITH MULTI-COLORED LIGHTS AND SOUNDS. PUSH BUTTON AND TIMER CONTROLLED.	SEE SPECIAL PROVISION				
SS	SHADE SAIL	RIGHT TRIANGLE LAYOUT WITH 2 SIDES MOUNTED TO BUILDING & ONE SIDE MOUNTED TO SUPPORT POLE (PER MANUF. SPECIFICATIONS), FINAL SIZE & COLOR TO BE DETERMINED BY OWNER.	SEE DETAIL 6, SHEET 13				
ST1	CONCRETE STAIRCASE	24" TREADS x 6" RISERS, WITH EMBEDDED HANDRAILS	SEE DETAIL 5, SHEET 11				
ST2	CONCRETE STAIRCASE	18" TREADS x 6" RISERS, WITH EMBEDDED HANDRAILS	SEE DETAIL 5, SHEET 11				
SW	SEAT WALL	18" HEIGHT WITH BEVELED CONCRETE CAP, STONE FACADE TO MATCH BUILDING	SEE DETAIL 6, SHEET 10				
тс	BISTRO TABLE AND CHAIRS	±28* SQUARE, FOLDING BISTRO TABLE AND FOLDING SLATTED BISTRO CHAIR; FINISHES TO BE APPROVED BY OWNER	SEE DETAILS 3 & 5, SHEET 13				
тм	ARTIFICIAL TURF MOUND	PET TURF BY EVERLAST ARTIFICIAL GRASS. FIELD & OLIVE GREEN COLORED MONOFILAMENT YARN WITH BROWN THATCH. FACE WEIGHT OF 60 OUNCES AND APPROX. 1" PILE HEIGHT.	SEE PLANS & DETAIL 7, SHEET 11				

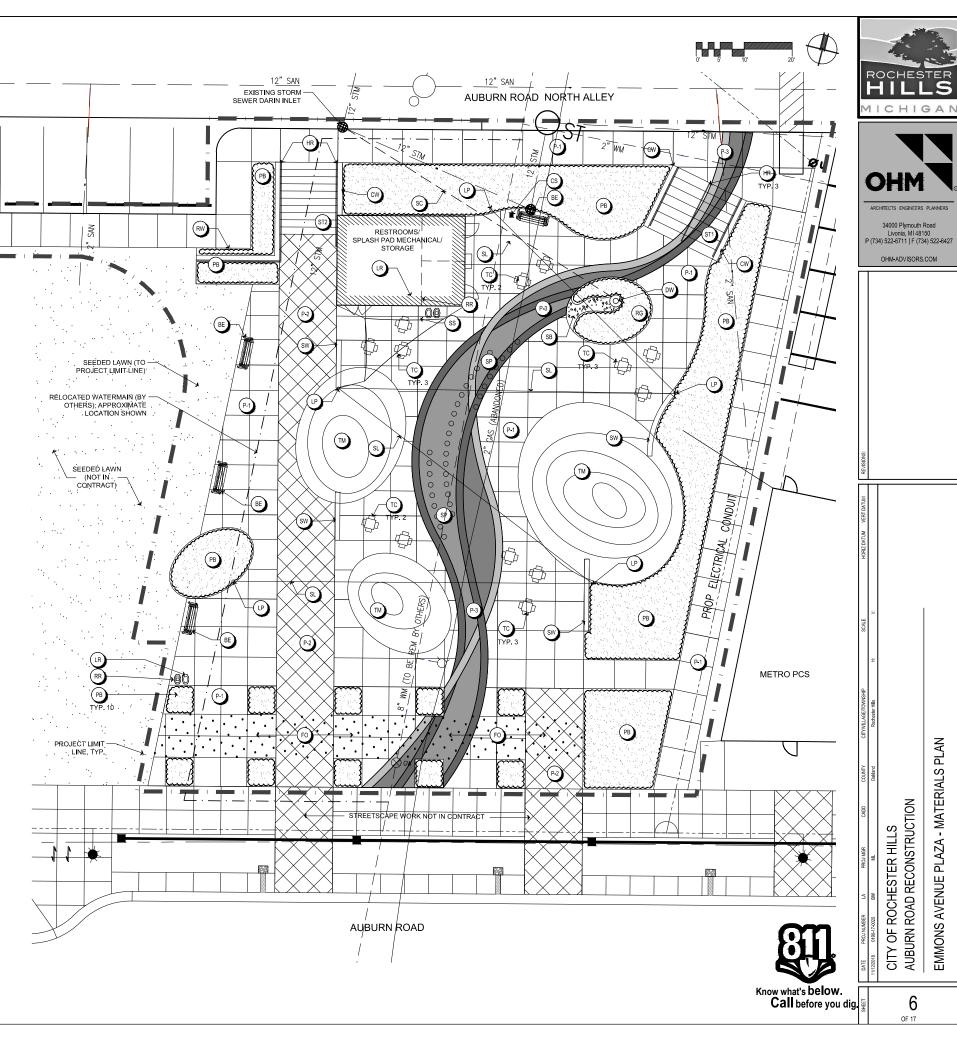
#### MATERIALS LEGEND:

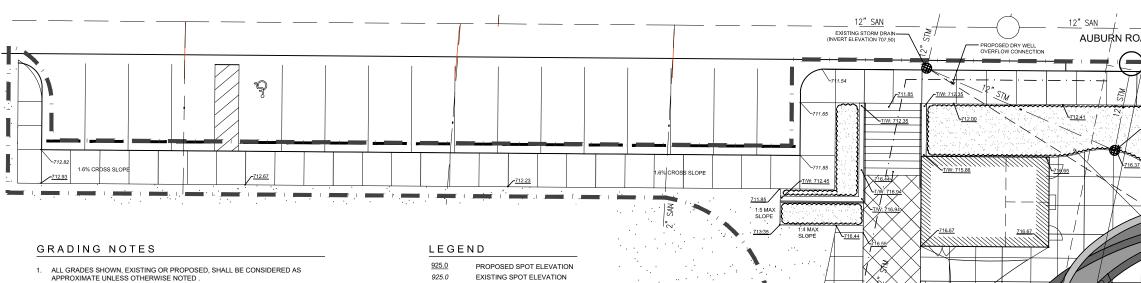
- <del>*</del> -	EXISTING LIGHT POLE
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- PROPOSED BENCH
- 111 EXISTING BIKE RACK
- PROPOSED CHARGING STATION
- $\bigcirc$ PROPOSED LITTER RECEPTACLE
- PROPOSED RECYCLE RECEPTACLE 0
- PROPOSED LAWN PROPOSED CONCRETE PAVEMENT, TYPE 1
- PROPOSED CONCRETE PAVEMENT, TYPE 2
- $\overline{\Box}$ PROPOSED POLYMER CEMENT SURFACING
- PROPOSED FIBER OPTIC LIGHTING
  - PROPOSED PLANTING BED

