



COMMUNITY DEVELOPMENT • 115 Executive Parkway, Suite 400 • Hudson, Ohio 44236 • (330) 342-1790

DATE: June 8, 2016

TO: City of Hudson Planning Commission for June 13, 2016 Meeting

FROM: Greg Hannan, City Planner
Mark Richardson, Community Development Director

SUBJECT: Site Plan Review for Norton Road Trailhead Park for Summit County
Metroparks, PP#3009954

ZONING: District 8 Overlay – Hike Bike Senior Housing Overlay Zone

PC Case No: 2016-13

Project Introduction

Application has been received for the Norton Road Trailhead Park for the Summit County Metroparks Hike and Bike Trail. The proposed project includes a 15 space parking lot, landscaping, and a trail connection between The Summit County Hike and Bike Trail and Lawnmark Drive. The project is being completed by Redwood Communities, in coordination with Summit County Metroparks, as the public open space dedication for the Trails of Hudson development.

Adjacent Development: South of the subject property is residential property within the City of Stow. West of the property is the Hike and Bike Trail and additional property within District 8. North of the property is the Trails of Hudson development. To the east of the subject property is a residentially used property at 1433 Norton Road.

The following information is attached to this report:

1. Site plan submittal from TGC Engineering, Inc. received June 2, 2016.
2. Preliminary Comment Letter based on the May 2, 2016 submittal, prepared by City Planner Greg Hannan, dated May 20, 2016.

Trails of Hudson Open Space Dedication

The 2011 approval for the Trails of Hudson development (Case No. 2011-36) required the public open space requirements to be met with a park dedication to the Summit County Metroparks and the development of a parking lot to service the adjacent Hike and Bike trail. The applicant transferred the open space parcel to the Summit County Metroparks in 2012 fulfilling the Phase I requirement. The trailhead park is required to be developed in conjunction with the Phase II base improvements.

The below table summarizes the dedication requirements which were established in 2012. At that time, the city accepted an estimate of cost for the trailhead park and stated a pathway connection to Lawnmark Drive and a sidewalk along Hudson Drive from Redwood Blvd to the Hike and Bike Trail would contribute toward the dedication requirements. An updated cost estimate is needed for the referenced items. Staff anticipates the referenced items will fully meet the open space dedication requirements of the Trails of Hudson development.

<u>Dedication Requirement</u>	<u>Acreage</u>	<u>Value</u>
Phase I dedication requirement	2.84 acres	\$134,900
Phase II dedication requirement	3.04 acres	\$150,480
Total dedication required	5.88 acres	\$285,380
<u>Dedication Proposed</u>		
Donated land	1.6215 acres	\$149,121
Trailhead parking lot estimate		\$106,068.50
Remaining funds to be applied toward the trail connection to Lawnmark Dr. and a sidewalk along Hudson Dr.		\$30,190.50
Total Dedication Proposed		\$285,380

Applicable District Regulations

Use: The proposed public park use is permitted by right.

Setbacks: Based on ongoing discussions with the applicant and Summit County Metroparks, staff anticipates the parking lot will be reduced to a 25 foot front setback from Norton Road to allow some additional separation between the parking lot and the trail/kiosk area.

Pedestrian Amenities: Staff suggests realigning the north-south trail connector eastward several feet to provide a direct alignment with the Norton Road crossing. The multi-purpose path along Norton Road depicted in the submittal is to be completed by the City of Hudson as part of the Darrow Road-Norton Road intersection improvements. Staff requests the submittal incorporate a sidewalk connection between Redwood Blvd and the Hike Bike Trail at Hudson Drive as discussed with the Trails of Hudson Phase I approval.

Applicable Zoning Development and Site Plan Standards, Section 1207

Staff compared the proposal to zoning development and site plan standards. We comment on the following:

Landscaping: Bufferyard B has been proposed adjacent to the single family residential unit to the east. Perimeter landscaping is applicable between the parking lot and the Norton Road right of way. A landscape plan has been prepared by TGC Engineering LLC to demonstrate compliance with the applicable standards. Summit County Metroparks and the applicant are reviewing the plan details and may expand the design to incorporate additional shade trees and natural no-mow meadow plantings.

Engineering: City Engineer Thom Sheridan is completing a review of the plan submittal. Mr. Sheridan notes the applicant must review the stormwater management calculations from the Trails of Hudson project to determine if the stormwater needs for the parking lot have been accommodated. If stormwater management is needed, the applicant intends to install a bioswale between the parking lot and the north-south trail segment. The City of Hudson, Summit Metroparks, and the applicant are also coordinating several design details related to the adjacent Norton Road infrastructure project and the operational needs of the Metroparks.

Findings:

The staff finds that the application complies with the purposes and intent of the code and community plans, regulations that minimize land disturbance and protect environmental features, and other applicable development regulations as specified in Section 1204.04 except as discussed above and recommended below.

Required PC Action, Chapter 1203.09(g)(3)

The PC shall consider the development application, the staff report, and then take final action. PC shall approve, approve with conditions, or deny the application based on its compliance with the appropriate review standards. All decisions of the Commission shall be based on findings of fact related to the relevant standards of the Code.

Recommendation

Approve the application for the Norton Road Trailhead Park for Summit Metroparks, Permeant Parcel #3009954 per Case No. 2014-13 according to plans received June 2, 2016 with the following conditions:

1. Submit an updated cost estimate for the proposed improvements to confirm the open space dedication obligations have been met.
2. Incorporate a sidewalk connection along Hudson Drive between Redwood Blvd and the Hike and Bike Trail.
3. Subject to the review and approval of City Engineer Thom Sheridan.
4. The applicant shall install silt fencing and/or polypropylene fencing to mark and protect the approved clearing limits, which shall be maintained by the applicant.
5. Satisfaction of the above conditions prior to scheduling of a preconstruction meeting with City Officials and no clearing or construction of any kind shall commence prior to the issuance of a Zoning Certificate.

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HUDSON 

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May 20, 2016

RE: PC 2016-13 Trailhead Park for Metroparks Serving Summit County

Ms. Patricia Rakoci-

Thank you for your submission of the site plan application for the proposed trailhead park for Metroparks Serving Summit County. The application has been scheduled for the Planning Commission (PC) meeting of June 13, 2016. In preparation for such, I am forwarding preliminary comments related to compliance with the Land Development Code (LDC). In addition to these comments, engineering design related comments will be forwarded under separate cover. Our goal is to provide you an opportunity to respond to the below comments by June 2, 2016. We will revise the comments accordingly for the staff report scheduled to be issued on June 8, 2016. Additionally I am available to meet and review the comments at your convenience.

Chapter 1205.11 District 8 Hike/Bike Senior Housing Overlay

Use: The proposed public park use is permitted by right.

Setbacks: The proposed parking lot setbacks are acceptable.

Pedestrian Amenities: Sidewalks are required abutting a public street and provisions shall be made for non-vehicular circulation systems including pathways and bikeways. The applicant has proposed a multi-purpose path to connect Lawnmark Drive to the Hike and Bike Trail. Staff suggests realigning the trail connection as depicted on the attached page. The depicted multi-purpose path along Norton Road is to be completed by the City of Hudson and should be labeled as such.

Section 1207 Zoning Development and Site Plan Standards

Wetland/Stream Corridor Protection

The applicant submitted a wetland delineation in September of 2011 as part of the adjacent Trails of Hudson development. No wetlands were identified within or adjacent to the development area.

Landscaping/Buffering

- a) Bufferyards: Bufferyard B is applicable to the adjacent single family residential unit to the east and the trails of Hudson development to the north. This bufferyard has already been proposed to the north as part of the Trails of Hudson development; however, it is needed to the east.
- b) Interior island landscaping: As the proposed parking lot contains less than 20 spaces interior landscaping is not required.
- c) Perimeter landscaping at parking lot: Staff notes the proposed perimeter landscaping is appropriate along the east side of the lot to screen from the adjacent development; however, is not required along the west side adjacent to the trail. Some of the unneeded island and perimeter landscaping could be relocated to screen the lot from east-bound traffic on Norton Road. Perimeter landscaping should be added to screen the parking lot from Norton Road.

Off-Street Parking and Loading Requirements

- a) Stall dimensions: The parking stall depth can be reduced to 19 feet.
- b) Maneuverability area: The northern end of the parking area contains a back up area abutting the trail. This connection should be revised to create a lawn/landscaped area between the two with only a 10 foot wide path connection and a bollard to restrict vehicle access (see attached).

Traffic Analysis: Engineering Department will review applicable sightlines and access.

Stormwater Management: A separate correspondence will be issued by the Engineering Department.

Exterior Lighting: Exterior lighting has not been proposed for the parking lot.

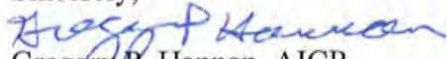
City Arborist Comments

Below are comments received from Public Works Superintendent-City Arborist Tom Munn:

- a) Landscape details listed on Sheet C10 specify sugar maple (highly salt sensitive) and viburnum (subject to defoliation by leaf beetle). I recommend substitution of Autumn Blaze or October Glory maple, and Miss Kim lilac, respectively, or equivalents.
- b) Siting the shade trees closer to the outer perimeter of the parking lot will provide more root space, and healthier and larger shade trees.
- c) Additional shade trees along the parking lot edges in lieu of shrubs would provide a shaded, cool car for hikers to return to after exercising.

Please contact me for any assistance I can provide.

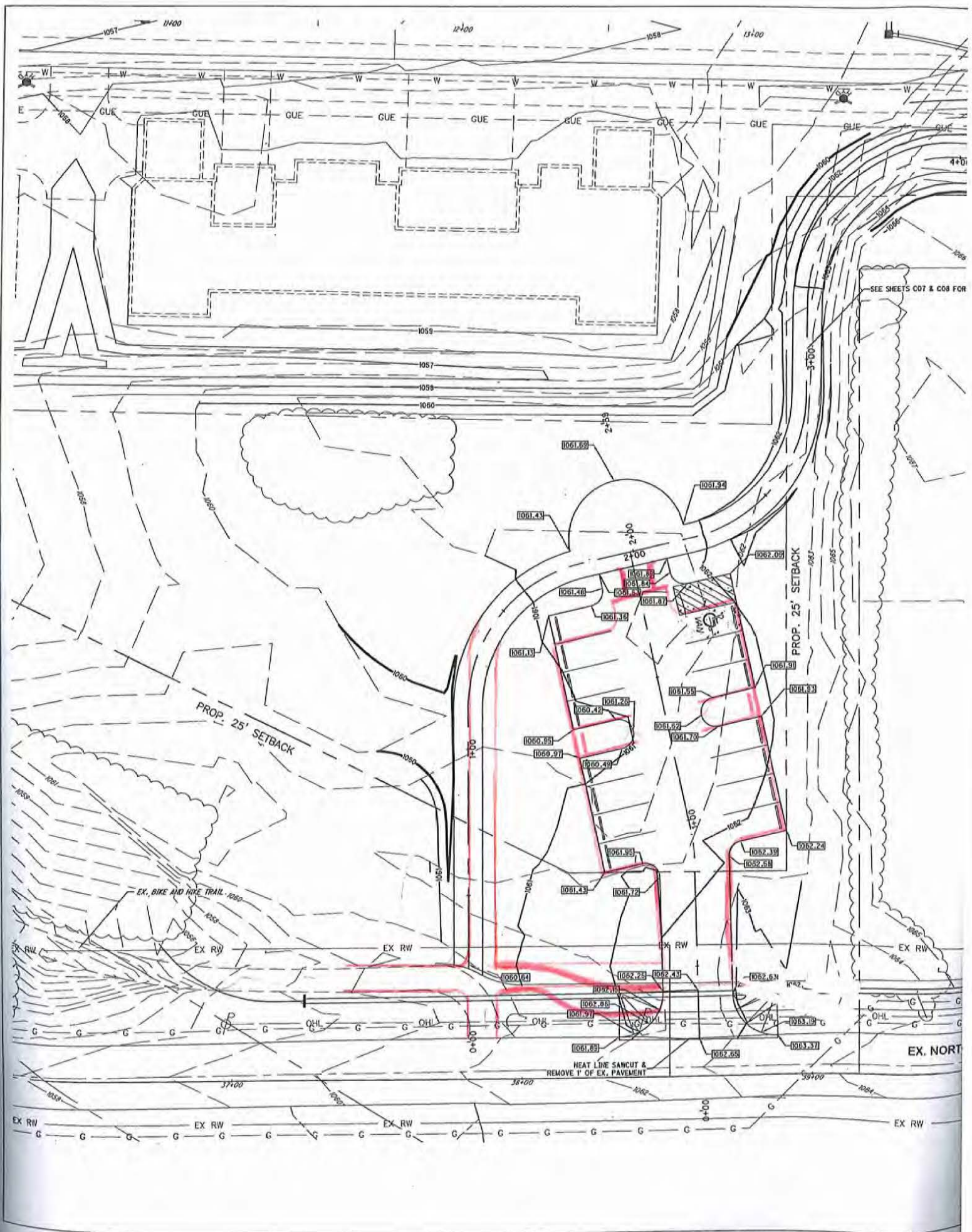
Sincerely,



Gregory P. Hannan, AICP

City Planner

CC: Mark Richardson, Community Development Director
Thom Sheridan, City Engineer
Chris Papp, Asst City Engineer



GENERAL NOTES:

