OHIO HUDSON

Planning Commission Staff Report

April 12, 2021
Case #2021-214

Meeting Date:
April 12, 2021

Location:
2155 Middleton Road

Parcel Number
3009775

Request:
Conditional Use and site plan request for an indoor golf facility.

Applicant:
Chad Costello, Peninsula Architects

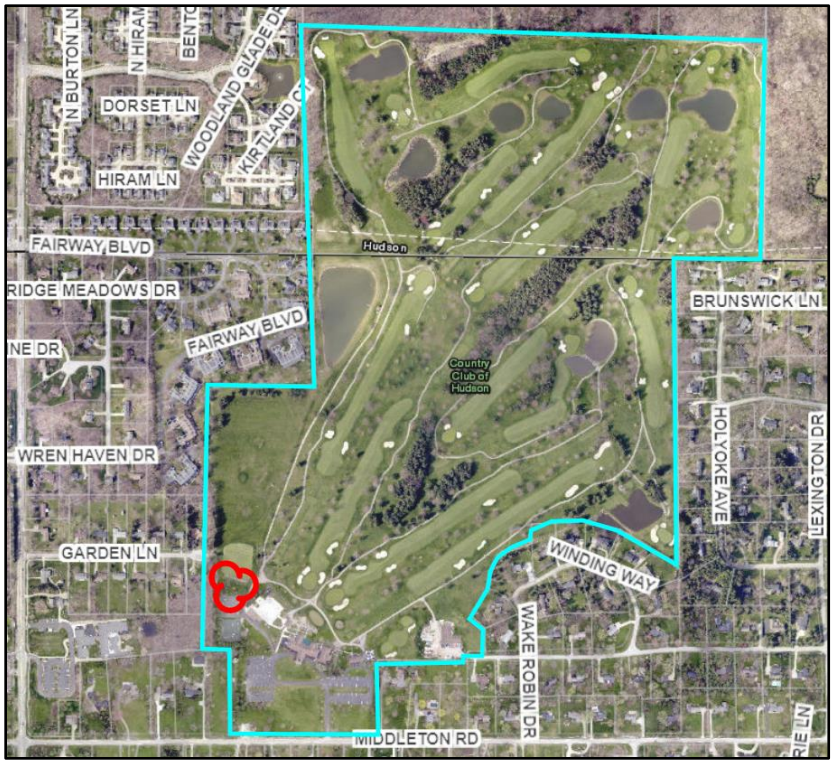
Property Owner:
Country Club of Hudson

Zoning:
D1 - Suburban Residential Neighborhood

Case Manager:
Nick Sugar, City Planner

Staff Recommendation
Approval subject to conditions on page 5.

Contents



Existing Conditions, Hudson GIS

Project Background:
The Country Club of Hudson is located on the north side of Middleton Road, east of Darrow Road. The private membership facility opened in 1969 on the former Wilkinson Farm. The property is approximately 200 acres in size and contains a variety of facilities, including a golf course, tennis courts, swimming pool and banquet hall.

The applicant is proposing a 2,800 square foot indoor golf training facility on the western edge of the property, adjacent to the existing driving range. The facility would include training simulators, an indoor putting green, an office, meeting room, and equipment room. The building would be accessed via the club's interior driveway. An additional fire access drive would be extended from an existing driveway apron at the terminus of Garden Lane.

Adjacent Development:
The property is adjacent to multiple residential subdivisions, including Wake Robin Estates, Garden Lane, Greencrest, Fairview Homes Condominiums, and the Kirtland Lane Subdivision in Twinsburg Township. The proposed building would be directly adjacent to the Garden Lane Subdivision and the Hudson Montessori School to the west.

District Standards (Section 1205)

☑ **Property Standards** The proposal would meet the property/development design standards as stipulated in Section 1205.05 District 1: Suburban Residential Neighborhood.

Use Standards (Section 1206)

The application is subject to compliance with the general conditional use standards of Section 1206.02:

(1) *The use is consistent with the policies and intent of the Comprehensive Plan.*

Comment: The Comprehensive Plan identifies the Country Club of Hudson within the *Parks & Recreation Plan*. The club is one of three golf courses in the city. The Comprehensive Plan primarily identifies goals for public parks; however, it does state overall goals of establishing Hudson as a regional recreation destination, budgeting improvements to existing parks, and exploring programs for the community's youth and senior citizens at parks and recreation facilities.