#### FIBER OPTIC QUANTITIES:

- QTY. ITEM
- 3 FL5600 LED FIBER OPTIC ILLUMINATOR (120 WATT. RGBW, PROGRAMMABLE)
- 3 ROLLS FIBER OPTIC LIGHTING CABLE, (12 STRAND PMMA (30' EACH) END GLOW FIBER)
- 83 P4 PAVER FITTING





- 2. MAXIMUM SLOPES IN LANDSCAPE AREAS SHALL NOT EXCEED 3:1, UNLESS OTHERWISE INDICATED.
- 3. ALL SURFACES SHALL BE CONSTRUCTED TO POSITIVELY DRAIN AWAY FROM ALL VERTICAL ELEMENTS SUCH AS BUILDINGS, WALLS, COLUMNS, ETC. TOWARD AND INTO DRAINAGE STRUCTURES SHOWN.
- 4. ALL WALKWAYS, RAMPS, ETC. SHALL MEET CURRENT ADA (AMERICANS WITH DISABILITIES ACT) STANDARDS AT A MINIMUM.
- 5. GRADES SHOWN INDICATE FINISH GRADE. VERIFY DEPTH OF PAVEMENT SECTIONS PRIOR TO ROUGH GRADING.
- 6. PROPOSED GRADES AND CONTOURS ARE INTERPOLATED FROM THE BEST INFORMATION AVAILABLE. ALL PROPOSED GRADES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- 7. MATCH GRADES WITH ADJACENT SURFACES SO THAT ALL ABUTTING SURFACES ARE FLUSH.
- 8. PROVIDE POSITIVE DRAINAGE FROM ALL PAVEMENT SURFACES TO CURBS OR INLETS.
- 9. MAINTAIN COMPACTION RATES SPECIFIED FOR PAVEMENT SUB-GRADE AND FILL ADJACENT TO CURBS AND WALKS TO MINIMIZE SETTLEMENT.
- 10. FINISH GRADES SHALL BE 3 INCHES BELOW ELEVATIONS SHOWN FOR ALL PLANTING AREAS UNLESS OTHERWISE NOTED.
- 11. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WITH WORK. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND/OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCY BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS. NO WORK SHALL BE DONE IN AREAS WHERE SUCH DISCREPANCIES EXIST UNTIL A RESOLUTION IS REACHED AND APPROVED BY THE OWNER OF OWNER'S REPRESENTATIVE...
- 12. THE CONTRACTOR SHALL COORDINATE ALL WORK AND BE RESPONSIBLE FOR ALL METHODS, MEANS, SEQUENCE AND PROCEDURES OF THE WORK.
- 13. DO NOT DISTURB AREAS OUTSIDE OF PROJECT LIMITS.
- LOCATE AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES.
- 15. REFER TO GENERAL NOTES FOR ADDITIONAL INSTRUCTION.