1. THE FOLLOWING NOTES APPLY TO THE TRAILHEAD CONSTRUCTION AND ALL WORK ON METRO PARKS PROPERTY. REFER TO NOTES ON SHEET C01 FOR WORK WITHIN R/W.
2. THE CONTRACTOR SHALL KEEP A LEGIBLE AND CURRENT COPY OF THE APPROVED PLANS AND BID SPECIFICATIONS ON SITE AT ALL TIMES.
3. THE PROJECT MANUAL AND CONTRACT DRAWINGS SHALL GOVERN THIS IMPROVEMENT. WITHIN THIS PROJECT ARE REFERENCES TO THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIALS SPECIFICATIONS (2013 EDITION). THESE REFERENCES TO ODOT SPECIFICATIONS SHALL GOVERN THIS IMPROVEMENT WHERE NOTED ON THE CONTRACT DRAWINGS OR REFERENCED IN THE TECHNICAL SPECIFICATIONS. OTHERWISE THE PROJECT MANUAL AND CONTRACT DRAWINGS WILL PREVAIL.
4. UNLESS STATED IN THE PLANS OR PROJECT MANUAL, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS, INCLUDING SAFETY REQUIREMENTS. CONTRACTOR SHALL EXERCISE PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF ALL PERSONS, INCLUDING EMPLOYEES, PARK USERS AND PROPERTY.
5. UNLESS STATED IN THE PLANS OR PROJECT MANUAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PAYING ALL FEES, SCHEDULING AND OBTAINING ALL INSPECTIONS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR SHOP DRAWING SUBMITTALS TO THE NECESSARY AGENCIES FOR PERMITS AND APPROVALS.
6. ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR. THE COST OF SAME SHALL BE INCLUDED IN UNIT PRICES FOR THE VARIOUS RELATED ITEMS.
7. ANY MATERIAL OR ITEM OF WORK, WHICH HAS NO SPECIFICATION, SHALL BE APPROVED BY METRO PARKS. COST SHALL BE INCLUDED IN UNIT PRICES FOR THE VARIOUS RELATED ITEMS.
8. ANY DEFECTS IN CONSTRUCTION, INCLUDING MATERIALS OR WORKMANSHIP, SHALL BE CORRECTED BY REMOVAL AND REPLACEMENT OR OTHER APPROVED METHODS PRIOR TO ACCEPTANCE BY THE METRO PARKS. THE COST SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
9. ANY MODIFICATIONS TO THE WORK AS SHOWN ON THESE APPROVED PLANS SHALL HAVE PRIOR WRITTEN APPROVAL OF THE METRO PARKS PRIOR TO PERFORMING THE WORK.
10. NORMAL WORKING HOURS ARE BETWEEN 7:00 A.M. AND 3:30 P.M. MONDAY THROUGH FRIDAY EXCLUSIVE OF HOLIDAYS. ANY WORK BEYOND THESE HOURS AND DAYS WILL ONLY BE ALLOWED UPON EXPLICIT APPROVAL OF METRO PARKS.
11. MATERIALS AND EQUIPMENT SHALL NOT BE STORED IN PUBLIC RIGHT OF WAYS OR WITHIN THE DRIP LINE OF EXISTING TREES TO REMAIN. ON-SITE STORAGE AREAS, NOT NOTED ON THE PLANS, MUST BE APPROVED BY METRO PARKS PRIOR TO PLACING ANY MATERIAL OR EQUIPMENT.
12. THE CONTRACTOR, CONTRACTOR'S EMPLOYEES, SUB-CONTRACTORS AND OTHER PERSONNEL AT THE SITE SHALL ACT APPROPRIATELY AND SHALL NOT USE PROFANE AND/OR OFFENSIVE LANGUAGE. THE CONTRACTOR IS RESPONSIBLE FOR THE BEHAVIOR OF THEIR EMPLOYEES AND SUBCONTRACTORS.
13. ALL EXCESS MATERIALS, SUCH AS BUT NOT LIMITED TO TOPSOIL, EXCAVATION, PIPE ETC., SHALL BE HAULED FROM THE SITE AND PROPERLY DISPOSED OF LEGALLY. NO PAYMENT WILL BE MADE FOR HAULING EXCESS MATERIALS FROM THE SITE. PAYMENT FOR HAULING AND DISPOSING OF EXCESS MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THE RELATED ITEM.
14. CONTRACTOR SHALL EMPLOY AN EXPERIENCED AND QUALIFIED SUPERINTENDENT, SATISFACTORY TO METRO PARKS. THE SUPERINTENDENT MUST BE IN ATTENDANCE AT THE JOB SITE AT ALL TIMES DURING THE PROGRESS OF WORK. THE SUPERINTENDENT SHALL NOT BE CHANGED WITHOUT THE CONSENT OF METRO PARKS.

PROTECTION AND RESTORATION OF PROPERTY:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE PROPERTY. ALL ROAD SURFACES, EASEMENTS, OR RIGHT-OF-WAY DISTURBED BY THE CONSTRUCTION OF ANY PART OF THESE IMPROVEMENTS ARE TO BE RESTORED AS DIRECTED BY METRO PARKS OR THE LOCAL GOVERNING AGENCY.
2. ALL DISTURBED STORM SEWERS AND/OR APPURTENANCES, SIGNS, GUARD RAILING, MAIL AND/OR PAPER BOXES, DRIVE CULVERTS, FENCES, TREES, LANDSCAPING, OR OTHER ITEMS DISTURBED BY THE CONSTRUCTION SHALL BE RESTORED OR REPAIRED TO THE AT LEAST THE BEFORE-CONSTRUCTION CONDITION ACCORDING TO LOCAL OR METRO PARKS STANDARDS.
3. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES TO THE PROJECT WORK LIMITS SHOWN ON THE DRAWINGS AND SHALL NOT TRESPASS UPON PRIVATE PROPERTY.
4. CONTRACTOR SHALL KEEP ALL STREETS, LANES, AND PARKING AREAS ADJACENT TO THE PROJECT AREA CLEAN AND FREE FROM ANY DEBRIS, MUD AND/OR OTHER CONSTRUCTION EQUIPMENT AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL REMOVE ANY DEBRIS AND MUD FROM PUBLIC STREETS AND METRO PARKS ROADS, TRAIL OR PARKING LOTS AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE METRO PARKS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY METRO PARKS OR IT'S REPRESENTATIVE IF SUSPECTED HAZARDOUS MATERIAL, MATERIALS THAT MAY CREATE A HEALTH RISK, ARCHEOLOGICAL ARTIFACTS OR BONES ARE DISCOVERED ON SITE.
6. AREAS BEYOND THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED INCLUDING THE STOCKPILE OF ANY MATERIALS OR CONSTRUCTION TRAFFIC.
7. ALL DISTURBED AREAS SHALL RECEIVE 4" OF TOPSOIL AND BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFIED ON THE PLANS. ANY AREAS BEYOND THE CONSTRUCTION LIMITS, SHOWN ON THE PLANS, DISTURBED BY THE CONTRACTOR, SHALL BE RESTORED AT NO EXPENSE TO THE METRO PARKS.
8. SEED MIXTURES, PLANTINGS AND OTHER PROPOSED VEGETATION SHALL CONFORM TO THE SPECIFICATIONS NOTED ON THE PLANS AND NOTES.

SURVEY/LAYOUT:

1. DO NOT SCALE FROM THESE DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO FACE OF CURB AND EDGE OF PAVEMENT. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON THE GROUND AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE METRO PARKS.
2. THE CONSTRUCTION STAKING OF ALL SITE IMPROVEMENTS, INCLUDING THE LIMITS OF CLEARING AND GRADING, SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A SURVEYOR LICENSED IN THE STATE OF OHIO.
3. PRECISE LAYOUT SHALL BE STAKED AND APPROVED BY THE METRO PARKS 48 HOURS (2 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION. GPS GUIDED CONSTRUCTION EQUIPMENT MAY BE USED ONLY IF APPROVED BY METRO PARKS. IF GPS GUIDED EQUIPMENT IS USED, METRO PARKS MAY REQUIRE CONTRACTOR TO PROVIDE REFERENCE STAKES FOR INSPECTION PURPOSES. COST OF REFERENCE STAKES SHALL BE INCLUDED IN THE BID FOR THE RELATED ITEM.
4. THE CONSTRUCTION LIMITS SHALL BE FIELD STAKED AND ORANGE CONSTRUCTION FENCING OR SILT FENCE SHALL BE INSTALLED AS NOTED ON THE DRAWINGS. CONSTRUCTION FENCE SHALL PROTECT THE PUBLIC AND NATURAL RESOURCES FROM CONSTRUCTION ACTIVITY.
5. THE ELEVATION DATUM USED IS NAVD 1988. COORDINATES ARE BASED UPON OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 1983, GROUND.
6. THE CONTRACTOR SHALL REFERENCE ALL IRON PINS AND MONUMENTS IN DANGER OF DESTRUCTION BEFORE EXCAVATION. IF ANY PINS OR MONUMENTS ARE DISTURBED, A SURVEYOR, REGISTERED IN THE STATE OF OHIO, SHALL ACCURATELY RESET THEM AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OR REFERENCING OF THE PRIMARY CONTROL POINTS. ANY POINTS DISTURBED DURING CONSTRUCTION SHALL BE RESET IF NECESSARY BY THE CONTRACTOR'S SURVEYOR AT NO EXPENSE TO THE METRO PARKS.
7. THE CONTRACTOR SHALL PROVIDE INFORMATION NECESSARY TO DEVELOP A FINAL SET OF "AS-BUILT" PLANS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE A SET OF PLANS MARKED IN RED, CERTIFIED BY THE CONTRACTOR AS INCLUDING ALL FIELD CHANGES WHICH OCCURRED DURING CONSTRUCTION, AS DOCUMENTED BY ANY CHANGE ORDERS OR OTHERWISE. ALL COST SHALL BE INCLUDED WITH VARIOUS RELATED ITEMS. FINAL CONTRACT PAYMENT WILL NOT BE MADE UNTIL 75% AS-BUILT PLANS ARE RECEIVED AND APPROVED BY METRO PARKS. AS-BUILT DRAWINGS SHALL BE PREPARED BY A PROFESSIONAL SURVEYOR AND SHALL BE SUBMITTED IN PDF AND AUTOCAD FORMAT.

UTILITIES:

1. THE CONTRACTOR IS RESPONSIBLE, PRIOR TO CONSTRUCTION, TO DETERMINE THE ACTUAL LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL CALL OUPS AT (800) 362-2764 AND OGPUPS AT (800) 925-0988 TWO FULL WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL RELOCATE AND/OR PROVIDE PROTECTION OF UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL PAY THE TOTAL COST AND/OR CHARGE BY THE RESPECTIVE UTILITY COMPANY FOR THE RELOCATION AND/OR PROTECTION OF THE UTILITIES, WHICH COST SHALL BE INCLUDED IN THE BID FOR THE ITEM WHICH NECESSITATED THE RELOCATION AND/OR PROTECTION.
3. SEE SHEET C01 FOR ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.
- ~~4. THE LOCATION OF EXISTING UTILITIES AND STRUCTURES SHOWN ON THE PLANS ARE BASED ON A SURVEY PROVIDED BY:
--XX-ADD-CONSULTANT--~~
5. THE METRO PARKS REPRESENTATIVE AND METRO PARKS ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.

EARTHWORK:

1. NUCLEAR COMPACTION TESTING SHALL BE REQUIRED FOR ALL FILL AREAS OVER TWO FEET (2') IN DEPTH, AT 6" LIFTS PER ASTM A-1557, 95% MODIFIED. COST OF TESTING SHALL BE PAID BY THE CONTRACT AND INCLUDED IN THE RELATED PAY ITEMS UNLESS SPECIFIED OTHERWISE IN THE PLANS OR PROJECT MANUAL.
2. NO BLASTING WILL BE PERMITTED ON THIS PROJECT.
3. METRO PARK'S REPRESENTATIVE SHALL APPROVE ROUGH GRADING PRIOR TO FINISH GRADING, TOPSOIL PLACEMENT AND SEEDING.
4. MAINTAIN UNIFORM AND POSITIVE SLOPES ON ALL RE-GRADED SURFACES.
- ~~5. GEOTECHNICAL INVESTIGATIONS HAVE BEEN PREPARED BY ---, DATED -- AND ARE INCLUDED IN THE PROJECT MANUAL.~~

MAINTENANCE OF TRAFFIC:

1. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC AS PER ODOT ITEM 614.
2. SAFE VEHICULAR, PEDESTRIAN AND/OR BICYCLE TRAFFIC SHALL BE MAINTAINED BY THE CONTRACTOR. ROADS, TRAILS AND PARKING AREAS SHALL NOT BE CLOSED UNLESS OTHERWISE SHOWN ON THE PLANS. CONTRACTOR SHALL INSTALL APPROPRIATE BARRIERS AND SIGNAGE TO MAINTAIN SAFE VEHICULAR, PEDESTRIAN AND BICYCLE TRAFFIC. PAYMENT FOR BARRIERS AND SIGNAGE SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTENANCE OF TRAFFIC.

WETLANDS/STREAM AVOIDANCE:

1. NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES.

PAVING:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PLANT TICKETS FOR ALL MATERIALS DELIVERED TO THE SITE. PLANT TICKETS MUST SHOW NET QUANTITY OF DELIVERED MATERIAL. MATERIAL DELIVERED OR PLACED WITHOUT PLANT TICKETS SHALL BE REMOVED AND PROPERLY DISPOSED AT THE EXPENSE OF THE CONTRACTOR.
2. ALL PAVING MATERIAL MUST BE PROVIDED BY ODOT CERTIFIED SUPPLIER. WRITTEN PROOF SHALL BE REQUIRED UPON DELIVERY OF MATERIALS. THE JOB MIX FORMULA (JMF) MUST BE SUBMITTED TO, AND APPROVED BY METRO PARKS PRIOR TO SCHEDULING A PRECONSTRUCTION MEETING.
3. MEASUREMENT AND PAYMENT FOR ALL PAVING MATERIALS, INCLUDING ASPHALT AND AGGREGATE BASE, SHALL BE FOR THE ACCEPTED QUANTITIES, COMPLETE AND IN PLACE. CONTRACTOR MAY NOT PLACE SPOIL MATERIAL ON METRO PARKS PROPERTY. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF SPOILS AND EXCESS MATERIALS FROM THE SITE.

DRAINAGE:

1. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE BY ROUTING DRAINAGE FLOWS THAT ARE INTERRUPTED BY CONSTRUCTION.
2. WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.
3. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE CONTRACTOR SHALL NOTIFY THE METRO PARKS BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

BEST MANAGEMENT PRACTICES:

1. THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACT ON THE RECEIVING WATERS. IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.
2. THE OHIO EPA NOTICE OF INTENT WILL BE SUBMITTED TO OHIO EPA AT LEAST 21 DAYS PRIOR TO CONSTRUCTION.

OR

- AN NPDES PERMIT IS NOT REQUIRED FOR THIS PROJECT. HOWEVER, THE CONDITIONS OF A TYPICAL NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEM SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACT ON THE RECEIVING WATERS. IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.
3. TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING ADJACENT WETLANDS, STREAM CHANNELS AND OR DRAINAGE WAYS A QUANTITY OF ITEM 832 - TEMPORARY SEDIMENT AND EROSION CONTROL AND ITEM 832 - TEMPORARY CONSTRUCTION FENCE HAS BEEN ADDED TO THE GENERAL SUMMARY. THIS FILTER FABRIC FENCE AND THE TEMPORARY CONSTRUCTION FENCE ARE TO BE INSTALLED AT THE PROPOSED CONSTRUCTION LIMITS AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION.
 4. EROSION CONTROL MATS SHALL BE MADE OF ALL NATURAL MATERIALS. MATS SHALL HAVE NETTING MADE OF JUTE YARN OR OTHER BIODEGRADABLE NATURAL FIBER. MATS CONTAINING NETS MADE WITH POLYPROPYLENE, POLYMERIC PLASTIC OR OTHER NON-NATURAL MATERIALS SHALL NOT BE USED.

STORM SEWERS:

1. UNLESS NOTED ON THE DRAWINGS, ALL STORM SEWERS, BASIN OUTLETS AND BIO-SWALE/BASIN OUTLETS SHALL BE PVC-SD35; CORRUGATED HDPE PIPE WITH SMOOTH INTERIOR WALLS OR REINFORCED CONCRETE PIPE.
2. ALL STORM SEWERS SHALL BE PLACED OVER 4" OF BEDDING. BEDDING SHALL BE #57 CRUSHED LIMESTONE PLACED 12" ABOVE HDPE AND PVC PIPE AND TO THE CENTERLINE OF REINFORCED CONCRETE PIPE.
3. TRENCHES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF THE TRENCH WITH COMPACTED ODOT ITEM 304.