(2) *The use is physically and operationally compatible with the surrounding neighborhood.*

Comment: Staff notes the following based on the applicant's submittal:

- **Location of activity on the site**: The proposed building would be located adjacent to the Garden Lane subdivision, however; staff notes the building is oriented to the interior of the property, with the main entryway and parking to the east. The building is also proposed at a fifty (50') foot side yard setback. Staff notes the base setback for noncommercial structures in this zoning district is thirty (30) feet; however, special conditions for golf courses require a fifty (50) foot setback.
- **Noise:** The facility has been described by the applicant as an indoor golf training facility, however; staff notes three overhead doors proposed on the north wall. These doors would lead out to the existing driving range from the proposed training bays. Question how these doors would be utilized with the overall operation of the facility. Additionally, staff suggests relocating the equipment doors to the north elevation to minimize impact on adjacent residential uses. Finally, outdoor speakers/music should be prohibited due to the proximity of the building near Garden Lane.
- **Hours of operation:** The applicant has indicated the facility will mainly operate from September to April. In the warmer months (May to August), the facility will only be open for private events and during poor weather conditions. Hours of operation include:
  - Monday: Closed
  - Tuesday – Saturday: 9:00 am – 8:30 pm
  - Sunday: 10:00 am – 5:30 pm

  The applicant should provide information on the anticipated number of private events and how the proposed hours of operation compare with the rest of the club's amenities.
- **Light intensity and hours of full illumination:** The applicant should verify if any exterior lighting is proposed and, if so, submit a lighting plan in conformance to Section 1207.14 Exterior Lighting.
- **Location of loading and delivery zones:** Anticipated loading and deliveries would occur along the drive and associated parking pad to the east of the proposed training facility.

(3) *The use can generally be accommodated on the site consistent with any architectural and design standards set forth in the applicable district regulations of this Code.*

Comment: The design of the building would require approval from the Architectural and Historic Board of Review. Staff notes the building is in general compliance with the city's architectural design standards.

(4) *Access points are located as far as possible from intersections and adequate sight distances are maintained.*

Comment: Not applicable as the proposed building is accessed from an interior driveway.

(5) *On-site and off-site traffic circulation patterns shall not adversely impact adjacent uses.*

Comment: Staff notes a fire access drive would be extended from the terminus of Garden Lane. An arm barrier gate equipped with a knox box would be constructed at this entrance. Applicant should confirm this drive would only be utilized by emergency services. Additionally, the site plan shows the majority of the construction activity near Garden Lane, including the staging area, waste container area, and concrete washout. Staff suggests all related activity be setback a minimum twenty-five (25) feet from the western property line.

(6) *The use will be adequately served by public facilities and services*

Comment: The proposed building would be served by the following facilities:

- **Sewer** - Summit County DOSSS: A sewer line currently extends across the existing drive range to the north of the proposed building. The proposal would extend a line approximately one hundred (100) feet across the driving range to the training facility.
- **Water** – Private: A private well system serves the property. The building would be tied into an existing well located approximately two hundred (200) feet to the south near the swimming pool clubhouse.

(7) *The use provides adequate off-street parking on the same property as the use.*

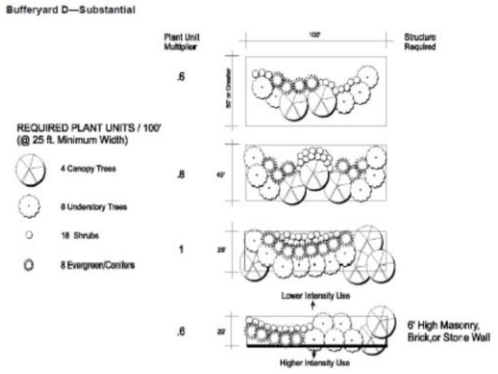
Comment: Staff notes the use would provide golf cart parking via a 25’ x 16.5’ asphalt pad. Users or the facility would utilize the existing parking area at the club’s entrance, which accommodates approximately one hundred sixty-five (165) vehicles.

The parking standards stipulated in Section 1207.12 require one parking space per two employees, plus three per golf hole. The applicant should provide an updated parking calculation including the proposed facility to verify this requirement would be met.

(8) *The use will be screened with fencing and/or landscaping in excess of what is required in of this Code if the use may otherwise result in an adverse impact.*

Comment: The proposed use would remove a portion of the mature vegetation along the western property line to install the required drainage. The LDC requires Bufferyard D per Section 1207.04 be installed along the west side of the building to buffer the adjacent residential uses.