 LEEGEND
 PROPOSED SPOT ELEVATION

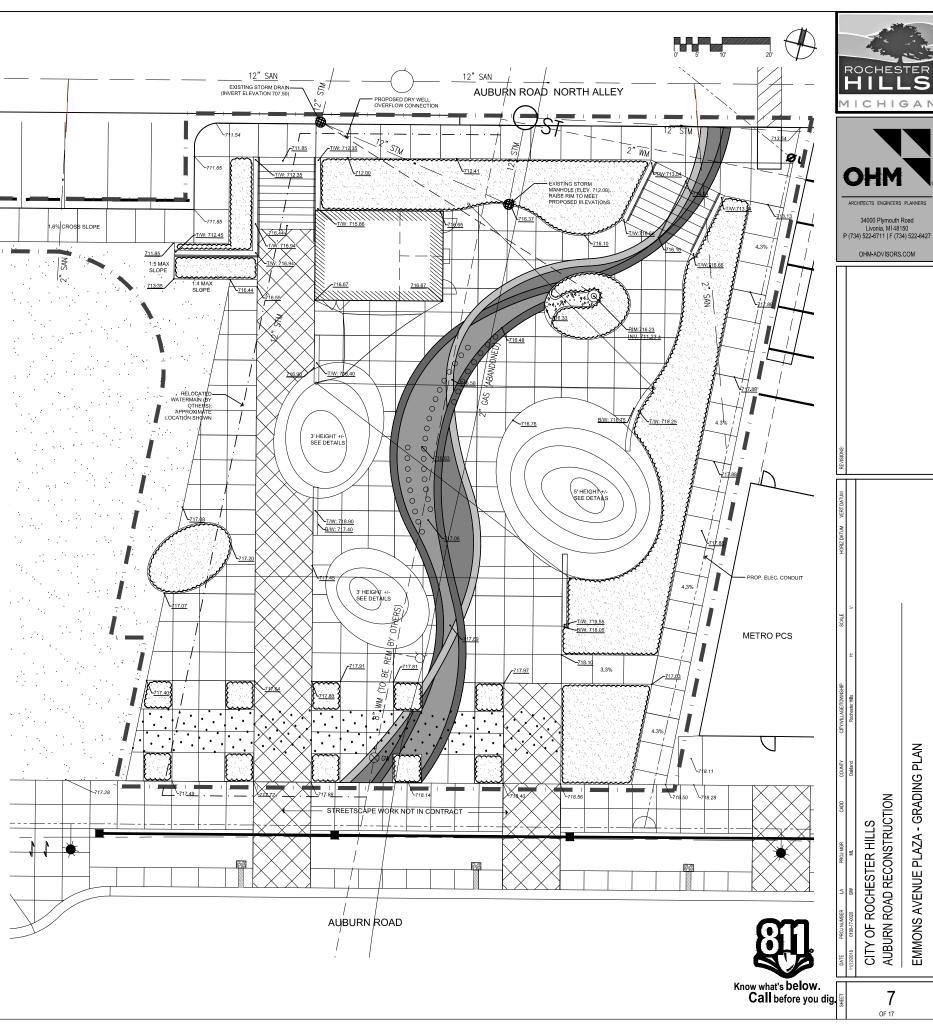
 925.0
 EXISTING SPOT ELEVATION

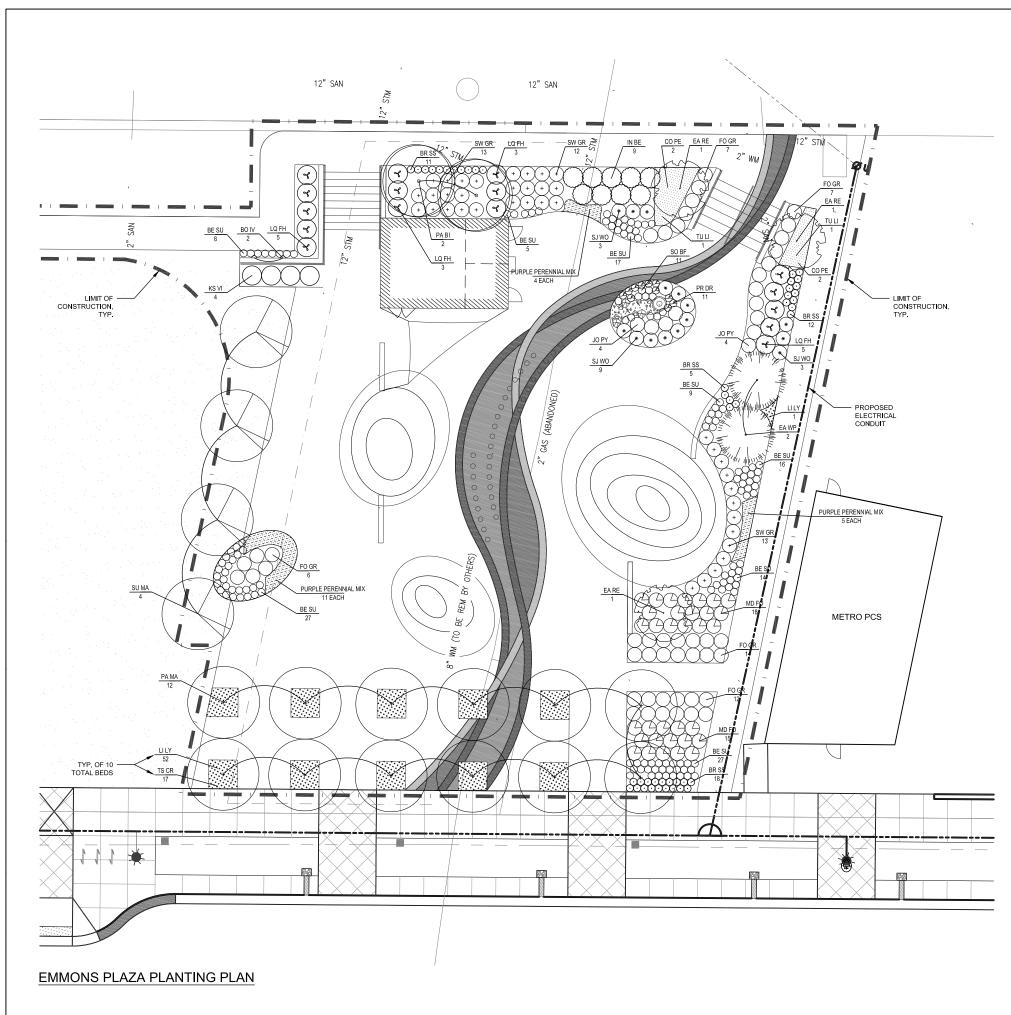
 7/W 925.0
 TOP OF WALL ELEVATION

 B/W 925.0
 BOTTOM OF WALL ELEVATION

 B/W 925.0
 DRAIN RIM ELEVATION

 INV. 925.0
 INVERT ELEVATION





#### PLANT LIST

	PLANT LIST: TREES						
CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING		
PA MA	PAPERBARK MAPLE	Acer griseum	3" CAL	B&B	AS PER PLAN		
SU MA	SUGAR MAPLE	Acer saccharum	3" CAL	B&B	20' O.C.		
PA BI	RENAISSANCE REFLECTION PAPER BIRCH	Betula papyrifera 'Renci'	10' MULTI-STEM	B&B	AS PER PLAN		
EA RE	MINNESOTA STRAIN EASTERN REDBUD	Cercis canadensis 'Northern Strain'	8' MULTI-STEM	B&B	AS PER PLAN		
EA WP	EASTERN WHITE PINE	Pinus Strobus	12' HT.	B&B	AS PER PLAN		

	PLANT LIST: SHRUBS & ORNAMENTAL GRASSES							
CODE	COMMON NAME	LATIN NAME	INSTALL SIZE	CONDITION	SPACING			
MD FO	BLUE MIST DWARF FOTHERGILLA	Fothergilla gardenii 'Blue Mist'	#3	CONT.	36" O.C.			
LQ FH	LITTLE QUICK FIRE HARDY HYDRANGEA	Hydrangea paniculata 'SMHPLQF'	#3	CONT.	AS PER PLAN			
SJ WO	KALM'S ST. JOHN'S WORT	Hypericum kalmianum	#3	CONT.	36" O.C.			
IN BE	INKBERRY	llex glabra	#3	CONT.	48" O.C.			
SW GR	SHENANDOAH SWITCH GRASS	Panicum virgatum 'Shenandoah'	#1	CONT.	36" O.C.			
FO GR	FOUNTAIN GRASS	Pennisetum alopecuroides	#1	CONT.	36" O.C.			
PR DR	PRAIRIE DROPSEED	Sporobolus heterolepis	#1	CONT.	AS PER PLAN			
KS VI	KOREAN SPICE VIBURNUM	VIburnum carles	#5	B&B	48" O.C.			