TESTING AND INSPECTION:

1. ALL COMPACTION, ASPHALT, CONCRETE AND OTHER PAVING MATERIALS SHALL BE TESTED AS REQUIRED BY THE ODOT 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE LOCAL REQUIREMENTS AS APPLICABLE. CONTRACTOR SHALL EMPLOY A CERTIFICATED INDEPENDENT TESTING COMPANY. COPIES OF ALL REPORTS AND TEST RESULTS SHALL BE SUBMITTED TO METRO PARKS. PAYMENT FOR TESTING SHALL BE INCLUDED IN THE LUMP SUM UNIT BID FOR TESTING AND INSPECTION.
2. ALL SANITARY SEWERS AND WATER LINES SHALL BE TESTED AND INSPECTED AS REQUIRED BY ALL LOCAL, STATE AND FEDERAL REGULATIONS. COPIES OF ALL REPORTS AND TEST RESULTS SHALL BE SUBMITTED TO METRO PARKS. PAYMENT FOR TESTING SHALL BE INCLUDED IN THE LUMP SUM UNIT BID FOR TESTING AND INSPECTION.

GENERAL NOTES-EARTHWORK

1. THE CONTRACTOR SHALL INSTALL ALL SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION AND OFF-SITE SILTATION BEFORE ANY CLEARING, GRUBBING OR EARTHWORK HAS BEGUN. REFERENCE STORM WATER POLLUTION PREVENTION PLAN FOR EROSION CONTROL STRUCTURES AND SPECIFICATIONS.
2. ALL TIMBER, LOGS, BRUSH, RUBBISH, AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED FROM THE ROAD CONSTRUCTION AREAS.
3. ANY UNSUITABLE SOILS ENCOUNTERED IN PROPOSED PAVEMENT AREAS WITHIN THE R/W AND TRAILHEAD SHALL BE REMOVED AND REPLACED WITH COMPACTED MATERIAL APPROVED BY THE CITY ENGINEER PER SECTION 7 OF HUDSON ENGINEERING STANDARDS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPORTATION OF ANY BORROW MATERIAL NECESSARY TO COMPLETE THE JOB.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ANY AND ALL EXCESS OR UNSUITABLE MATERIAL NOT USED ON THE JOB SITE.
6. FOR OFF-SITE BORROW AND/OR WASTE AREAS, THE CONTRACTOR OR DEVELOPER NEEDS TO SUPPLY SITE LOCATIONS AND OTHER INFORMATION INCLUDING OWNER, ADDRESS AND PHONE NUMBER AT THE CITY OF HUDSON PRE-CONSTRUCTION MEETING. A SEPARATE STORMWATER POLLUTION PREVENTION PLAN WILL NEED TO BE PRODUCED AND IMPLEMENTED PER LOCAL SOIL AND WATER REGULATIONS.
7. PROPOSED PAVEMENT AND BUILDING AREAS ARE TO BE PROOF-ROLLED PER SPECIFICATIONS IMMEDIATELY PRIOR TO CONSTRUCTION. ANY AREAS FOUND TO BE "SOFT" OR "SPONGY" ARE TO BE OVER-EXCAVATED TO FIRM EARTH AND BACKFILLED PER SPECIFICATIONS.
8. PROPOSED ELEVATIONS SHOWN SHALL NOT BE CHANGED WITHOUT APPROVAL OF THE CITY ENGINEER AND THE DESIGN ENGINEER.
9. UNLESS OTHERWISE INDICATED AT A SPECIFIC LOCATION, ALL FINISHED GRADES AT THE LIMITS OF NEW WORK ARE TO CONFORM TO AND MATCH EXISTING GRADES.
10. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN POSITIVE DRAINAGE TO CATCH BASINS OR SHEET FLOW OFF OF OPEN AREAS BY MEANS OF SITE GRADING.
11. EXCAVATIONS ARE TO BE PROMPTLY BACKFILLED AND GRADED SO AS TO ELIMINATE AND PREVENT PONDING ON THE SITE.

GENERAL NOTES-CONSTRUCTION

1. THIS PLAN HAS BEEN BASED UPON DIGITAL COUNTY ORTHOPHOTO INFORMATION AND TOPOGRAPHIC AND BOUNDARY SURVEY WORK PERFORMED BY TGC ENGINEERING, LLC.
2. THE CONTRACTOR SHALL KEEP ALL EXISTING STREETS CLEAN OF ALL SOIL, DIRT, MUD, AND DEBRIS. THE CONTRACTOR SHALL EXERCISE DILIGENT CARE TO PROTECT ALL TREES, SHRUBS, AND PLANTS NOT DESIGNATED FOR REMOVAL. CONTRACTOR SHALL REPLACE, TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE OWNER, ANY TREES, SHRUBS, PLANTS, AND OTHER OBJECTS REMOVED, DESTROYED, DISFIGURED, OR DAMAGED DUE TO CONTRACTOR'S NEGLIGENCE.
3. ALL TESTING AND INSPECTION FEES ARE THE RESPONSIBILITY OF THE DEVELOPER (OWNER).
4. WARNING DEVICES (ROAD CONSTRUCTION AHEAD ON NORTON ROAD, BOTH DIRECTIONS, TRUCKS ENTERING/ EXITING ROADWAY ONTO NORTON ROAD, FLAGGERS AHEAD, IF/ WHEN NEEDED) SHALL BE PROVIDED (AT THE DEVELOPER'S EXPENSE) AT THE INTERSECTION(S) OF EXISTING ROADS AND THE ROAD(S) UNDER CONSTRUCTION.
5. ADDITIONAL SOIL AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE CITY OF HUDSON ENGINEER DURING CONSTRUCTION AND THE TWO YEAR MAINTENANCE PERIOD.
6. THE DEVELOPER IS ULTIMATELY RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES ON THE SITE DURING ROAD CONSTRUCTION AND THROUGH THE TWO YEAR MAINTENANCE PERIOD. THE DEVELOPER MAY BE REQUIRED TO POST SUITABLE FINANCIAL GUARANTEES PRIOR TO PLAT APPROVAL TO ENSURE COMPLIANCE WITH THIS REQUIREMENT.
7. VISIBLE ABOVE-GROUND UTILITIES ON SITE HAVE BEEN SHOWN ON THE PLANS. THE CONTRACTOR IS TO FIELD-VERIFY ELEVATIONS, QUANTITIES AND LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LAWFUL MANNER.
9. ALL UNDERGROUND LINES ENCOUNTERED BY CONSTRUCTION ARE TO BE COMPLETELY RESTORED AT THE EXPENSE OF THE CONTRACTOR.
10. COST OF ANY SHEETING, DEWATERING OR FOUNDATIONS NECESSARY FOR CONSTRUCTION SHALL BE INCLUDED IN THE PRICE BID FOR RESPECTIVE ITEMS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND MATERIALS OF CONSTRUCTION TO COMPLETE PROPOSED CONSTRUCTION.
12. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (INCLUDING BUT NOT LIMITED TO CLEARING/GRUBBING, EARTHWORK, BUILDING CONSTRUCTION, STREET OPENINGS AND UTILITY CONNECTIONS) REQUIRED BY LOCAL AND STATE AGENCIES PRIOR TO CONSTRUCTION.
13. ANY APPARENT DISCREPANCIES OR QUESTIONS IN CONTRACT DOCUMENTS ARE TO BE BROUGHT TO THE ATTENTION OF THE DEVELOPER'S REPRESENTATIVES IMMEDIATELY.
14. THE DESIGN ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, PROCEDURES, TECHNIQUES OR SEQUENCES OF CONSTRUCTION NOT SPECIFIED HEREIN, NOR FOR THE SAFETY ON THE JOB SITE, NOR SHALL THE DESIGN ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
15. ANY MODIFICATIONS TO THE WORK SHOWN ON THE PLANS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE DEVELOPER AND THE REVIEWING AGENCIES.
16. ALL KNOWN ABOVE AND UNDERGROUND SERVICES HAVE BEEN NOTED ON THE DRAWINGS. THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR ANY SERVICES DAMAGED DURING THE CONSTRUCTION OF THE PROJECT WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE SERVICE AS SOON AS POSSIBLE AT THE CONTRACTOR'S OWN EXPENSE.

GENERAL NOTES - SITE PREPARATION

1. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
2. WHERE EXISTING ITEMS ARE SHOWN TO REMAIN, CARE SHOULD BE TAKEN TO INSURE PROTECTION OF THAT ITEM FROM DAMAGE. ANY ITEM DISTURBED BY CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN EXISTING AND TO THE SATISFACTION OF THE OWNER OF THE ITEM.
3. WHERE PROPOSED CONSTRUCTION IS TO BE WITHIN 10 FEET OF AN ADJACENT PROPERTY, THE PROPERTY LINE SHALL BE CLEARLY MARKED EVERY 50 FEET BY A PROFESSIONAL SURVEYOR AND CONSTRUCTION FENCE SHALL BE PLACED 2 FEET INSIDE THE MARKED PROPERTY LINE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION AND CLEARING OF ALL EXISTING ON-SITE FACILITIES NOTED TO BE REMOVED UNLESS OTHERWISE NOTED AS PART OF THE CONTRACT FOR GENERAL CONSTRUCTION. ALL STRUCTURES IDENTIFIED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BELOW GRADE FOUNDATIONS, FOOTERS AND BASEMENT AREAS. THE CONTRACTOR SHALL PERFORM CLEARING, GRUBBING, REMOVAL OF TREES AND STUMPS, REMOVAL AND DISPOSAL OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL FROM THE SITE OF ALL DEMOLISHED MATERIALS AND THE FILLING OF ALL DEPRESSIONS CAUSED BY DEMOLITION AND GRADING OF THESE AREAS.
5. REMOVE SOILS AS NECESSARY TO COMPLETE PROPOSED CONSTRUCTION, PER SUMMIT METRO PARKS.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION, REMOVAL, AND RESTORATION WORK NECESSARY TO PERMIT CONSTRUCTION OF THE PROPOSED PROJECT.

GENERAL NOTES-PAVEMENT

1. THE PAVEMENT AND BASE COURSE SHALL BE CONSTRUCTED AS SHOWN ON THE TYPICAL PAVEMENT SECTION SHEET CONTAINED IN THESE PLANS. THE ROAD(S) SHALL BE CONSTRUCTED TO THE LINE AND GRADE SHOWN ON THE ENCLOSED PLANS AND PROFILES.
2. ANY AREA IN WHICH THE PAVEMENT IS IN A FILL SITUATION, THE TOP SOIL OR ANY UNSUITABLE SOIL SHALL BE STRIPPED AND A SUITABLE BACKFILL MATERIAL IS TO BE COMPACTED TO MEET SUMMIT METRO PARKS SPECIFICATIONS.
3. ALL TESTING AND INSPECTION FEES ARE THE RESPONSIBILITY OF THE DEVELOPER.
4. PRIOR TO PAVING, THE SUBGRADE SHALL BE TESTED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK FURNISHED BY THE CONTRACTOR. ANY YIELDING AREAS IN THE SUBGRADE SHALL BE REMOVED AND/OR REPLACED PER SUMMIT METRO PARKS SPECIFICATIONS.

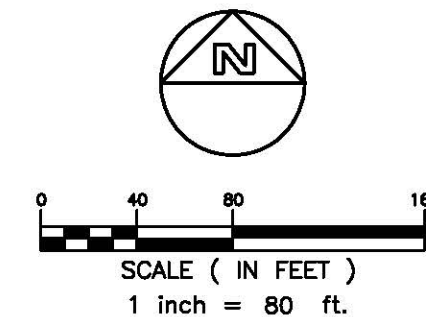
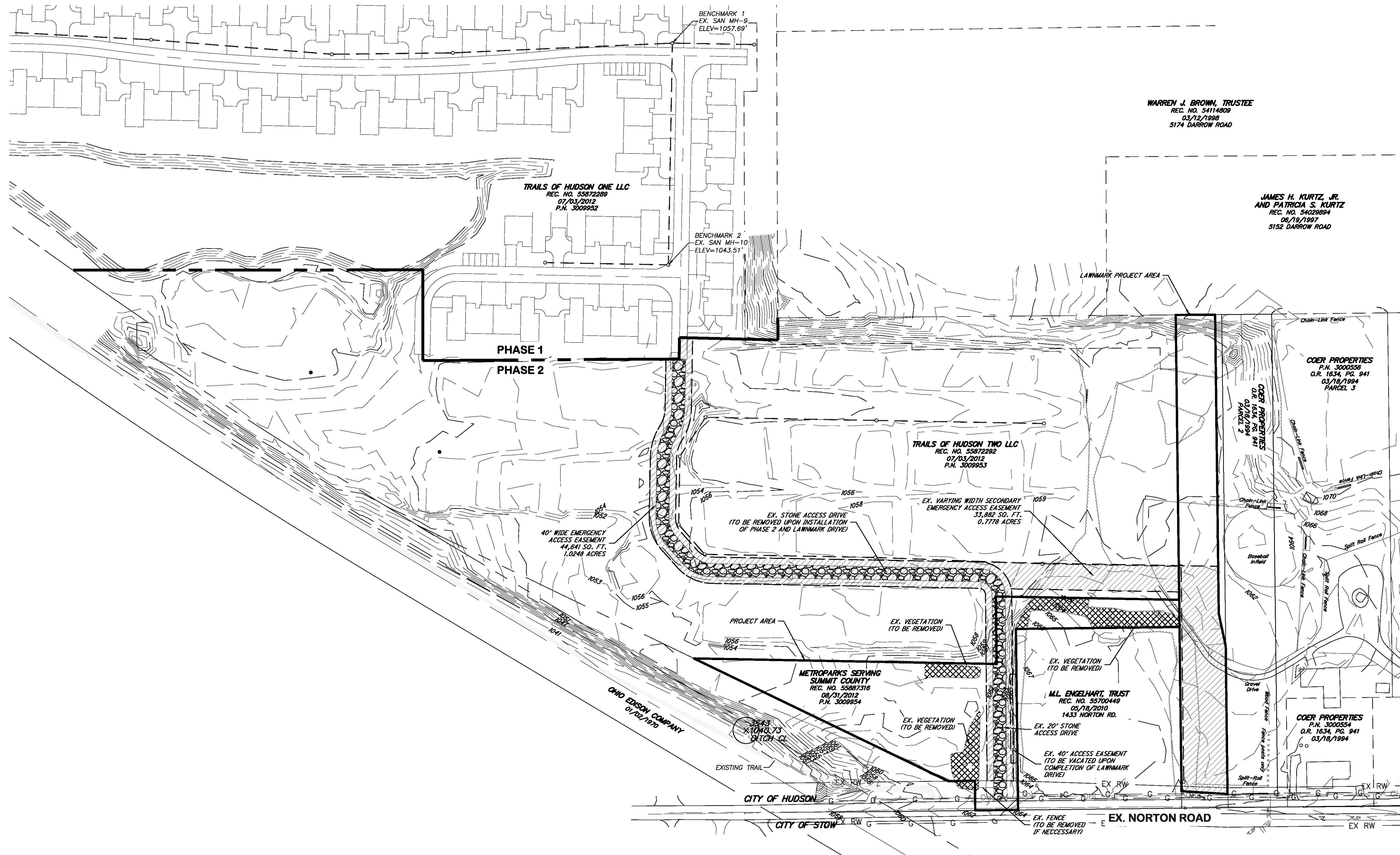
STANDARD NOTES