Looking west from proposed building



(9) *The use is proposed at a density consistent with that of the existing neighborhood.*

Comment: Not applicable

Special Conditions (Section 1206.02)

The application is subject to compliance with the special conditions addressing operation of Section 1206.02:

- *The only dwelling on the property, if one is provided, shall be for a facility or maintenance manager.*
- *The use shall contain no overnight accommodations.*
- *Amplification of music, live entertainment, or other noise emanating from the use that is audible at the property line shall not be allowed.*
- *The storage of hazardous materials for longer than thirty days shall not be permitted.*

Comment: The applicant should verify if any live entertainment, music, etc. would be associated with the proposed use.

(21) *Special conditions for golf courses:*

- *The use of firearms shall not be permitted as a part of user activities at a commercial recreational facility.*
  Comment: Not applicable
- *A traffic impact study shall be submitted that assesses the impacts of the proposed use on existing roads, intersections, and circulation patterns, and that demonstrates compliance with the traffic facility standard set forth in Section 1207.11, and/or sets forth mitigation measures to eliminate or substantially reduce such impacts.*
  Comment: Applicant should submit a trip generation report to determine compliance and if a full traffic study is required.
- *The only dwelling on the property, if one is provided, shall be that of a manager or a caretaker of the facility and related family.*
  Comment: Not applicable
- *The City may restrict access to the facility, storage of vehicles or materials on the property, and hours of operation to ensure no adverse impacts on adjacent properties.*
  Comment: Access should be restricted from Garden Lane to only include emergency safety services.
- *The City may restrict outdoor lighting on the property to a greater extent than this Code may otherwise require, in order to eliminate glare on abutting public roads and private property.*
  Comment: The applicant should verify if any exterior lighting is proposed and, if so, submit a lighting plan in conformance to Section 1207.14 Exterior Lighting.
- *All principal structures such as pools, bath houses, restaurants, or clubhouses shall be set back at least 100 feet from the front property line and at least fifty feet from other property lines.*
  Comment: The proposed building would be setback fifty (50) feet from the property boundary.

City Departments:

☑ **Engineering**

Assistant City Engineer Nate Wonsick has reviewed the request and has provided the following comments, which are explained in greater detail in the attached review letter:

- Approvals required from Summit County Building Standards, Summit County DSSS, U.S. Army Corp of Engineers, if applicable.
- A current approved wetland delineation or a letter of a wetland biologist shall be submitted stating they have visited the site and no wetlands existing on the project area.
- Stormwater management calculations shall be revised to meet the City of Hudson Engineering Standards, designed for the 25-year post-developed storm.

- A City of Hudson Long Term Maintenance Agreement must be signed for the storm water management SCD's.

☑ **Fire Department** Fire Marshal Shawn Kasson has reviewed the request and has provided the following comments, which are explained in greater detail in the attached review letter:

- Proposed drive shall be constructed to the specifications of a fire access road.
- Building shall be designed to be compliant with Section 507.5.1 of the Ohio Fire Code.

Findings:

The staff finds that the application is in substantial compliance with the use, zoning development site plan, and other governmental regulations.

Required PC Action

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 Conditional Use and site plan request for an indoor golf facility at 2155 Middleton Road per Case 2021-214, according to proposal dated March 3, 2021 subject to the <u>following conditions</u>:

1. Bufferyard D per Section 1207.04 of the Land Development Code to be applied along the proposed building between the adjacent residential uses to the west.
2. Proposed fire access drive at Garden Lane shall only be utilized by emergency safety services.
3. An exterior lighting plan shall be submitted for any proposed lighting in compliance with Section 1207.14 of the Land Development Code.
4. Applicant shall submit an updated parking count for staff to verify compliance with Section 1207.12.
5. Applicant shall submit a trip generation report to be reviewed by the Engineering Department.
6. Outdoor speakers/music shall be prohibited.
7. Equipment room doors shall be relocated to the north elevation.
8. Construction activity including staging area, waste container area, and concrete washout be located a minimum twenty-five (25) feet from the western property boundary.
9. All items stipulated in the review letter from the Assistant City Engineer dated 3.23.21 shall be addressed.
10. All items stipulated in the review letter from the Fire Marshal dated 3.9.21 shall be addressed.

EST. 1967 THE COUNTRY CLUB OF HUDSON

Ben Curtis Golf Academy Operating Procedure & Hours

The Ben Curtis Golf Academy (Academy) at the Country Club of Hudson (Club) will be a privately operated structure, ultimately overseen by the General Manager of the Country Club of Hudson.