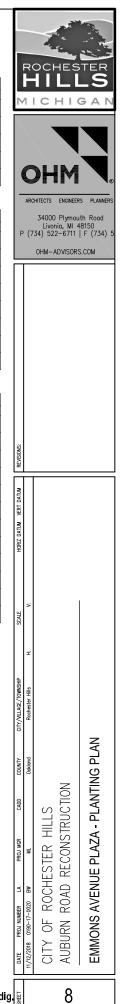
#### PLANT LIST: CODE COMMON NAME \*GL OR GLOBEMASTER ORNAMENTAL ONIC \*\*TS CR TRICOLOR SNOW CROCUS \*RG CO RUBY GIANT PURPLE CONEFLOWE JO PY CHOCOLATE JOE PYE WEED SO BF SOUTHERN BLUE FLAG \*BL ST BLAZING STAR LILY SILVERY SUNPROOF LILY-TURF BO IV FENWAY PARK BOSTON IVY GOLDSTURM BLACK-EYED SUSAN BE SU BR SS BRILLIANT SEDUM STONECROP \*\*TU LI APPLE BLOSSOM TULIP MIXTURE CO PE BOWLES' COMMON PERIWINKLE

\*PLANTS WITH ONE (1) ASTERISK ARE CALLED OUT ON PLAN SHEET AS "PURPLE PERENNIAL MIX." THEY SHALL BE SPACED 18" O.C. IN A RANDOM FASHION WITHIN HATCH SHOWN ON PLANTING PLAN. EQUAL QUANTITES OF EACH SPECIES WILL BE SPECIFIED IN QUANTITIES.



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LATIN NAME	INSTALL SIZE	CONDITION	SPACING				
Allium 'Globemaster'	#1	CONT.	18" O.C.				
Crocus sieberi 'Tricolor'	Bulb	25-PACKAGE	12" O.C.				
Echinacea purpurea 'Ruby Giant'	#1	CONT.	18" O.C.				
Eutrochium rugosum 'Chocolate'	#1	CONT.	36" O.C.				
Iris virginica	#1	CONT.	AS PER PLAN				
Liatris spicata	#1	CONT.	18" O.C.				
Liriope muscari 'Silvery Sunproof'	Plug	8-CELL FLAT	12" O.C.				
Parthenocissus tricuspidata 'Veitchii'	#1	CONT.	6' O.C.				
Rudbeckia fulgida var. 'Goldsturm'	#1	CONT.	18" O.C.				
Sedum spectabile 'Brillant'	#1	CONT.	18" O.C.				
Tulip triumph	Bulb	70-PACKAGE	12" O.C.				
Vinca minor 'Bowles'	Plug	38-CELL FLAT	12" O.C.				
	LATIN NAME Allium 'Globemaster' Crocus sieberi 'Tricolor' Echinacea purpurea 'Ruby Giant' Eutrochium rugosum 'Chocolate' Iris virginica Liatris spicata Liatris spicata Liriope muscari 'Silvery Sunproof' Parthenocissus tricuspidata 'Veitchil' Rudbeckia fulgida var. 'Goldsturm' Sedum spectablle 'Brilliant' Tulip triumph	LATIN NAME         INSTALL SIZE           Allium 'Globernaster'         #1           Crocus sieberi 'Tricolor'         Bulb           Echinacea purpurea 'Ruby Giant'         #1           Eutrochium rugosum 'Chocolate'         #1           Iris virginica         #1           Liatris spicata         #1           Liriope muscari 'Silvery Sunproof         Plug           Parthenocissus tricuspidata 'Veilchii'         #1           Rudbeckia fulgida var. 'Goldsturm'         #1           Sedum spectabile 'Brilliant'         #1	Allium 'Globernaster'     #1     CONT.       Crocus sieberi Tricolor'     Bulb     25-PACKAGE       Echinacea purpurea 'Ruby Giant'     #1     CONT.       Eutrochium rugosum 'Chocolate'     #1     CONT.       Iris virginica     #1     CONT.       Liatris spicata     #1     CONT.       Liriope muscari 'Silvery Sunproof'     Plug     &-CELL FLAT       Parthenocissus tricuspidata 'Veitchii'     #1     CONT.       Rudbeckia fulgida var. 'Goldsturm'     #1     CONT.       Sedum spectabile 'Brilliant'     #1     CONT.       Tulip triumph     Bulb     70-PACKAGE				

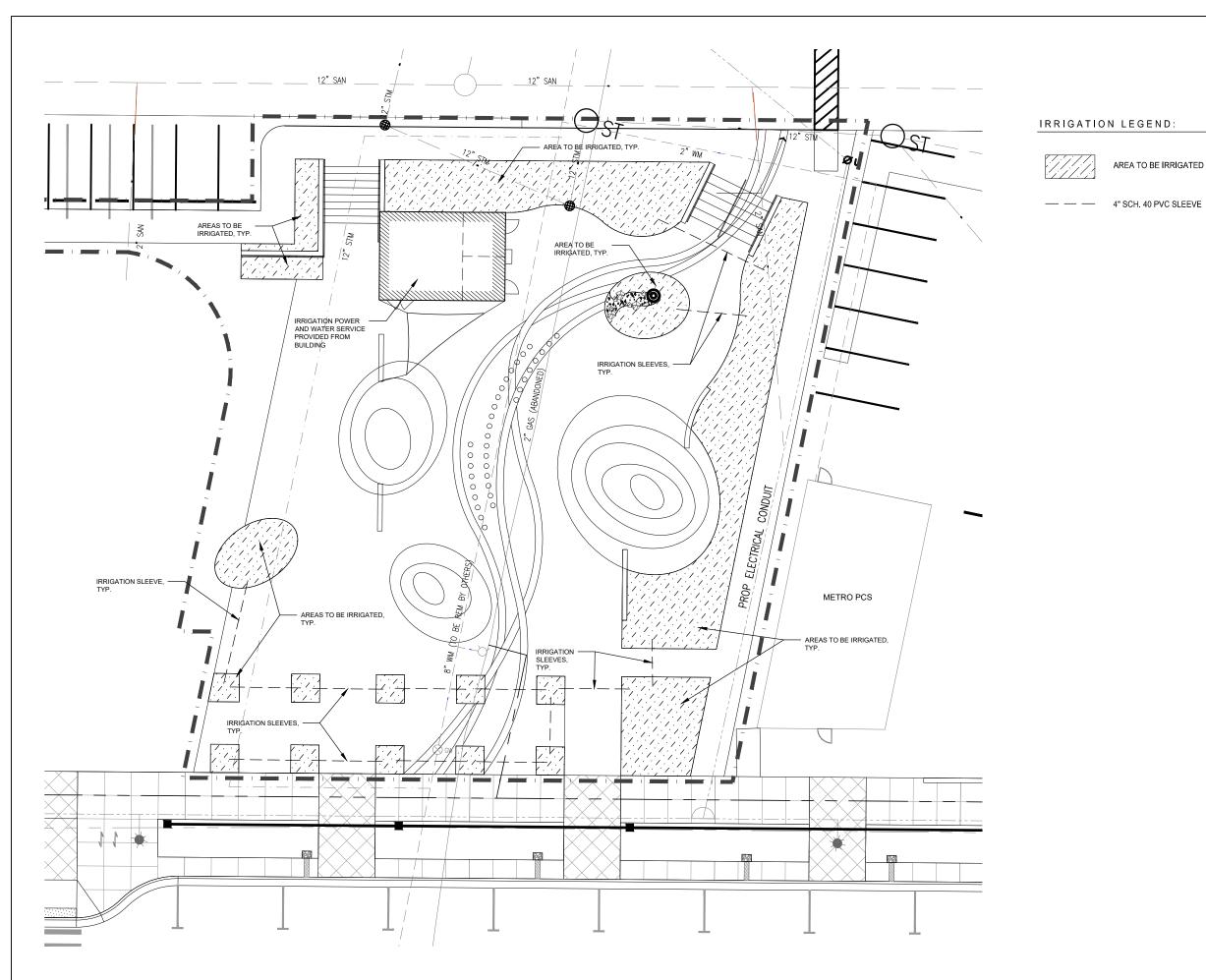
\*GROUNDCOVER WITH TWO (2) ASTERISKS ARE PROPOSED AREAS THAT WILL ALSO INCLUDE EITHER CROCUS OR TULIP PLANTINGS. SEE PLAN CALLOUTS FOR MORE INFORMATION.