SUMMIT METRO PARKS
BIKE AND HIKE TRAILHEAD
IMPROVEMENT PLANS

TGC Engineering, LLC
1310 SHARON COBLEY RD. P.O. BOX 37
SHARON CENTER, OH 44274
(PHONE) 330.570.8004 (FAX) 888.820.8423

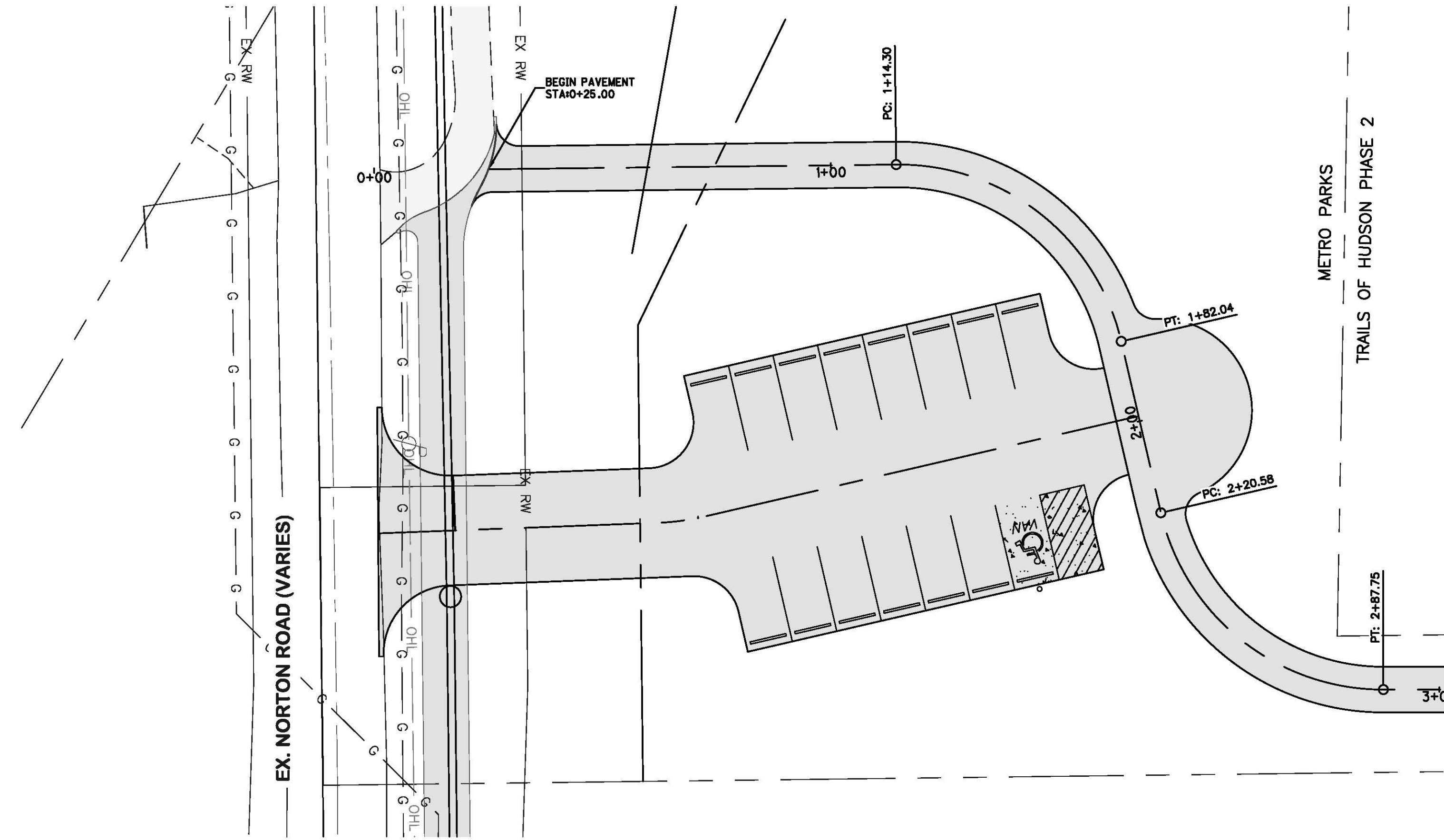
PROJECT NO.
1229B
DATE
2016-06-02

C03



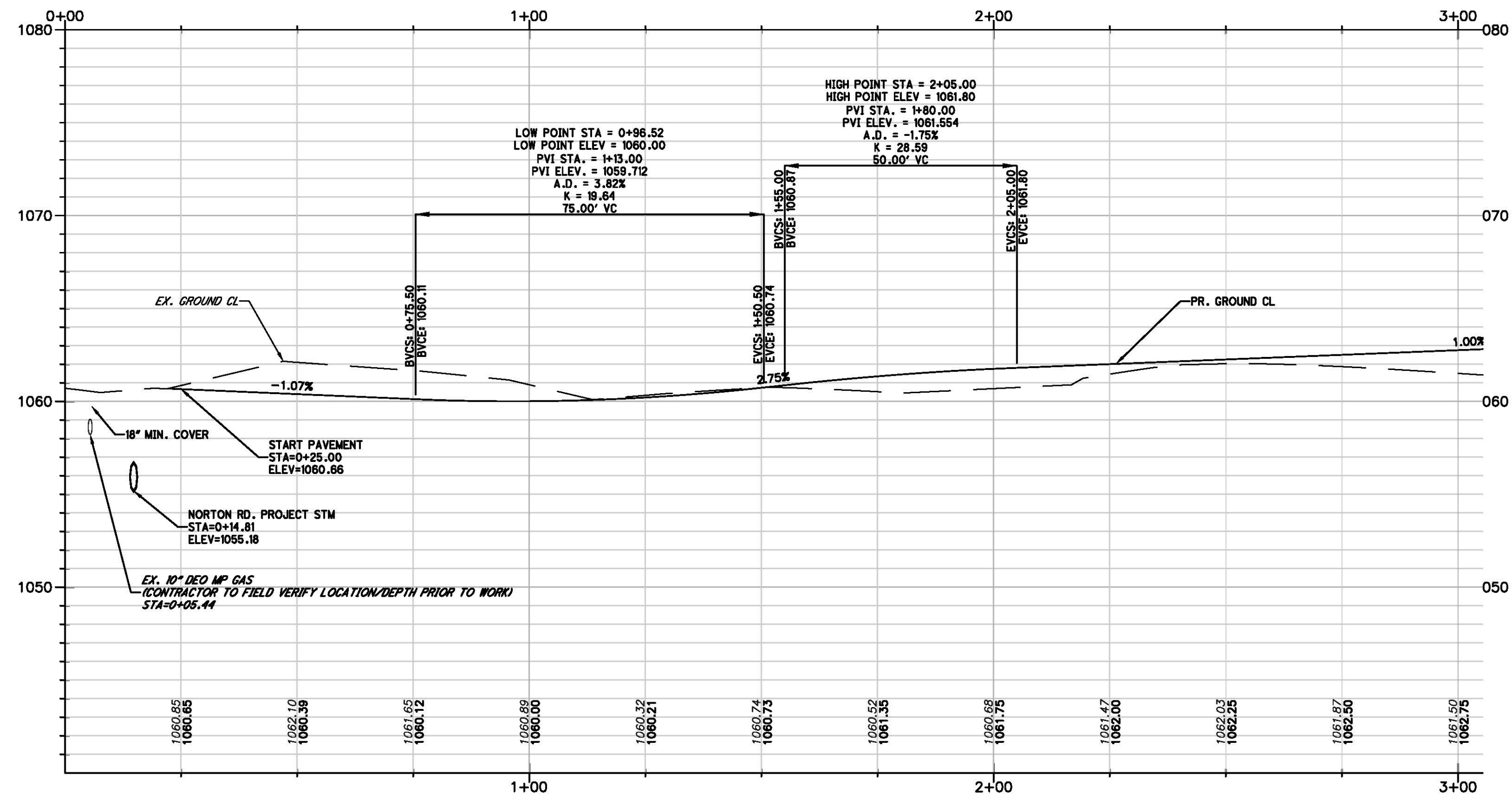
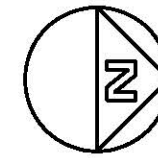
NOTE:

- IF SUMMIT METRO PARKS TRAILHEAD IS INSTALLED DURING THE CONSTRUCTION OF NORTON ROAD PROJECT, THE CONTRACTOR FOR SUMMIT METRO PARKS TRAILHEAD SHALL COORDINATE CONSTRUCTION WITH THIS CONTRACTOR.



PLAN: MULTI-USE TRAIL

SCALE: 1"=20' H



PROFILE: MULTI-USE TRAIL

SCALE: 1"=20' H, 1"=5' V

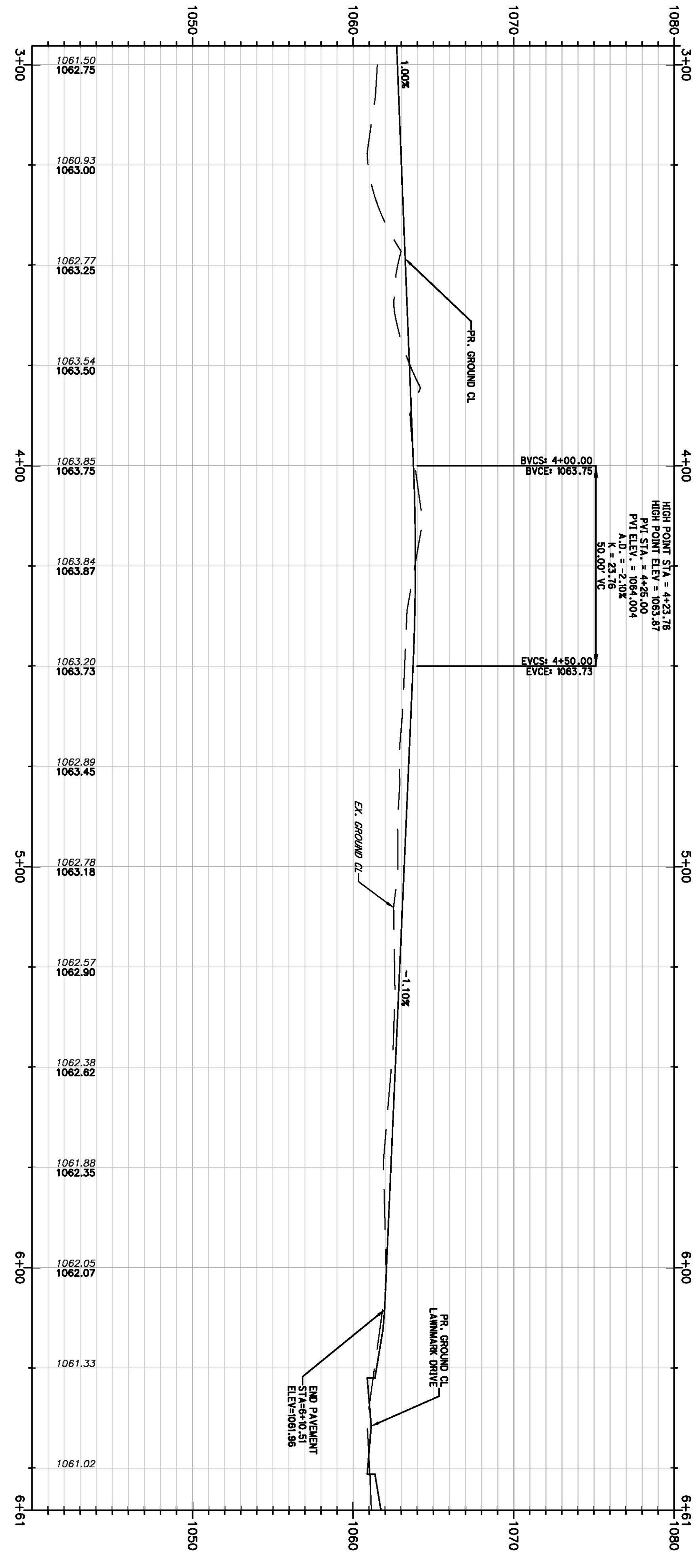
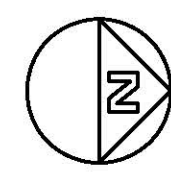
NOTE:
 1. IF SUMMIT METRO PARKS TRAILHEAD IS INSTALLED DURING THE CONSTRUCTION OF NORTH ROAD PROJECT, THE CONTRACTOR FOR SUMMIT METRO PARKS TRAILHEAD SHALL COORDINATE CONSTRUCTION WITH THIS CONTRACTOR.



**MATCHLINE STA. 3+00
 SEE SHEET C07**

PLAN: MULTI-USE TRAIL

SCALE: 1"=20' H



PROFILE: MULTI-USE TRAIL

SCALE: 1"=20' H, 1"=5' V

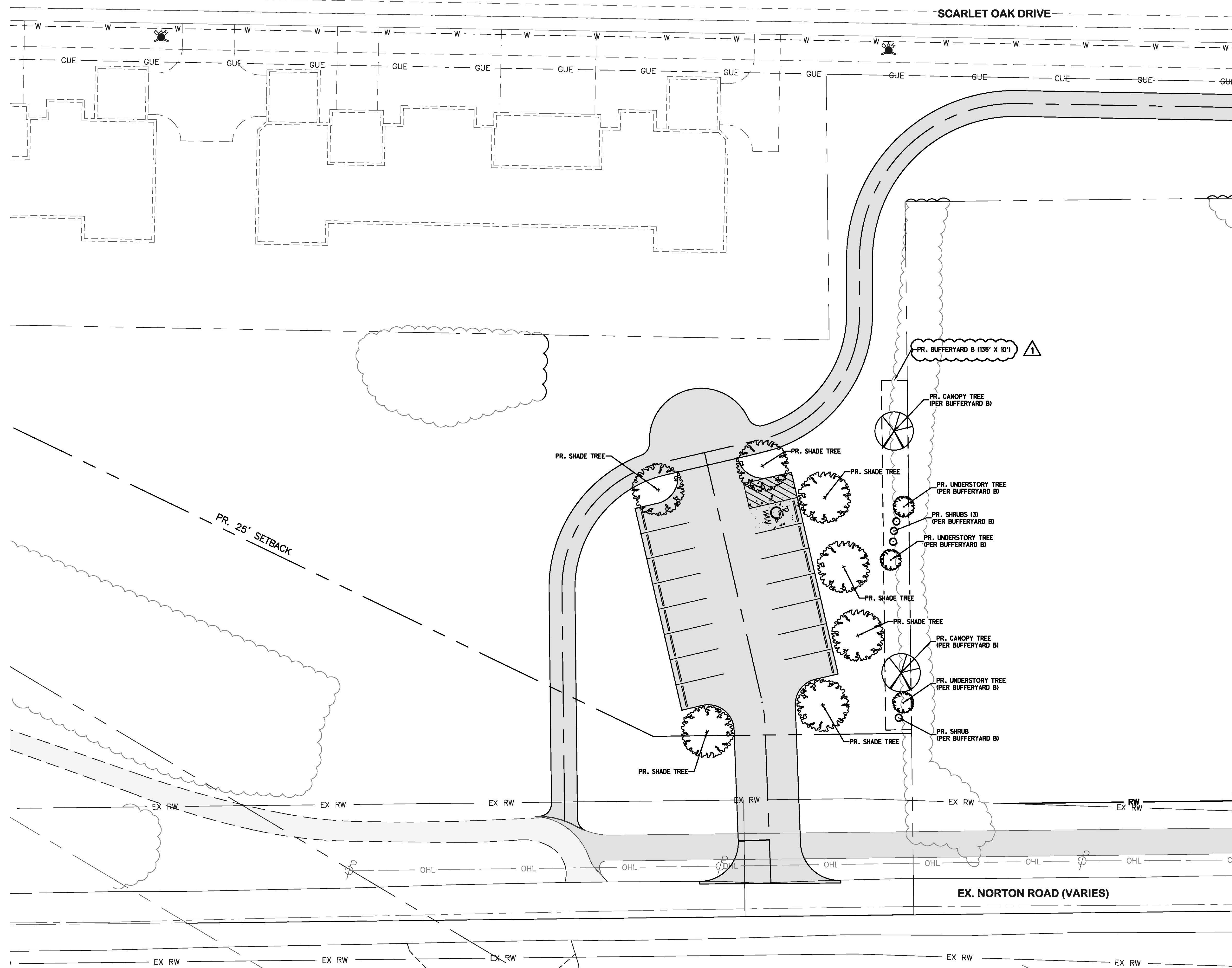
MULTI-USE TRAIL PLAN AND PROFILE

SUMMIT METRO PARKS BIKE AND HIKE TRAILHEAD IMPROVEMENT PLANS

TGC Engineering, LLC
 1310 SHARON COPLEY RD., P.O. BOX 37
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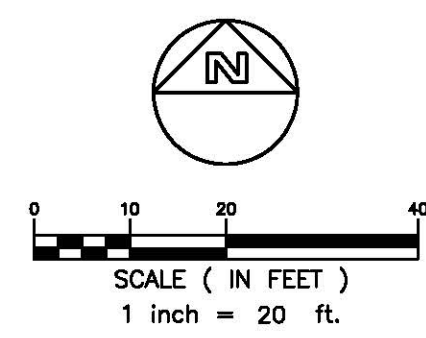
PROJECT NO. 1229B
 DATE 2016-06-02