The facility itself will be managed in tandem by both the Academy and the Club. The Academy will have a Manager of Operations as will the Club. The Manager of the Academy will be responsible for all activities of the Academy and will work within the hours and regulations set forth by the Club. The Club's Manager of the facility will be responsible for all activities outside of the Academy. Additional staffing will be provided by, and supervised by the Club, as needed. While normal Hours of Operation will be in place, the Academy building will also be used for multiple private events, hence hours may be adjusted.

Hours of Operation:

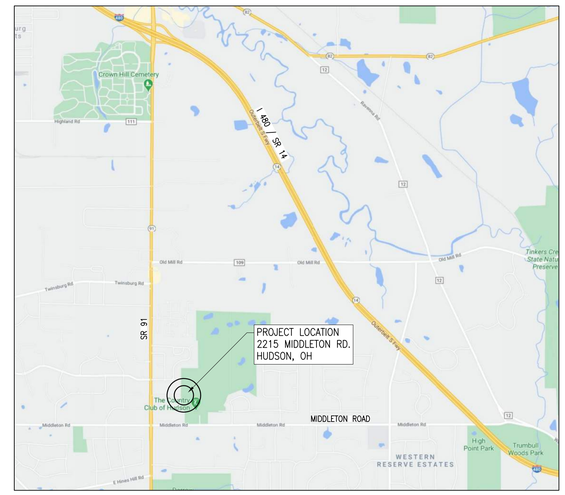
MAY-AUGUST
CLOSED - Open only for private events and during poor weather conditions

Normal Hours of Operation 10:00am-7:30pm (Will be dependent on the event)

SEPTEMBER-APRIL
Closed Mondays
Tuesday -Saturday: 9:00am-8:30pm
Sunday: 10:00am-5:30pm

BEN CURTIS GOLF ACADEMY

2155 MIDLETON ROAD
HUDSON, OHIO 44236



VICINITY MAP
NO SCALE

CIVIL SHEET INDEX

LAND SURVEY NOTES

LAND SURVEY DATA SHOWN ON THE CIVIL PLANS SHEETS HAS BEEN REFERENCED FROM AN EXISTING CONDITIONS TOPOGRAPHIC SURVEY PERFORMED BY
TGC ENGINEERING, LLC
1310 SHARON COPLEY ROAD, P.O. BOX 37
SHARON-CENTER, OHIO 44274
330.590.8004
TGC ENGINEEEERING FILE # 2335 DATED OCT 15 2020

SITE DATA

PARCEL INFO	NUMBER 3009696 AREA 109.27 ACRES
PARCEL ADDRESS	2155 MIDDLETON ROAD HUDSON, OH 44236
ZONING DISTRICT	(1) SUBURBAN RESIDENTIAL NEIGHBORHOOD
PROPERTY OWNER	COUNTRY CLUB OF HUDSON 2155 MIDDLETON ROAD HUDSON, OH 44236
PROJECT ARCHITECT	CHAD COSTELLO PENINSULA ARCHITECTS PO BOX 235 1775 MAIN STREET PENINSULA, OH 44264
PROJECT CIVIL ENGINEER	JOHN URBANICK, PE ROCKAWAY CIVIL, LLC 10191 SPERRY ROAD KIRTLAND, OH 44094

PROJECT DISTURBANCE AREA DATA

PROPOSED DISTURBED AREA = 26,500 SQ. FT. (0.61 ACRES)

THE PROJECT DISTURBED AREA IS UNDER 1.00 ACRE. THEREFORE, A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IS NOT REQUIRED FOR THIS PROJECT.

AN ABBREVIATED SWP3 PLAN WILL BE PROVIDED FOR THIS PROJECT. REFER TO C200 SHEETS.