OF 17



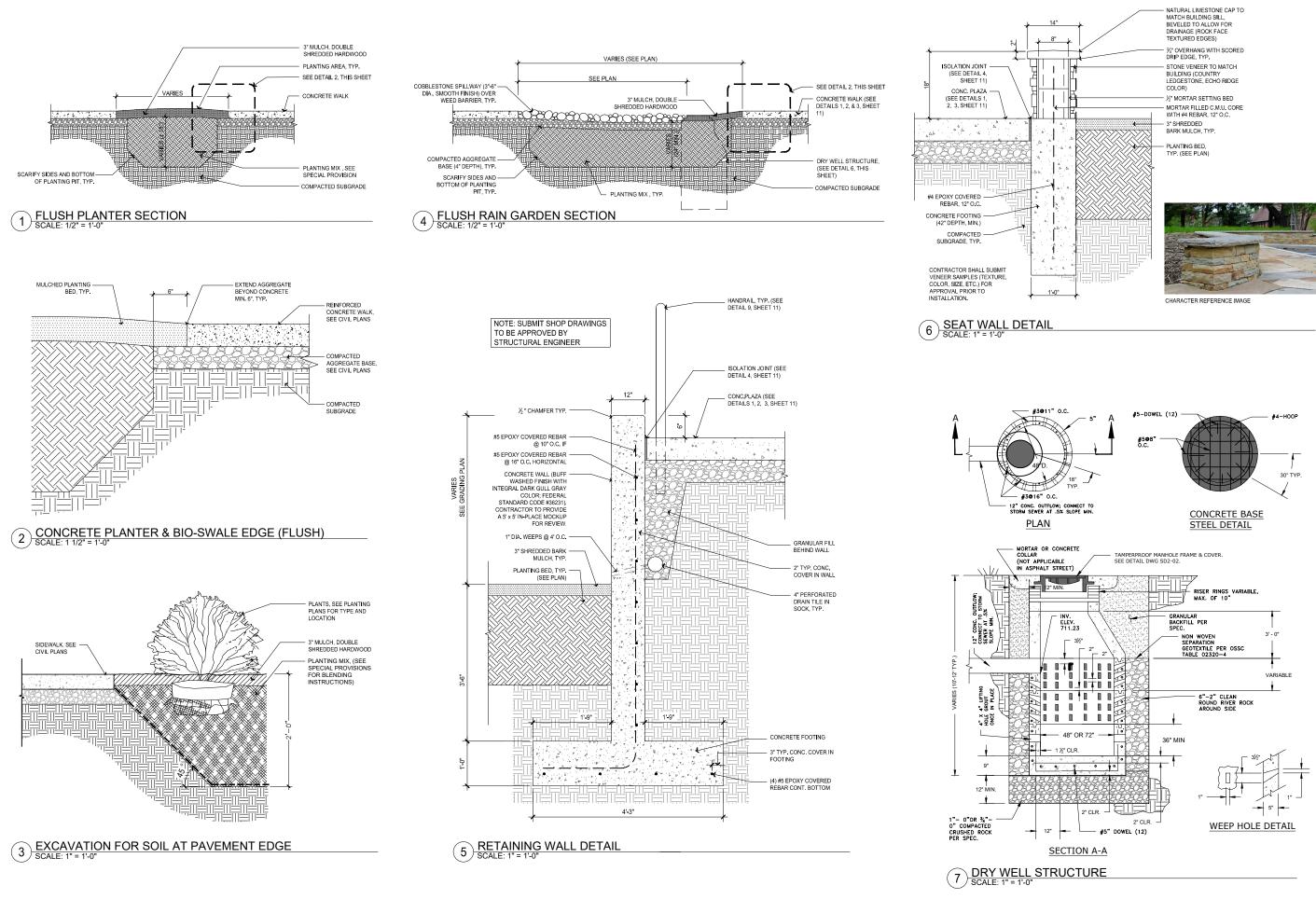
Know what's below.