C08



NOTE:

1. SEE SHEET C10 FOR FULL LANDSCAPE NOTES AND SPECIFICATIONS



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ITEMS 653 & 659 – TOPSOIL, SEEDING AND MULCHING
 SEE SEEDING NOTES FOR SUPPLEMENTAL SPECIFICATIONS. FURNISH AND PLACE A MINIMUM OF 4" APPROVED TOPSOIL OVER COMPACTED SUBGRADE, ITEM 203, AS SHOWN ON PLANS & DETAILS. ALL TOPSOIL SHALL BE SCREENED PRIOR TO SPREADING. ROCK HOUNDING IN PLACE WILL NOT BE ACCEPTED. THE SEED MIX SHALL BE AS SHOWN ON THE LANDSCAPE PLANS. AREAS DISTURBED BY THE CONTRACTOR OUTSIDE OF THE LIMITS OF CONSTRUCTION SHALL BE SEEDED AND MULCHED BY THE CONTRACTOR AT NO COST TO THE METRO PARKS. THE COST FOR MULCHING, FERTILIZATION, WATERING, INTER-SEEDING, MAINTENANCE, ETC. SHALL BE INCLUDED IN BID PRICE.

ITEMS 661 – PLANTING TREES, SHRUBS, PERENNIAL AND VINES
 SEE PLANTING NOTES FOR SUPPLEMENTAL SPECIFICATIONS. ALL TREES SHALL BE WRAPPED, BRACED AND MULCHED AS PER DETAILS AND THESE SPECIFICATIONS AT THE TIME OF INSTALLATION. THE COST FOR ALL PLANT MATERIAL, DIGGING, INSTALLATION COSTS INCLUDING TOPSOIL, MULCH, BRACING, FERTILIZATION, WRAPPING INCLUDING REMOVAL OF ALL STAKING AND WRAPPING AT THE END OF THE WARRANTY PERIOD SHALL BE INCLUDED IN BID PRICE.

ITEM SPEC – TREE PROTECTION FENCE
 FURNISH AND INSTALL TREE PROTECTION FENCE PRIOR TO THE START OF CONSTRUCTION AND AS PER DETAIL TREE PROTECTION FENCING AND AS SHOWN ON THE PLANS AND AS DIRECTED BY THE METRO PARKS.

ITEM SPEC – BERM ROOT CUTTING
 CUT ROOTS ALONG TRAIL EDGE AS SHOWN ON THE PLANS TO THE DEPTH SHOWN ON DETAIL TYPICAL SECTION B. ALL ASPHALT WORK SHALL BE A SEPARATE PAY ITEM. ROOT CUTTING AND REMOVAL UNDER EXISTING PAVEMENT SHALL BE INCLUDED IN ITEM 202.

SEEDING NOTES:

ALL DISTURBED AREAS UNLESS OTHERWISE NOTED SHALL BE SEEDDED AS PER THE PLANS AND SPECIFICATIONS. SEE LANDSCAPE PLAN FOR THE EXACT LOCATIONS OF SPECIALTY AND TURF LAWN AREAS.

SUBGRADE GRADING: THE SUBGRADE SHALL BE APPROVED BY THE METRO PARKS PRIOR TO THE SPREADING OF TOPSOIL.

FINISH GRADING: ALL AREAS TO BE GRADED BY THE CONTRACTOR SHALL BE GRADED TO SUBSTANTIALLY PLUS/ MINUS 0.1' OF FINISHED GRADE. FINISH GRADE SHALL BE APPROVED BY METRO PARKS PRIOR TO SEEDING, PLANTING OR MULCHING. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, UNIFORM PLANE, FREE OF ALL ROCKS, ROOTS OR DEBRIS WITH NO ABRUPT CHANGES OF GRADE.

THE CONTRACTOR SHALL SUBMIT SEED TAGS FROM THE SPECIFIED SEED MIXES TO THE METRO PARKS' LANDSCAPE ARCHITECT.

APPLICATION OF SEED IN TWO OPPOSITE DIRECTIONS TO ENSURE EVEN COVERAGE OF THE SEED AT A RATE GREATER THAN THE MANUFACTURER'S RECOMMENDATIONS.

- RAKE SEED IN TOP 1/4" OF SOIL BY DRAGGING WITH BACK SIDE OF LEAF RAKE.
- APPLY FERTILIZER AS PER SPECIFICATIONS.
- HYDRO SEEDING METHOD MAY ALSO BE APPROVED BY THE METRO PARKS.

ACCEPTABLE MULCHING METHODS:

- APPLICATION OF STRAW BY HAND OR MECHANICAL OPERATIONS.
- HYDRO MULCH.
- PENN MULCH (PATCHING ONLY).

STRAW MUST BE TACKED DOWN AFTER APPLICATIONS BY:

- ORGANIC LIQUID TACKIFIER.
- BIODEGRADABLE EROSION (GREEN) NETTING. STAPLE DOWN AT INTERVALS TO HOLD DOWN STRAW AGAINST WIND AND TRAFFIC. USE BIODEGRADABLE STAKES.
- HYDRO MULCH TACKIFIER OVER STRAW.

8. MAINTAIN SEEDED AREAS BY WATERING OR OTHER METHODS AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE STAND OF TURF LAWN OR SPECIALTY SEEDED AREAS, FREE OF ERODED OR WEATHER BARE SPOTS.

9. THIS ITEM SHALL INCLUDE COVER CROPS, MOWING, WATERING AS DIRECTED BY THE METRO PARKS AND A SECOND APPLICATION OF FERTILIZER 4-6 WEEKS AFTER THE INSTALLATION OR WEATHER PERMITTING.

TURF LAWN: THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4) SUCCESSIVE MOWINGS FOR ALL TURF LAWN AREAS; EACH MOWING SPREAD AT LEAST SEVEN (7) CALENDAR DAYS APART, PROVIDED BARE AREAS HAVE PRODUCED AN ACCEPTABLE STAND OF GRASS. MOWINGS SHALL COMMENCE WHEN TURF LAWN HAS REACHED A THREE INCH (3") HEIGHT. CONTRACTOR MUST NOTIFY METRO PARKS WHEN TURF IS TO BE MOWED.

SPECIALTY SEED MIXES: THE CONTRACTOR SHALL INCLUDE A COVER CROP OF ANNUAL RYE (*Lolium multiflorum*) SOWED AT A RATE OF 10-12 LBS/ACRE. THE CONTRACTOR SHALL NOT ALLOW THE ANNUAL RYE TO RESEED OR SMOTHER THE SPECIALTY SEED MIX DURING THE FIRST YEAR. THE CONTRACTOR SHALL MOW TO A HEIGHT OF 8" PRIOR TO SEED SET AND/OR WHENEVER GROWTH EXCEEDS 24". THIS COST SHALL BE INCLUDED IN THE BID ITEM.

10. THE CONTRACTOR WILL REPAIR ANY SPECIALTY AND/OR TURF LAWN AREAS THAT ARE NOT ESTABLISHED, ACCORDING TO THE METRO PARKS, WITHIN THE NEXT 12 MONTHS OF THE INITIAL PLACEMENT.

PLANTING NOTES:

REFER TO EXISTING CONDITIONS, DEMOLITION AND GRADING PLANS FOR INFORMATION REGARDING EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR MUST VERIFY THE EXACT LOCATIONS OF UTILITIES, DRAINAGE PIPE AND STRUCTURES, ETC. AND SHALL BE SOLELY RESPONSIBLE FOR ANY SUPPORT PRECAUTIONS AND/OR DAMAGES INCURRED.

~~REFER TO THE DEMOLITION PLANS FOR INFORMATION REGARDING EXISTING PLANT MATERIAL REMOVAL AND/OR PRUNING.~~

THE CONTRACTOR SHALL MAINTAIN AND PRESERVE ALL TREES AND SHRUBS NOT BEING REMOVED. THIS SHALL INCLUDE PROTECTION OF THE ROOT ZONE FROM COMPACTION OR DISTURBANCE. TREE PROTECTION FENCING SHALL BE USED AT THE DRIPLINE OF ALL TREES AND GROUPINGS WITHIN 50 FEET OF THE CONSTRUCTION EXCEPT WHERE OTHERWISE NOTED ON THE PLANS.

NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY DAMAGE AND REPAIR BEYOND THE CONSTRUCTION LIMITS.

THE GENERAL CONTRACTOR SHALL SUBMIT A PLANTING SCHEDULE WITH PROJECTED DATES FOR PREPARATION OF PLANT BEDS, INSTALLATION AND SEEDING. THE GENERAL AND LANDSCAPE CONTRACTOR SHALL COORDINATE THEIR WORK TO ALLOW SUFFICIENT TIME FOR THE LANDSCAPE CONTRACTOR TO PERFORM THEIR WORK DURING OPTIMAL SEASONAL CONDITIONS. IN THE EVENT THAT THE PROJECT IS DELAYED OR SIGNIFICANT AREAS ARE NOT READY TO ALLOW PLANTINGS TO BE INSTALLED DURING CORRECT WEATHER OR SOIL MOISTURE CONDITIONS OR WITH SUFFICIENT TIME TO ALLOW THE PLANTS TO BECOME ESTABLISHED BEFORE FALL AND WINTER, METRO PARKS RESERVES THE RIGHT TO DELAY PLANTING UNTIL THE FOLLOWING SEASON.

THE QUANTITY TAKEOFF IS SUPPLIED FOR THE CONTRACTOR'S REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL PLANT AND PLANTING MATERIALS AS PER THE SCHEDULE OF ITEMS. THE CONTRACTOR SHALL NOTIFY THE METRO PARKS IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.

VARIETIES AND SIZES OF PLANTS SHALL BE AS SPECIFIED ON THE PLANS. NO SUBSTITUTIONS SHALL BE ACCEPTED WITHOUT WRITTEN PERMISSION OF THE METRO PARKS' LANDSCAPE ARCHITECT.

ALL PLANTS SHALL BE HEALTHY, OF NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS. QUALITY AND SIZE OF PLANT MATERIAL SHALL CONFORM TO ANSI Z60.1: "AMERICAN STANDARDS FOR NURSERY STOCK", CURRENT EDITION. PLANTS SHALL BE IN A HEALTHY AND VIGOROUS CONDITION, FREE OF DEAD OR BROKEN BRANCHES, SCARS THAT ARE NOT COMPLETELY HEALED, FROST CRACKS, DISFIGURING KNOTS, BROKEN OR ABRADED BARK, REDUNDANT LEADERS OR BRANCHES, OR ABERRATIONS OF ANY KIND. PLANTS SHALL NOT HAVE MULTIPLE LEADERS UNLESS OTHERWISE NOTED.

BALLED AND BURLAPPED, B&B, PLANTS SHALL BE DUG WITH A FIRM ROOT BALL OF NATURAL EARTH. OF A SIZE PROPORTION TO THE PLANT'S SIZE, AS MEASURED BY CALIPER, HEIGHT OR SPREAD. BALLED AND BURLAPPED PLANTS SHALL BE HANDLED ONLY BY THE ROOTBALL, NOT BY THE TRUNK OR BRANCHES. CONTAINER PLANTS SHALL HAVE BEEN ESTABLISHED FOR A MINIMUM OF ONE FULL GROWING SEASON IN THEIR CONTAINERS BEFORE INSTALLATION. CONTAINER PLANTS SHALL BE HANDLED ONLY BY THE CONTAINER. ANY PLANTS DAMAGED AFTER DELIVERY BY IMPROPER HANDLING OR CARE WILL BE REJECTED AND MUST BE REMOVED OFFSITE AND REPLACED.

PLANTS SHALL BE PROTECTED FROM DRYING OUT DURING SHIPPING WITH TARPAILINS OR OTHER COVERINGS. PLANTS SHALL BE PROTECTED FROM DRYING OUT AFTER DELIVERY BY PLANTING IMMEDIATELY. IF THIS IS NOT POSSIBLE, PLANTS SHALL BE STORED IN A LOCATION PROTECTED FROM SUN AND WIND AND THE ROOTBALLS SHALL BE COVERED WITH MULCH OR EARTH AND WATERED FREQUENTLY TO KEEP MOIST UNTIL PLANTING.

TOPSOIL WILL BE STRIPPED AND STOCKPILED ONSITE FOR REUSE IN LANDSCAPE WORK. IF THE QUANTITY OF STOCKPILED TOPSOIL IS INSUFFICIENT, PROVIDE ADDITIONAL TOPSOIL AS REQUIRED TO COMPLETE THE LANDSCAPE WORK. APPROVED TOPSOIL SHALL CONFORM TO ITEM 653. THE CONTRACTOR SHALL PROVIDE THE METRO PARKS' LANDSCAPE ARCHITECT WITH THE SOURCE AND A SAMPLE OF THE TOPSOIL TO BE IMPORTED AND IT MUST BE APPROVED PRIOR TO DELIVERY TO THE SITE.

TOPSOIL FROM THE STOCKPILE OF ONSITE SOILS SHALL BE USED AS BACKFILL FOR TREE AND SHRUB PLANTING. THIS SOIL SHALL ALSO BE PLACED IN THE BOTTOM OF THE ROOT PIT AND TAMPED FIRMLY TO AVOID SETTLEMENT. FILL SOIL AROUND THE BALL OF THE PLANT AND WATER THOROUGHLY. PREPARE A RAISED EARTH BASIN AS WIDE AS THE PLANTING PIT AROUND EACH PLANT. WATER AGAIN IMMEDIATELY AFTER PLANTING BY FILLING THE BASIN AROUND EACH PLANT WITH WATER, TAKING CARE NOT TO DISTURB THE BACKFILL. WATER TO THE EXTENT NECESSARY TO ENSURE THAT THERE ARE NO AIR POCKETS AROUND THE ROOTBALL AND THAT THE ROOTBALL AND BACKFILL ARE THOROUGHLY SATURATED.