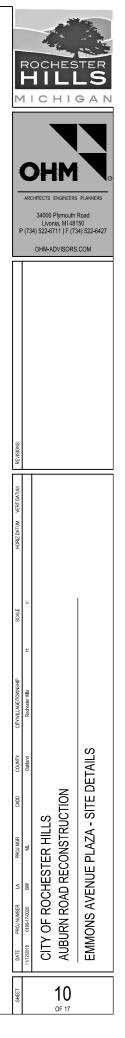


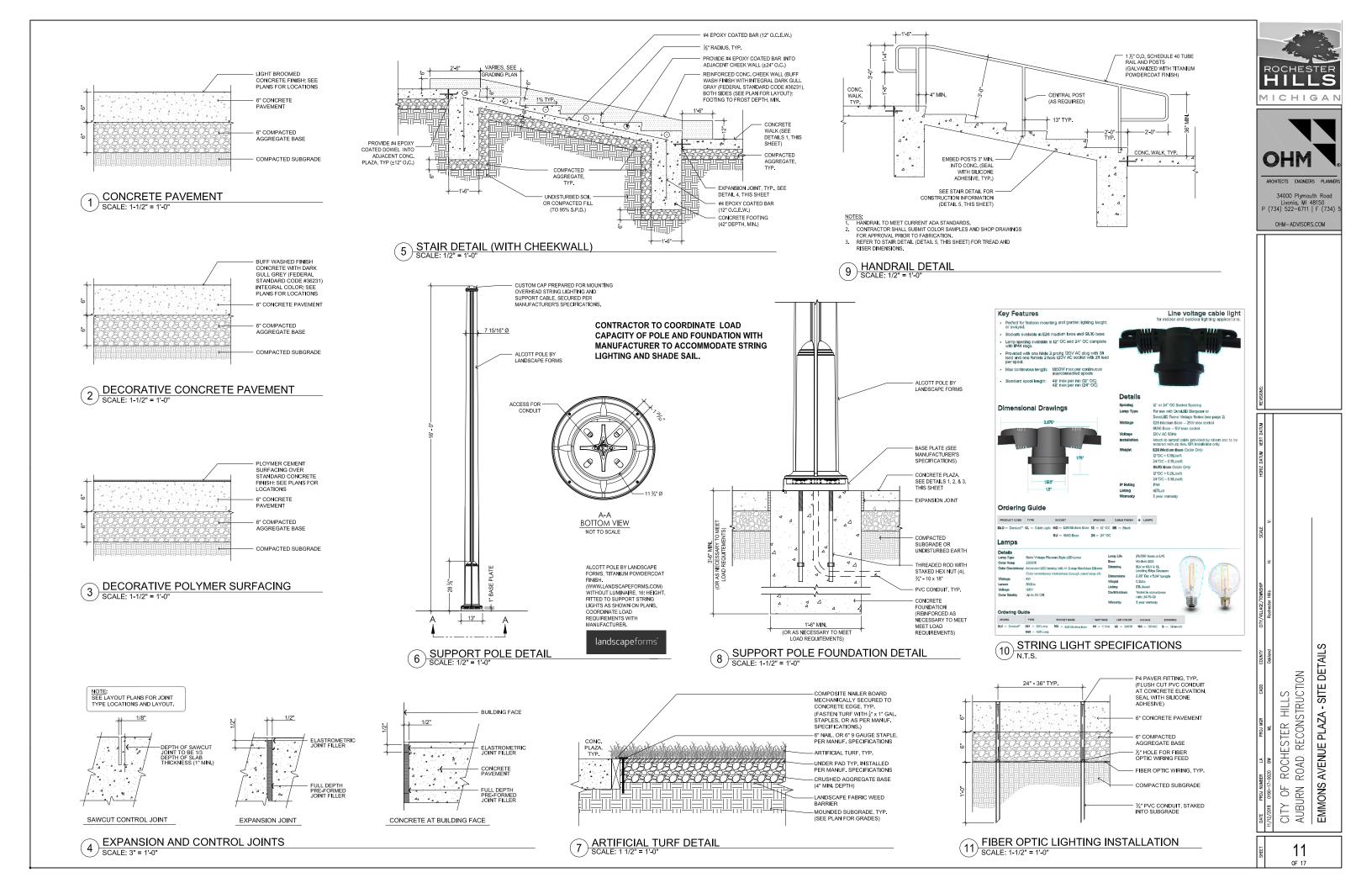


AREA TO BE IRRIGATED

F	ROCHESTER HILLS MICHIGAN MICHIGAN OHMOLOGAN ARCHTECTS ENGINEERS PLANNERS J4000 Plymouth Road J4000 Plymouth Road J400 Plymouth Road J400 Plymouth Road J400 Plymouth Road J4000 Plymouth Road				
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PROJ MGR	ML	CITY OF ROCHESTER HILLS	AUBURN ROAD RECONSTRUCTION	EMMONS AVENUE PLAZA - IRRIGATION PLAN	
LA	BW	CHEST	AD REC	'ENUE	
DATE PROJ NUMBER LA	11/12/2018 0190-17-0020 BW	JF RO(	RN RO4	VNS AV	
	/2018	CITY	AUBU	EMMC	
DATE	11/12				

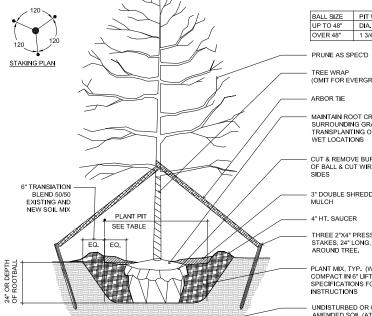


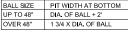




#### NOTES

- 1. CONTRACTOR SHALL ASSURE
- CONTRACTOR SHALL ASSORE PERCOLATION OF ALL PLANTING PTS PRIOR TO INSTALLATION.
   FINAL TREE STAKING PLACEMENT TO BE APPROVED BY OWNER.
   DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEM OR DE DEAD BROKESS COME BROKEN OR DEAD BRANCHES. SOME BROKEN OR DEAD BRANCHES, SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED, HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN,
- 4. MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHEN EVER
- PAGE NORTH AT THE SITE WHEN EVER POSSIBLE. IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN (8 IN.) INTO PLANTING HOLE.
- REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM TOP HALF OF ROOTBALL.
   SET TREE PLUMB IN PLANTING PIT.
   EACH TREE MUST BE PLANTED SUCH
   THAT THE TRUNK FLAPE IN URDER AT
- THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.





(OMIT FOR EVERGREENS)

MAINTAIN ROOT CROWN 2" ABOVE SURROUNDING GRADE AFTER TRANSPLANTING OR PLANT HIGH AT

CUT & REMOVE BURLAP FROM TOP 1/3 OF BALL & CUT WIRE BASKETS ON ALL

3" DOUBLE SHREDDED HARDWOOD MULCH

THREE 2"X4" PRESSURE TREATED PINE STAKES, 24" LONG, SPACE EVENLY AROUND TREE.