TREE BRACING SHALL BE FLEXIBLE, BIODEGRADABLE TIES. INSTALL LOOSE FITTINGS TIES THAT WILL NOT GIRDLE THE TRUNK. ENSURE THAT THE TIE WILL ALLOW TRUNK MOVEMENT AND GROWTH.

TREE WRAP/DEER GUARDS SHALL BE A SPIRAL, UV PROTECTED PVC, FREE OF HEAVY METALS AND OTHER TOXINS, EXTENDING UP THE TREE A MINIMUM OF 4' ABOVE FINISHED GRADE.

THE LOCATION OF PLANTS AS SHOWN ON THE PLANS IS APPROXIMATE. PLANTS SHALL BE POSITIONED BY THE CONTRACTOR AS SHOWN ON THE PLANS FOR REVIEW BY METRO PARKS' LANDSCAPE ARCHITECT PRIOR TO EXCAVATING. ADJUSTMENTS, IF ANY, TO PLANT LOCATIONS WILL THEN BE MADE ACCORDING TO THE LANDSCAPE ARCHITECT'S DIRECTIONS.

REMOVE ALL SALES TAGS, STRINGS, STRAPS, WIRE, ROPE OR OTHER MATERIALS THAT MAY INHIBIT PLANT GROWTH BOTH ABOVE AND BELOW THE SURFACE OF THE SOIL.

REMOVE ANY BROKEN, SUCKERING, DISEASED, CRISS-CROSSED BRANCHES BACK TO LIVE LEADER OR SIDE LATERAL WITH A FLUSH CUT.

REPLACE ANY REQUIRED PLANTING(S), WHICH SEVERELY DECLINE OR DIE AFTER THE DATE OF PLANTING. SEVERE DECLINE OF A PLANT SHALL BE DEFINED AS THE DEATH OF A MAJOR LEADER OR 50 PERCENT OF THE CROWN OF A TREE OR SHRUB OR DIEBACK OF A PLANT TO THE GROUND, EVEN IF THAT PLANT IS STILL ALIVE.

ALL PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE SUMMER GROWING SEASON AFTER PLANTING. PLANTING MATERIAL INSTALLED IN THE FALL SHALL BE IN FULL COUNT AND THRIFTY CONDITION ON THE NEXT SUCCEEDING SEPTEMBER 15, AT WHICH TIME REPLACEMENTS SHALL BE DETERMINED AND SCHEDULED FOR INSTALLATION DURING THE PLANTING PERIOD OF OCTOBER 15 - DECEMBER 1 OF THAT SAME SEASON. SPRING MATERIAL SHALL BE IN FULL COUNT AND THRIFTY CONDITION ON THE NEXT SUCCEEDING MAY 15, AT WHICH TIME REPLACEMENTS SHALL BE DETERMINED AND SCHEDULED FOR INSTALLATION PRIOR TO JUNE 1 OF THE SAME SEASON. ALL PLANTS INSTALLED IN THE SUMMER SHALL BE GUARANTEED FOR ONE (1) FULL SUMMER AND SHALL BE IN FULL COUNT AND THRIFTY CONDITION THE NEXT SUCCEEDING SEPTEMBER 15.

THE PROJECT MAINTENANCE PERIOD SHALL BEGIN AFTER FINAL ACCEPTANCE WITH THE EXCEPTION OF WATERING. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY WATER ALL PLANT MATERIAL IMMEDIATELY UPON PLANTING. THE CONTRACTOR SHALL MAINTAIN TREES AND SHRUBS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. ANY PLANTING SAUCERS NEEDING RESTORATION OR PLANTS NEEDING TO BE RESET OR STRAIGHTENED SHALL BE DONE PRIOR TO FINAL ACCEPTANCE.

ALL PLANTINGS SHALL BE CHECKED THROUGHOUT THE MAINTENANCE PERIOD FOR INSECTS OR DISEASE OR ANY CONDITIONS OF STRESS.

LAWN SEED MIX #1 – LAWNS

QUAN	BOTANICAL NAME	COMMON NAME	% SEED	RATE
XX SF	POE pratensis	Kentucky Blue Grass	0.30	5-6 LBS/1000 SF
	POE pratensis	S-21 Kentucky Blue Grass	0.15	
	FESTUCA rubra	Penn Lawn Red Fescue	0.15	
	LOLIUM perenne	Affinity Perennial Rye	0.10	
	LOLIUM perenne	Catalina Perennial Rye	0.10	
	LOLIUM perenne	Loredo Perennial Rye	0.10	
	LOLIUM perenne	Manhattan 3 Perennial Rye	0.10	

LAWN SEED MIX #2 – TURF FIELDS

QUAN	BOTANICAL NAME	COMMON NAME	RATE
XX SF	*FESTUCA spp.	Tall Fescue	5-6 LBS/1000 SF

* = SEED SHALL BE A MIXED BLEND OF (3) THREE OF THE TOP 50 TALL FESCUE CULTIVARS FOUND ON TABLE 9 – MEAN TURFGRASS QUALITY OF TALL FESCUE CULTIVARS GROWN AT FOUR LOCATIONS IN THE NORTH CENTRAL REGION FOUND AT THE NATIONAL TURFGRASS EVALUATION PROGRAM (NTEP) www.NTEP.org

SPECIALTY SEED MIX – NO MOW

QUAN	BOTANICAL NAME	COMMON NAME	% SEED	RATE	
XX ACRE	GRASSES			15 LBS/ACRE	
	ELYMUS canadensis	Canada Wildrye	0.35		
	PANICUM virgatum	Switchgrass	0.05		
	SCHIZACHYRIUM scoparium	Little Bluestem	0.20		
	SORGHASTRUM nutans	Indian Grass	0.10		
	FORBS				
	ASCLEPIAS syriaca	Common Milkweed	0.03		
	ASTER (Symphotrichum) novae-angliae	New England Aster	0.06		
	HELIOPSIS helianthoides	Ox-eye Sunflower	0.05		
	MONARDA fistulosa	Wild Bergamot	0.02		
	PENSTEMON canescens	Appalachian Beardtongue	0.01		
	PENSTEMON digitalis	Foxglove Beardtongue	0.05		
	RUDBECKIA hirta	Black-eyed Susan	0.04		
	SILPHIUM perfoliatum	Cup Plant	0.03		
SOLIDAGO nemoralis	Gray Goldenrod	0.02			

LANDSCAPE NOTES AND SPECIFICATIONS

SUMMIT METRO PARKS BIKE AND HIKE TRAILHEAD IMPROVEMENT PLANS

TGC Engineering, LLC
 1310 SHARON COHLEY RD. P.O. BOX 37
 SHARON CENTER, OH 44274
 (PHONE) 330.570.8004 (FAX) 888.820.8423

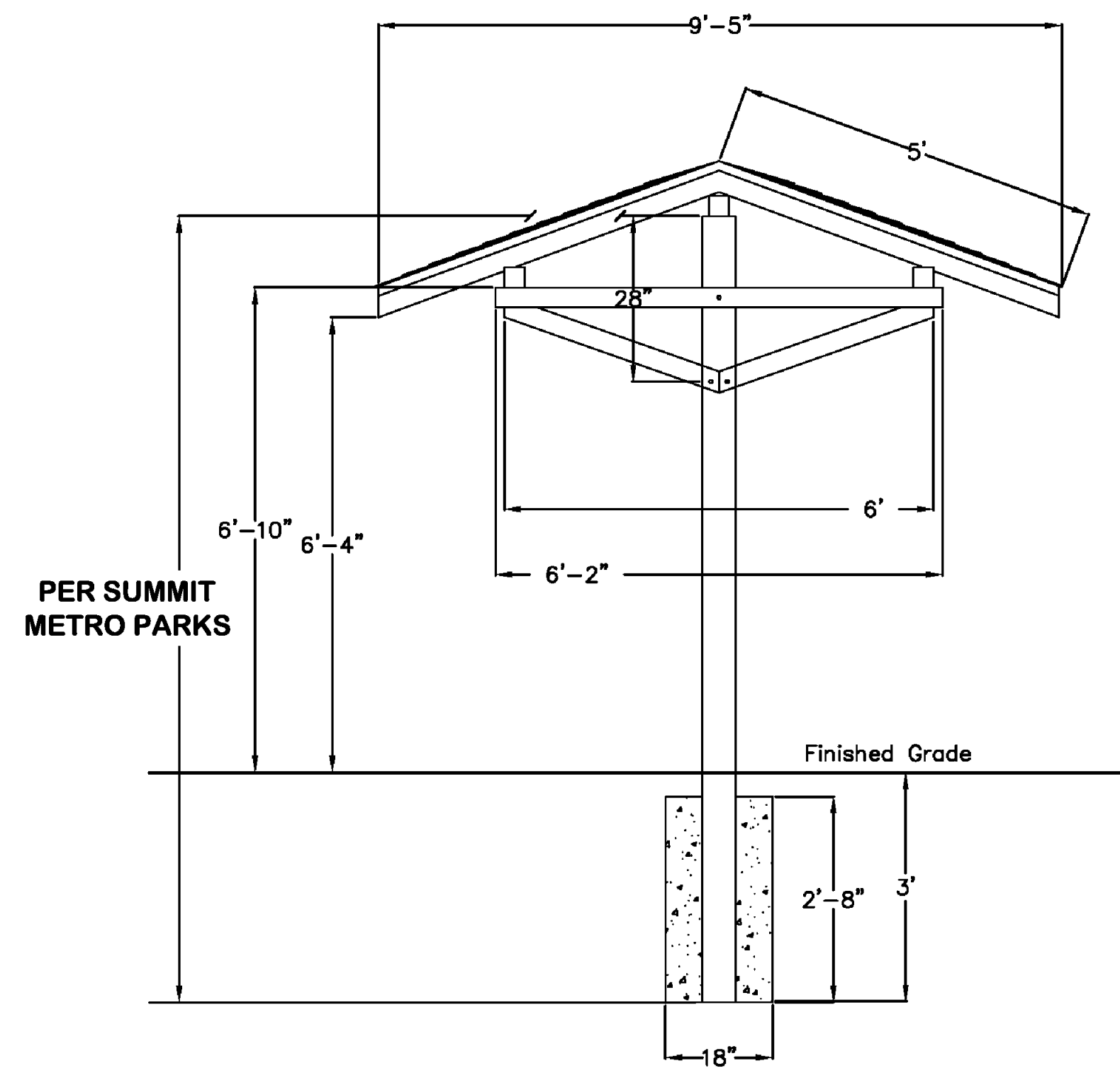
PROJECT NO.
1229B

DATE
2016-06-02

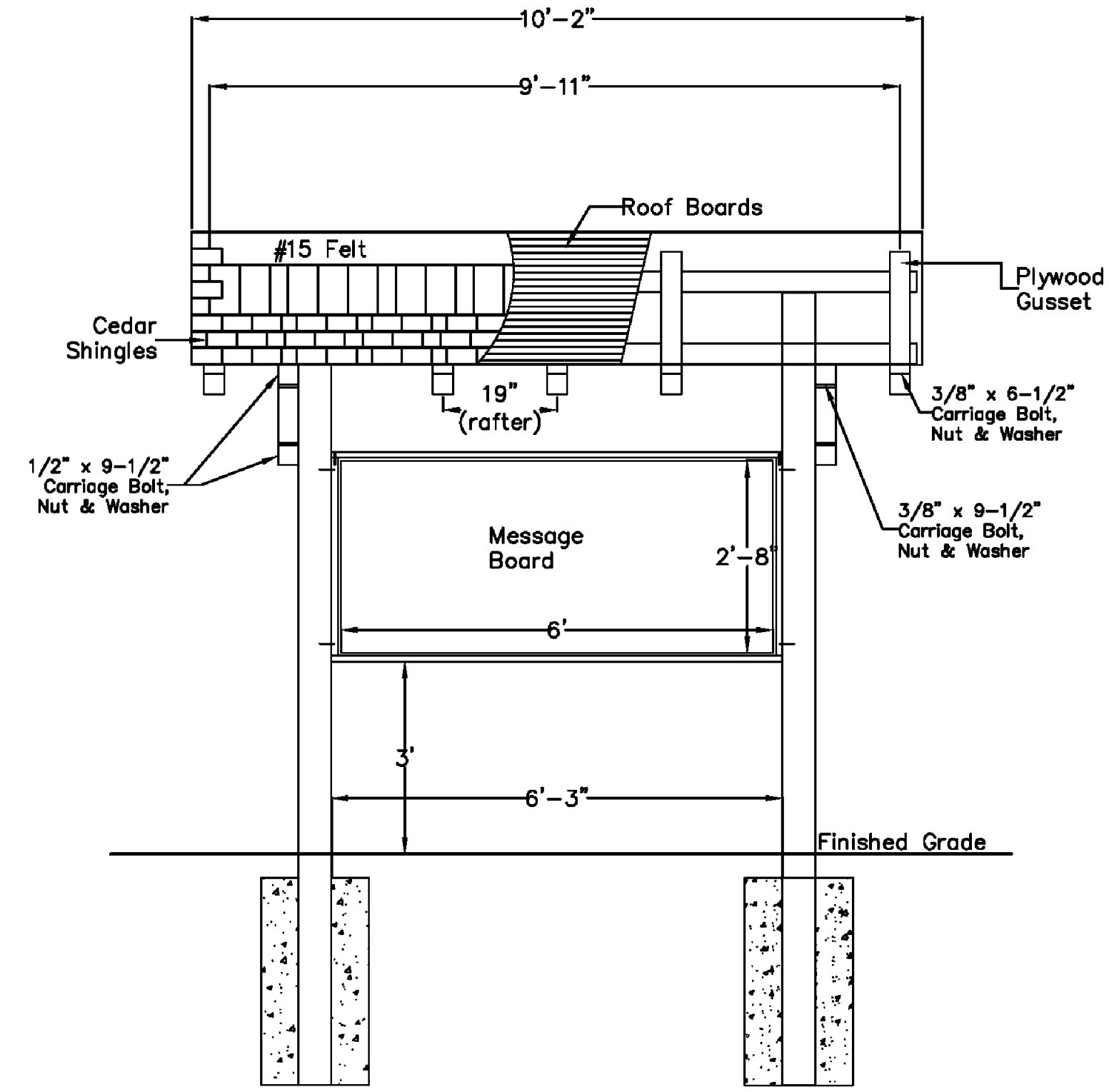
C10



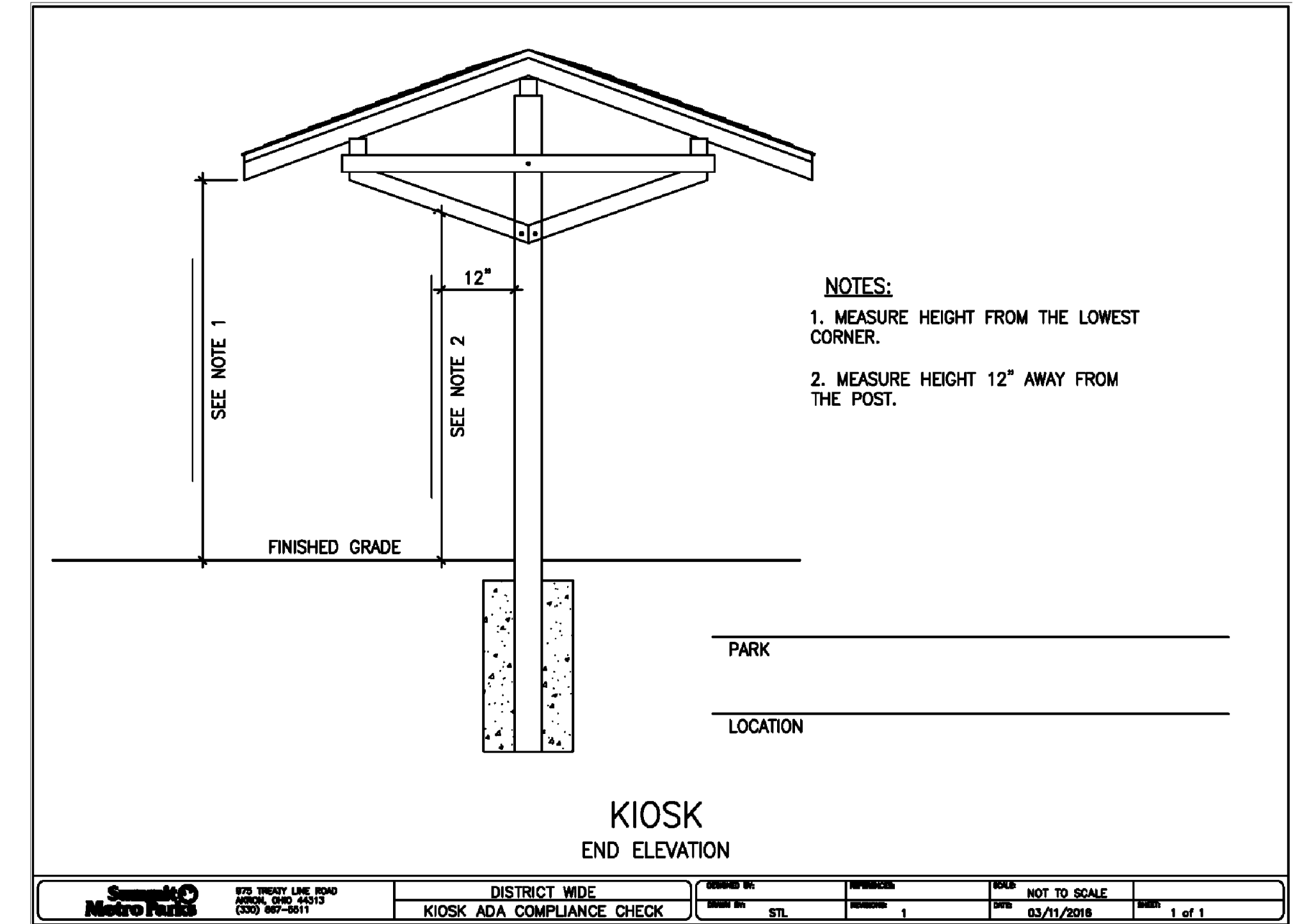
975 TREATY LINE ROAD
 AKRON, OHIO 44313
 (330) 867-5511



KIOSK
End Elevation



KIOSK
Elevation/Section

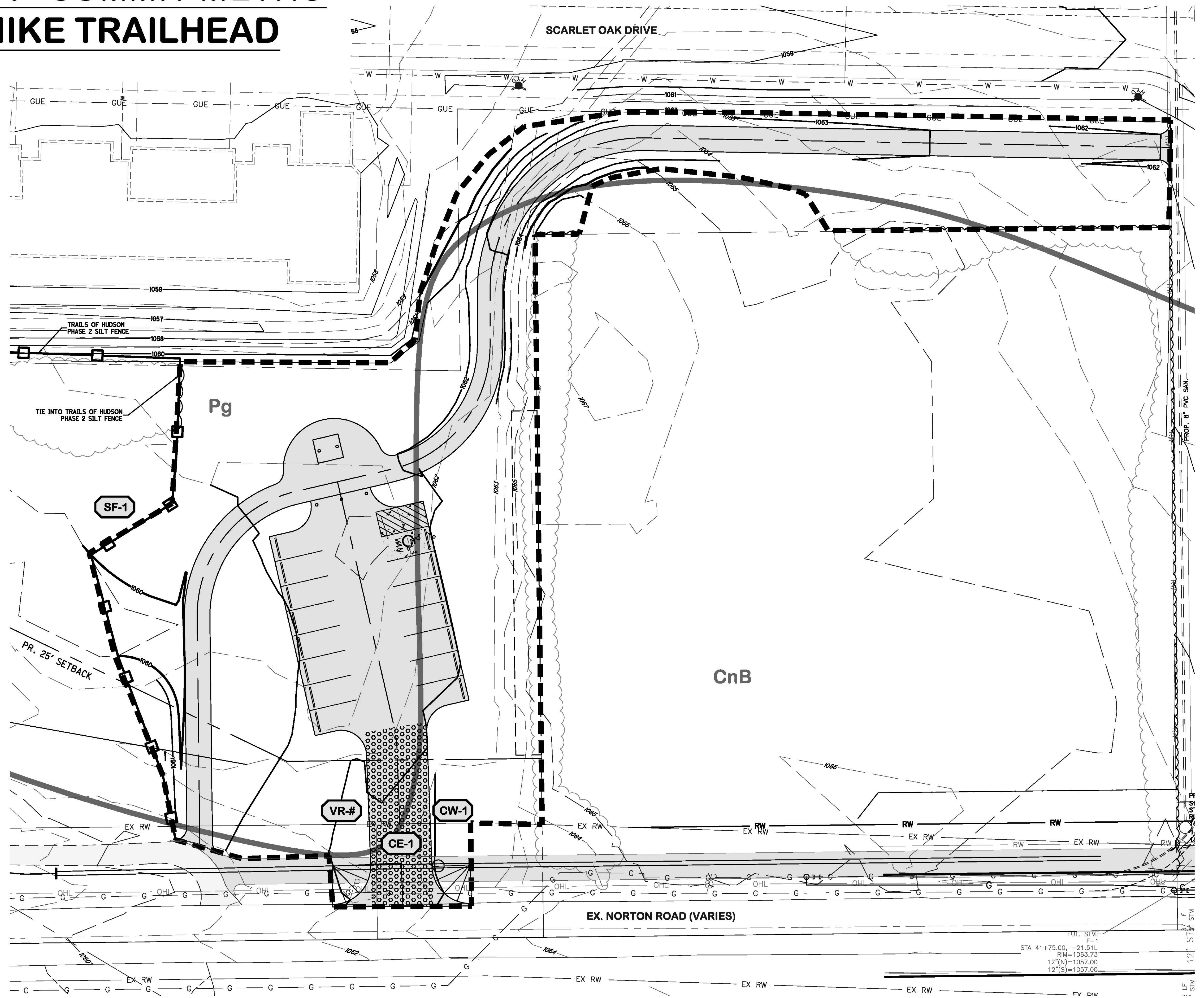


**KIOSK DETAILS
(BY OTHERS)**

TRAILS OF HUDSON - SUMMIT METRO PARKS BIKE AND HIKE TRAILHEAD

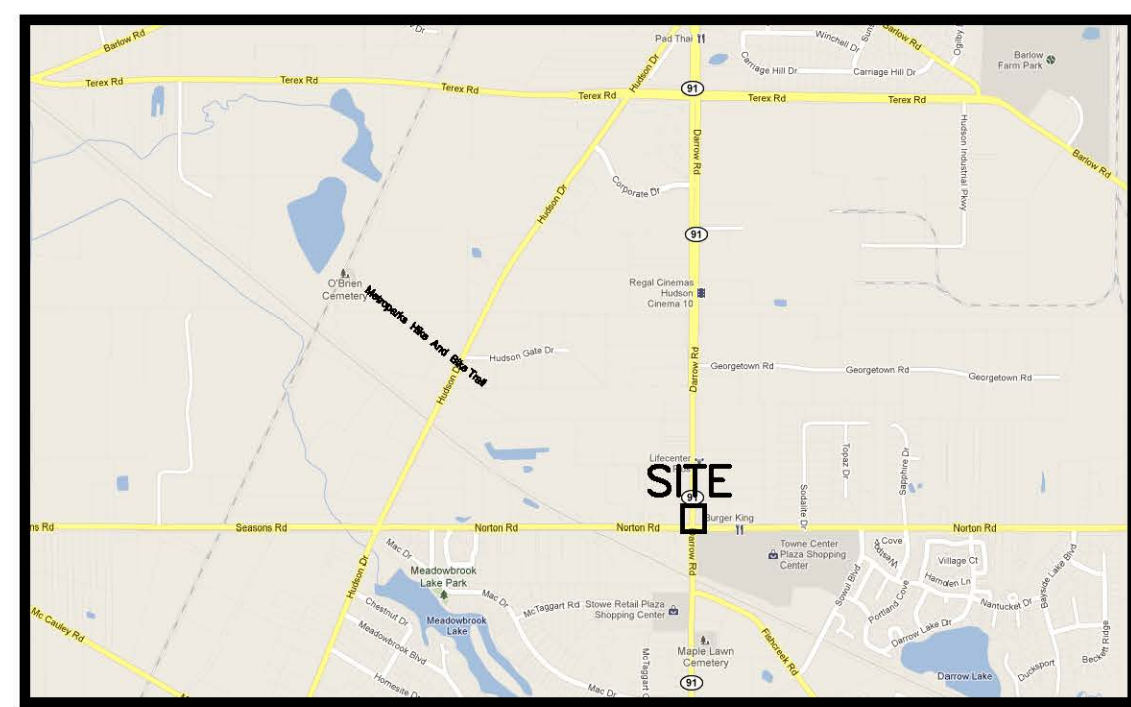
EROSION CONTROL PLAN

THE CITY OF HUDSON
SUMMIT COUNTY, STATE OF OHIO



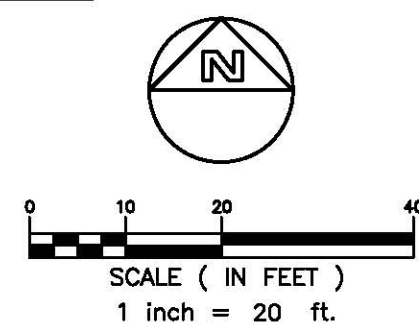
LEGEND

- SILT FENCE SF-#
- VEHICLE REFUELING AREA VR-#
- CONSTRUCTION ENTRANCE (25'W x 70'L x 10"D, SEE DETAILS & SPECS. SHEET C10) CE-#
- CONCRETE WASHOUT CW-#
- SOIL TYPE CnB
- SOIL TYPE BOUNDARY ---
- EARTH DISTURBANCE LIMITS - - - -



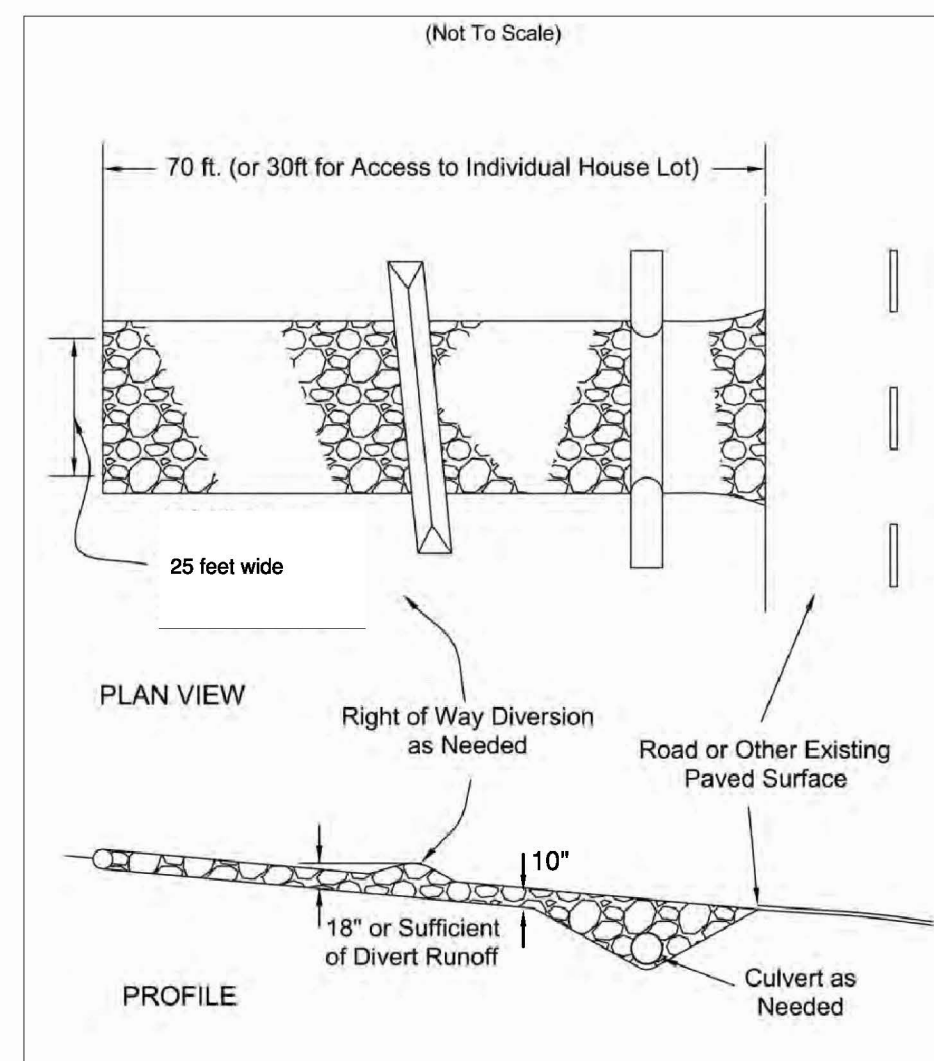
LOCATION MAP

NOT TO SCALE



FUT. STM.
F-1
STA 41+75.00, -21.51L
RM=1063.73
12"(N)=1057.00
12"(S)=1057.00

Specifications for
Construction Entrance



Specifications for
Construction Entrance

- Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
- Length—The construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
- Thickness - The stone layer shall be 10 inches thick
- Width - The entrance shall be 25 feet wide
- Geotextile - A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:
- Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
- Culvert - A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
- Water Bar - A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
- Maintenance - Top dressing of additional stone shall be applied as conditions demand. Must spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
- Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
- Removal—The entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

Figure 7.4.1

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 pli.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1x10-3 cm/sec.