PLANT MIX, TYP. (WATER & LIGHTLY COMPACT IN 6" LIFTS). SEE SPECIFICATIONS FOR BLENDING

UNDISTURBED OR COMPACTED AMENDED SOIL (AT FILL LOCATIONS)

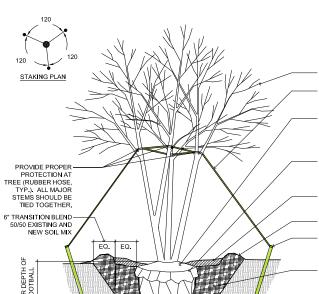
### 1 TREE PLANTING SCALE: 1/2" = 1'-0"

NOTES

- 1. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
- PRIOR TO INSTALLATION. 2. FINAL TREE STAKING PLACEMENT TO BE APPROVED BY OWNER. 3. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER. LUMBS. CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES, SOME BROKEN OR DEAD BRANCHES, SOME BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY ALSO BE PRUNED, HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- CROWN. 4. MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE. 5. IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL CUT THE MARCH ACCES
- THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN (8" MIN.) INTO
- PLANTING HOLE REMOVE ALL TWINE, ROPE, WIRE, AND BURLAP FROM TOP HALF OF ROOTBALL. SET TREE PLUMB IN PLANTING PIT.
- SET TREE PLUMB IN PLANTING PT. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

2 MULTI-STEMMED TREE PLANTING SCALE: 1/2" = 1'-0"

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MAINTAIN ROOT CROWN 2" ABOVE SURROUNDING GRADE AFTER TRANSPLANTING OR PLANT HIGH AT WET LOCATIONS

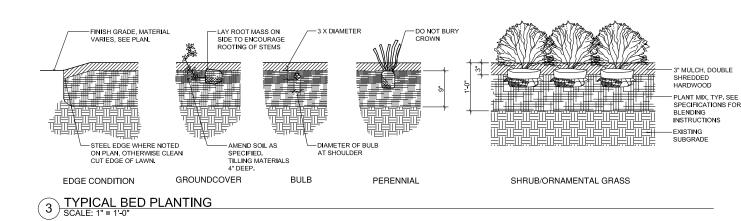
CUT & REMOVE BURLAP FROM TOP 1/3 OF BALL & CUT WIRE BASKETS ON ALL SIDES

3" DOUBLE SHREDDED HARDWOOD MULCH

4" HT. SAUCER

THREE 2"X4" PRESSURE TREATED PINE STAKES SPACED EVENLY AROUND TREE (SEE DIAGRAM).

- PLANT MIX, TYP. (WATER & LIGHTLY COMPACT IN 6" LIFTS). SEE SPECIFICATIONS FOR BLENDING INSTRUCTIONS
- UNDISTURBED OR COMPACTED AMENDED SOIL (AT FILL LOCATIONS)



PLANT PIT (SEE TABLE)

 MARK I HE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
 IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOD BALL, CUT THE WIRE BASKET IN FOUR PLACES AND FOLD DOWN (8" MIN.) INTO PLANTING HOLF. NEW SOIL MIX REMOVE ALL TWINE, SISAL, ROPE, WIRE, AND BURLAP FROM TOP HALF OF ROOTBALL. 8. SET TREE PLUMB IN PLANTING PIT. >iti 5. SET TREE PLUMB IN PLANTING PT. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT VISIBLE SHALL BE REJECTED. DO NOT EQ. COVER THE TOP OF THE ROOT BALL WITH SOIL. PLANT PIT (SEE TABLE) (4) EVERGREEN TREE PLANTING SCALE: 1/2" = 1'-0" 5 SHRUB / ORNAMENTAL GRASS PLANTING NOTES:

STAKING PLAN

PROVIDE PROPER PROTECTION AT

TREE (RUBBER HOSE, TYP.)

6" TRANSITION

EXISTING AND

**BLEND 50/50** 



NOTES:

LEADER.

CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
 FINAL TREE STAKING PLACEMENT TO BE

3. STAKE ALL EVERGREEN TREES UNDER

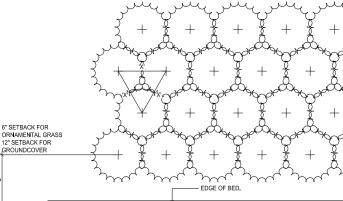
OVER. 4. PRUNE ONLY DEAD AND BROKEN BRANCHES. NEVER CUT THE CENTRAL

5 MARK THE NORTH SIDE OF THE TREE IN

12' TALL. GUY WIRES TO BE USED ON ALL EVERGREEN TREES 12' TALL AND

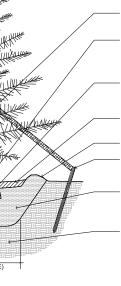
APPROVED BY ENGINEER.







PLANTING PIT TABLE				
BALL SIZE	BALL SIZE PIT WIDTH AT BOTTOM			
UP TO 48"	DIA. OF BALL + 2'			
OVER 48"	1 3/4 X DIA. OF BALL			



ARBOR TIE/ GUY WIRES FOR SUPPORT, LOOSELY TIED TO ALLOW FOR NATURAL SWAY

- MAINTAIN ROOT CROWN 2" ABOVE SURROUNDING GRADE AFTER TRANSPLANTING OR PLANT HIGH AT WET LOCATIONS, CUT AWAY ALL NYLON CORDS.

CUT & REMOVE BURLAP FROM TOP 1/3 OF BALL & CUT WIRE BASKETS ON ALL SIDES

4" SHREDDED HARDWOOD MULCH (OR AS PER PLAN)

SOIL SAUCER (4-6" HT. TYP.)

THREE 2"X4" PRESSURE TREATED PINE STAKES, 24" LONG, SPACED EVENLY AROUND TREE (SEE DIAGRAM).

PLANT MIX, TYP. (WATER & LIGHTLY COMPACT IN 6" LIFTS). SEE SPECIFICATIONS FOR BLENDING INSTRUCTIONS

UNDISTURBED OR COMPACTED AMENDED SOIL (AT FILL LOCATIONS)

- PLACE PLANTS PERPENDICULAR TO GRADE DO NOT FILL SOIL OVER TOP OF ROOT BALL
- 3" MULCH, DOUBLE SHREDDED HARDWOOD

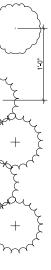
SOIL BERM TO HOLD WATER. PROVIDE CUT EDGE FOR MULCH WHEN ADJACENT TO PAVEMENT AND TURF. PULL MULCH AWAY FROM SHRUB

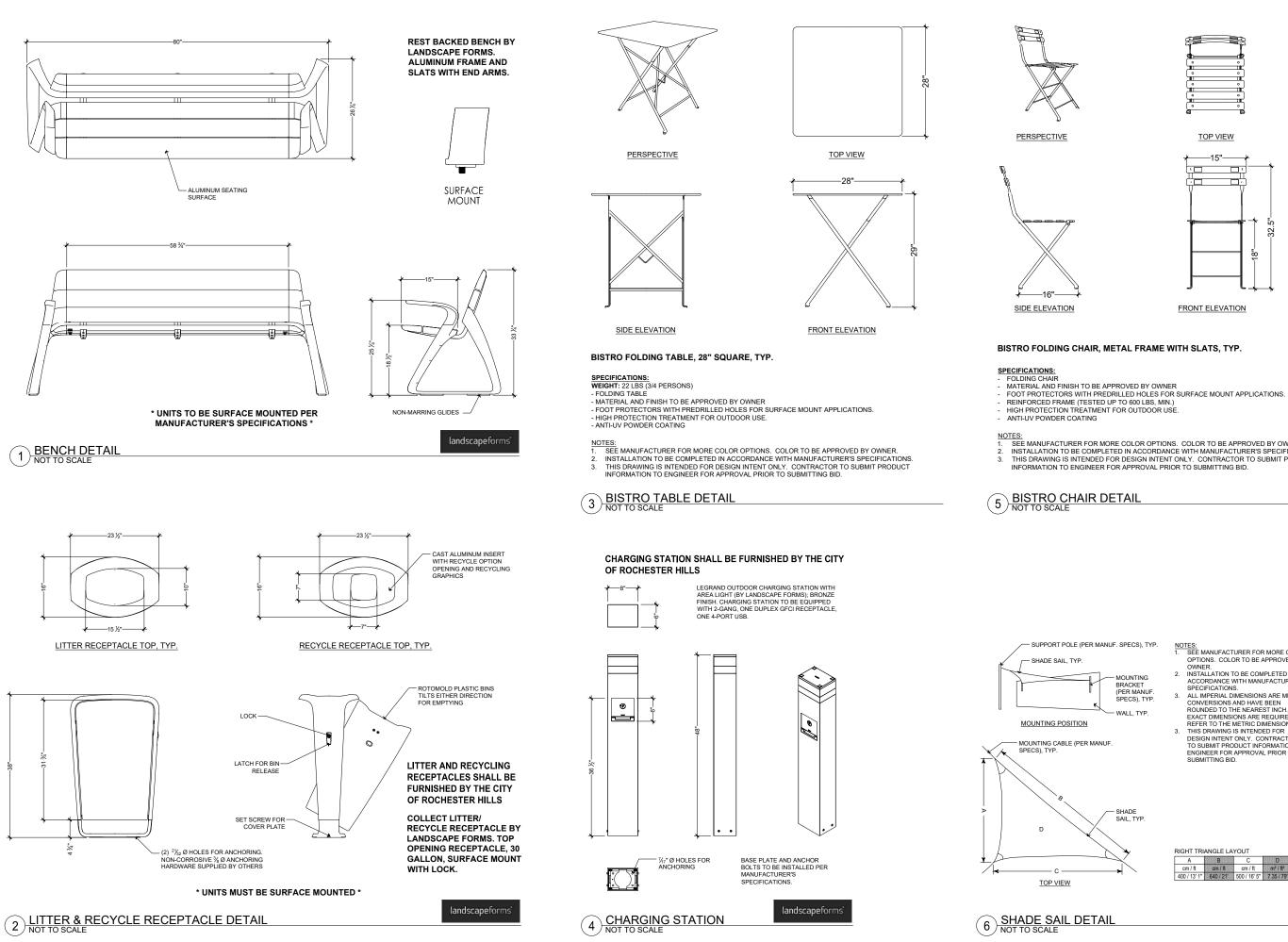
FINISHED GRADE

PLANT MIX, TYP. SEE SPECIFICATIONS FOR BLENDING INSTRUCTIONS

ROLL BACK AND CUT AWAY BURLAP AND TWINE DOWN THE SIDE.

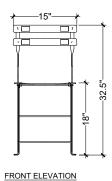
UNDISTURBED OR COMPACTED AMENDED SOIL (AT FILL LOCATIONS)







TOP VIEW



NOTES: 1. SEE MANUFACTURER FOR MORE COLOR OPTIONS. COLOR TO BE APPROVED BY OWNER. 2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. THIS DRAWING IS INTENDED FOR DESIGN INTENT ONLY. CONTRACTOR TO SUBMIT PRODUCT INFORMATION TO ENGINEER FOR APPROVAL PRIOR TO SUBMITTING BID.

- NOTES: 1. SEE MANUFACTURER FOR MORE COLOR OPTIONS. COLOR TO BE APPROVED BY OWNER
- 2. INSTALLATION TO BE COMPLETED IN
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL IMPERIAL DIMENSIONS ARE METRIC CONVERSIONS AND HAVE BEEN ROUNDED TO THE NEAREST INCH. IF
- ROUNDED TO THE NEAREST INCH, IF EXACT DIMENSIONS ARE REQUIRED, REFER TO THE METRIC DIMENSIONS. THIS DRAWING IS INTENDED FOR DESIGN INTENT ONLY. CONTRACTOR TO SUBMIT PRODUCT INFORMATION TO ENGINEER FOR APPROVAL PRIOR TO SUBMITTING BID. SUBMITTING BID.

RIGHT TRI	ANGLE LA	YOUT	
A	B	С	D
cm / ft	cm / ft	cm / ft	m² / ft²
400 / 13' 1"	640 / 21'	500 / 16' 5"	7.35 / 79'

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REVISIONS				
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CITY/VILLAGE/TO/WNSHIP	Rochester Hills			EMMONS AVENUE PLAZA - SITE FURNISHING DETAILS
COUNTY	Oakland			JRNISH
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PROJ MGR	ML	CITY OF ROCHESTER HILLS	AUBURN ROAD RECONSTRUCTION	- AZA -
Ч	BW	CHEST	<b>ND REC</b>	ENUE
DATE PROJ NUMBER LA	1/12/2018 0190-17-0020 BW	OF ROC	RN R0≜	VNS AV
DATE	11/12/2018	CITY	AUBU	EMMG
SHEET			<b>13</b> OF 17	