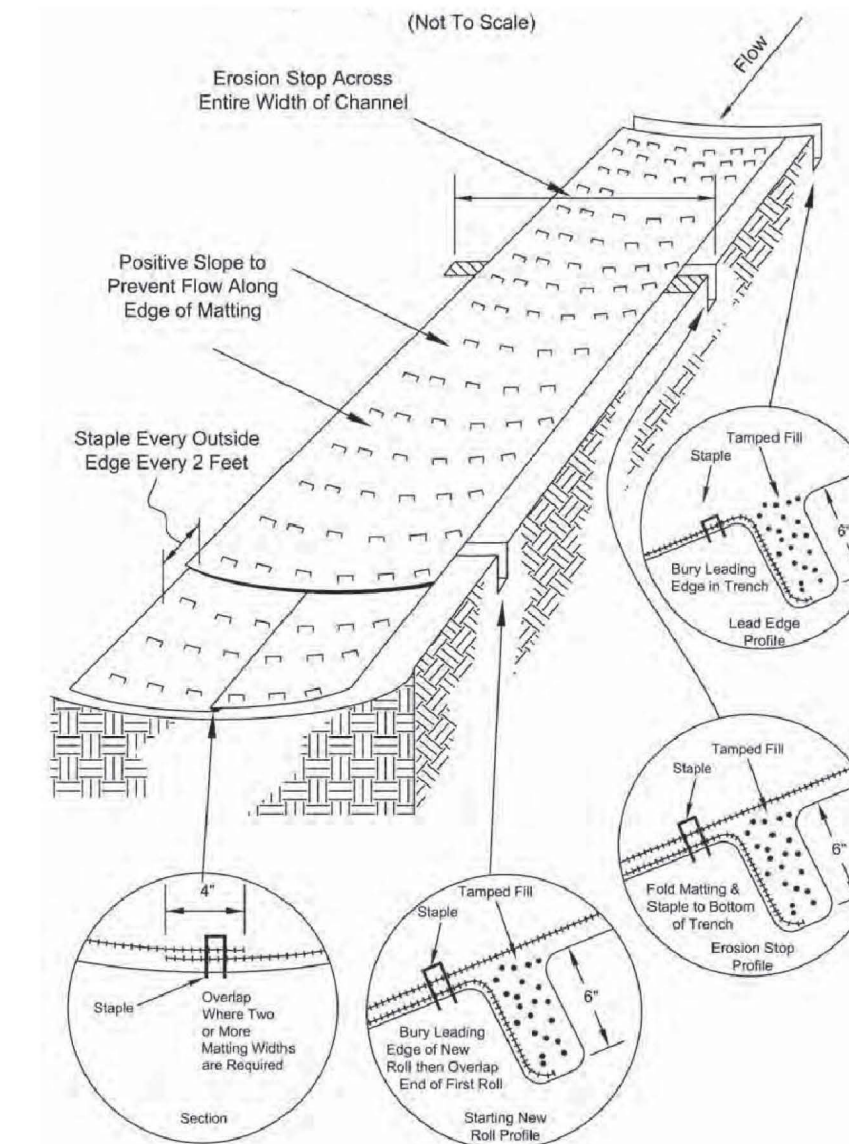
CHAPTER 7 Soil Stabilization 19 20 CHAPTER 7 Soil Stabilization

Specifications for
Temporary Rolled Erosion Control Product

- Channel/Slope Soil Preparation Grade and compact area of installation, preparing seedbed by loosening 2"-3" of topsoil above final grade. Incorporate amendments such as lime and fertilizer into soil. Remove all rocks, clods, vegetation or other debris so that installed RECP will have direct contact with the soil surface.
- Channel/Slope Seeding Apply seed to soil surface prior to installation. All check slots, anchor trenches, and other disturbed areas must be reseeded. Refer to the Permanent Seeding specification for seeding recommendations.
- Slope Installation**
- Excavate top and bottom trenches (12"x6"), intermittent erosion check slots (6"x6") may be required based on slope length. Excavate top anchor trench 2' x 3' over crest of the slope.
- If intermittent erosion check slots are required, install RECP in 6"x6" slot at a maximum of 50' centers or the mid point of the slope. RECP should be stapled into trench on 12" centers.
- Install RECP in top anchor trench, anchor on 12" spacings, backfill and compact soil.
- Unroll RECP down slope with adjacent rolls overlapped a minimum of 3". Anchor the seam every 16". Lay the RECP loose to maintain direct soil contact. Do not pull taut.
- Overlap roll ends a minimum of 12" with upslope RECP on top for a shingle effect. Begin all new rolls in an erosion check slot if required, double anchor across roll every 12".
- Install RECP in bottom anchor trench (12"x6"), anchor every 12". Place all other staples throughout slope at 1 to 2.5 per square yard dependent on slope. Refer to manufacturer's anchor guide.
- Channel Installation**
- Excavate initial anchor trench (12"x6") across the lower end of the project area.
- Excavate intermittent check slots (6"x6") across the channel at 30' intervals along the channel.
- Excavate longitudinal channel anchor slots (4"x4") along both sides of the channel to bury the edges. Whenever possible extend the RECP 2'-3' above the crest of channel side slopes.
- Install RECP in initial anchor trench (downstream) anchor every 12", backfill and compact soil.
- Roll out RECP beginning in the center of the channel toward the intermittent check slot. Do not pull taut. Unroll adjacent rolls upstream with a 3" minimum overlap (anchor every 16") and up each channel side slope.
- At top of channel side slopes install RECP in the longitudinal anchor slots, anchor every 16".
- Install RECP in intermittent check slots. Lay into trench and secure with anchors every 12", backfill with soil and compact.
- Overlap roll ends a minimum of 12" with upstream RECP on top for a shingle effect. Begin all new rolls in an intermittent check slot, double anchored every 12".
- Install upstream end in a terminal anchor trench (12"x6"), anchor every 12", backfill and compact.
- Complete anchoring throughout channel at 2.5 per square yard using suitable ground anchoring devices (I shaped wire staples, metal geotextile pins, plastic stakes, and triangular wooden stakes). Anchors should be of sufficient length to resist pullout. Longer anchors may be required in loose sandy or gravelly soils.

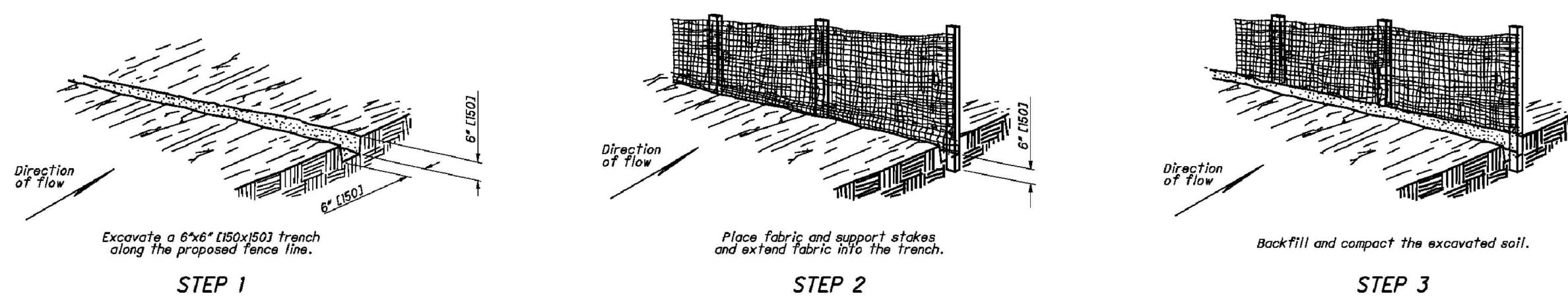
CHAPTER 7 Soil Stabilization 55

Specifications for
Temporary Rolled Erosion Control Product



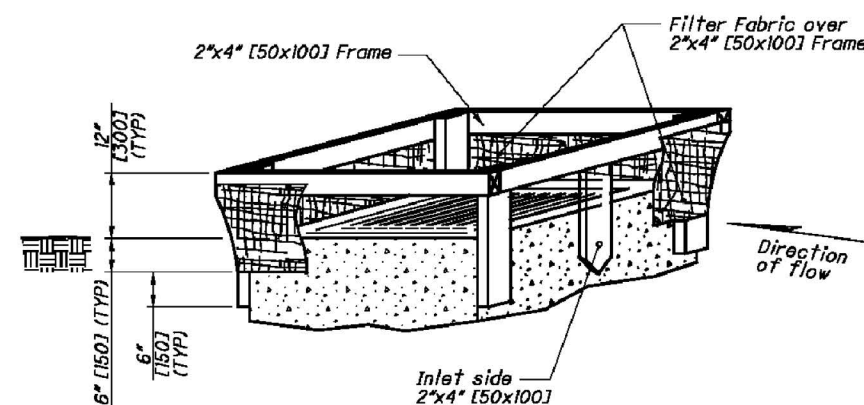
CHAPTER 7 Soil Stabilization 54

PERIMETER FILTER FABRIC FENCE



- NOTES**
- MATERIALS:**
Furnish 30" (0.8 m) wide filter fabric with sound wood supports with maximum on-center spacing of 10' (3.0 m). Use Filter Fabric conforming to 712.05, Type C.
- CONSTRUCTION:**
Trench the filter fabric fence as detailed. The contractor may elect to trench the fence detailed on steps 1 through 3 in one paving operation.
- PAVEMENT:**
The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 632 (SS632) for the following items:
- Perimeter Filter Fabric Fence
- All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS632 Appendix F are considered incidental.

INLET PROTECTION



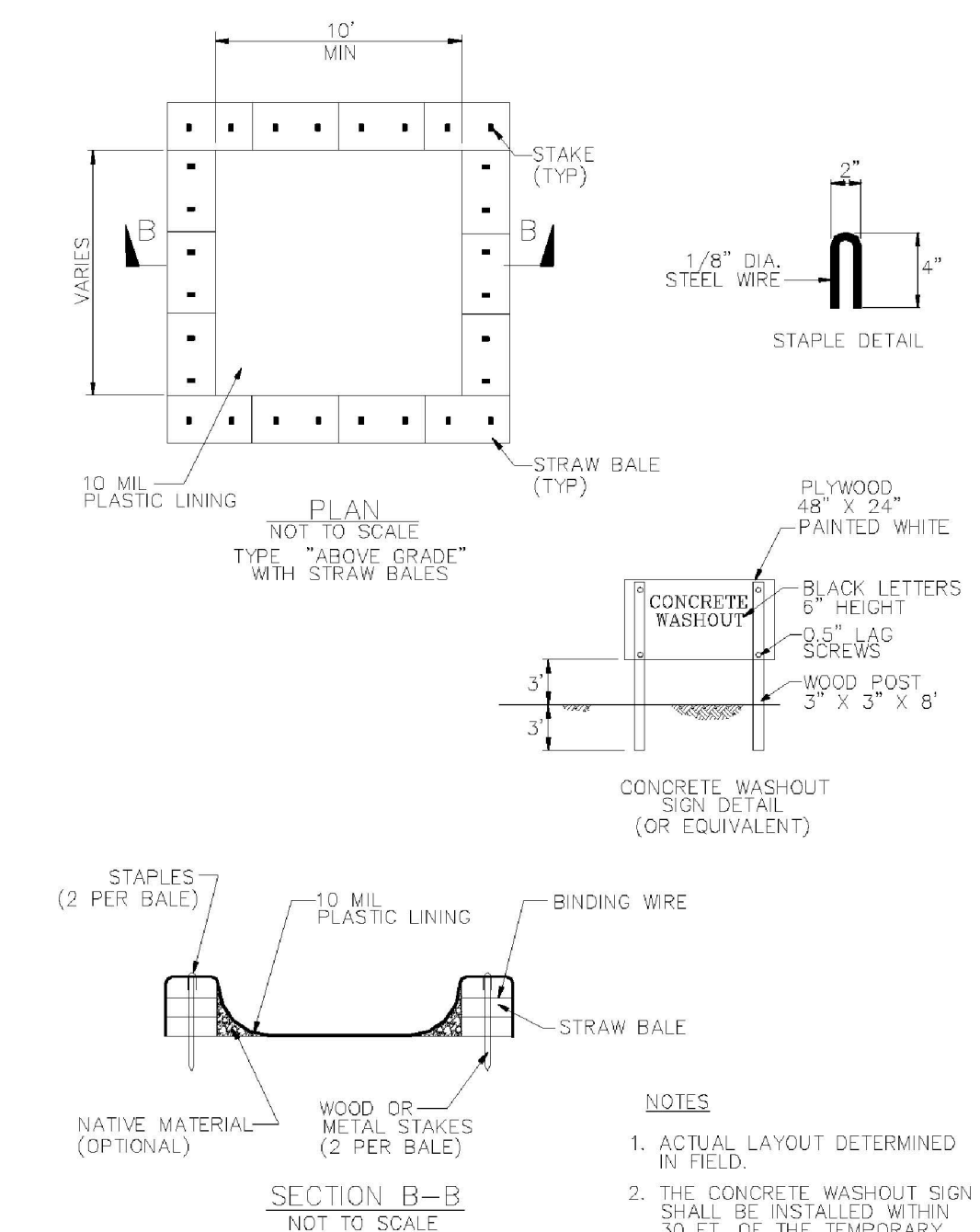
INLET PROTECTION

- NOTES**
- MATERIALS:**
Furnish inlet protection consisting of 18" (0.5 m) wide filter fabric fence with a securely nailed 2x4 (50x100) wood frame with a vertically driven 2x4 (50x100) on the inlet, or flow, side of the structure. Use Filter Fabric conforming to 712.05, Type C.
- CONSTRUCTION:**
Construct on 18" (0.5 m) wide filter fabric fence supported around a storm drain inlet or catch basin with a securely nailed 2x4 (50x100) wood frame. Excavate a 6" (150) trench around the inlet, and drive support posts 6" (150) below the excavated trench bottom. Stretch the fabric around the frame. Secure it tightly, ensuring that 6" (150) of fabric is in the trench. Overlap the fabric on one side of the inlet so that the fabric ends are not attached to the same post. Backfill and compact the excavated soil tightly onto the fabric. Place a vertical 2x4 (50x100) in the center of the inlet so that the top is at the top of the fence and the bottom is at least 6" (150) below the bottom of the ditch.
- PAVEMENT:**
The Department will pay for accepted quantities at the prices shown in Appendix F of Supplemental Specification 632 (SS632) for the following items:
- Inlet Protection
- All items shown on this Standard Construction Drawing that are required for construction that are not specifically identified in SS632 Appendix F are considered incidental.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ENGINEER
OFFICE OF STRUCTURAL ENGINEERING
STANDARD CONSTRUCTION DRAWING
CONSTRUCTION EROSION CONTROL
DATE: 4-29-02, 7-18-02, 12-01-04, 4-17-09
SCALE: AS SHOWN
DESIGNED BY: J. Starks
CHECKED BY: J. Starks

DATE: 4-29-02, 7-18-02, 12-01-04, 4-17-09
SCALE: AS SHOWN
DESIGNED BY: J. Starks
CHECKED BY: J. Starks

Concrete Waste Management WM-8



January 2003 California Stormwater BMP Handbook Construction www.cabmp handbook.com 7 of 7

EROSION CONTROL DETAILS

SUMMIT METRO PARKS BIKE AND HIKE TRAILHEAD IMPROVEMENT PLANS

TGC Engineering, LLC
1310 SHARON COPLEY RD. P.O. BOX 37
SHARON CENTER, OH 44274
(PHONE) 330.570.8004 (FAX) 888.820.8423

PROJECT NO. 1229B
DATE 2016-06-02

EC3