DEMOLITION PLAN NOTES

1. TBR = TO BE REMOVED
2. ETR = EXISTING TO REMAIN
3. OUPS SHALL BE CONTACTED 2 DAYS PRIOR TO ANY ON SITE EXCAVATION PERFORMED AS PART OF THIS PROJECT 1-800-362-2764.
4. THE MOST CURRENT VERSION OF OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL SHALL BE APPLICABLE TO THIS PROJECT.
5. THE CONTRACTOR SHALL CONDUCT OPERATIONS WITH A MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE THOROUGHFARES. MAINTAIN INGRESS EGRESS AND ACCESS AT ALL TIMES. DO NOT CLOSE OR OBSTRUCT ROADWAYS AND SIDEWALKS WITHOUT APPROPRIATE PERMITS.
6. CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF ALL STRUCTURES, PADS, WALLS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES , ETC.,, IN A LOCATION APPROVED BY ALL GOVERNING AGENCIES. ALL ITEMS REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.
7. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL DEMOLITION RELATED PERMITS, INCLUDING AN EPA NOTICE OF INTENT, IF NECESSARY.
8. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES OR DEPARTMENTS PRIOR TO REMOVAL OR SHUTOFF OR INSTALLATION OF ANY UTILITIES. THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITY COMPANIES AS TO WHICH PORTIONS ARE TO BE PERFORMED BY THE UTILITY COMPANY.
9. CONTRACTOR IS CAUTIONED THAT THE LOCATION AND/ OR ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF THE UTILITIES.
10. EXISTING UTILITIES OR STRUCTURES NOT DESIGNATED FOR REMOVAL ARE TO REMAIN.
11. ALL WASTE OR DEBRIS GENERATED AS PART OF SITE DEMOLITION SHALL BE DISPOSED OF OFF SITE AS PER CURRENT GOVERNMENT REGULATIONS.
12. ALL PROJECT AREAS DESIGNATED TO BE PAVED OR BUILT UPON SHALL BE CLEARED AND GRUBBED AS PER PROJECT SPECIFICATIONS.
13. ANY FILL MATERIAL SALVAGED FROM GRADING OPERATIONS THAT CAN BE DETERMINED BY AN INDEPENDENT TESTING AGENCY TO BE SUITABLE, SHALL BE USED FOR FILL MATERIAL AS APPROPRIATE.
14. ALL EXISTING LANDSCAPING WITHIN THE PROJECT LIMITS SHALL BE REMOVED, EXCEPT AS SHOWN TO REMAIN. TREES BEING REMOVED SHALL HAVE THEIR STUMPS GROUND.
15. CONTRACTOR SHALL MAKE PROVISIONS FOR STORM WATER DURING DEMOLITION PROCESS.
16. ALL STRUCTURES, UTILITIES, ETC., NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION.
17. DEMOLITION SHALL BE PERFORMED WITH CARE AND DUE DILIGENCE AS TO NOT DISRUPT THE OPERATION OF EXISTING UTILITY SERVICES TO REMAIN. ANY UTILITY DISCOVERED DURING DEMOLITION OR CONSTRUCTION, WHICH IS NOT SHOWN ON THE PLANS, SHALL BE REPORTED TO THE DESIGN ENGINEER FOR EVALUATION.
18. CONTRACTOR SHALL PROTECT ALL TREES NOTED TO REMAIN.
19. ALL ITEMS NOTED TO BE SALVAGED ARE TO BE PACKAGED BY THE CONTRACTOR AND TURNED OVER TO THE OWNER FOR REUSE. COORDINATE TURNOVER WITH OWNER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, RELOCATION, AND MAINTENANCE OF ALL EROSION CONTROL AND SEDIMENT PRACTICES.
21. OWNER SHALL PROVIDE ABATEMENT RELATED TO ASBESTOS, LEAD CONTAINING MATERIALS, MERCURY, ETC., AS NEEDED PRIOR TO DEMOLITION.
22. EXISTING PAVEMENT TYPES SHOWN ARE SURFACE CONDITIONS. DIFFERENT PAVEMENT TYPES MAY EXIST BELOW THE SURFACE. THE COST TO COMPLETELY REMOVE ALL EXISTING PAVEMENT SECTIONS SHALL BE INCLUDED AS PART OF THE BID.
23. ALL LAWN AREAS REMOVED OR DISTURBED SHALL BE REPLACED BY SEEDING AND MULCHING IN ACCORDANCE WITH ITEM 659 OF ODOT SPECIFICATIONS AND SHALL BE RESEEDED AND MULCHED WHEN REQUESTED IF SATISFACTORY RE-ESTABLISHMENT OF LAWN DOES NOT OCCUR.

STATE OF OHIO · JOHN URBANICK · E-66506 · REGISTERED PROFESSIONAL ENGINEER

ROCKAWAY CIVIL

Rockaway Civil LLC
10191 Sperry Road Kirtland Ohio 44094
440 655 8182 www.rockawaycivil.com

N

0 20'
SCALE: 1" = 20'

OHIO Utilities Protection SERVICE
Call Before You Dig
811 or 1.800.362.2764

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
1-800-925-0988

Ben Curtis Golf Academy
2155 Middleton Road
Hudson, Ohio 44236

Project Name

Sheet Revision

1	PC	03-03-21

Project Issue

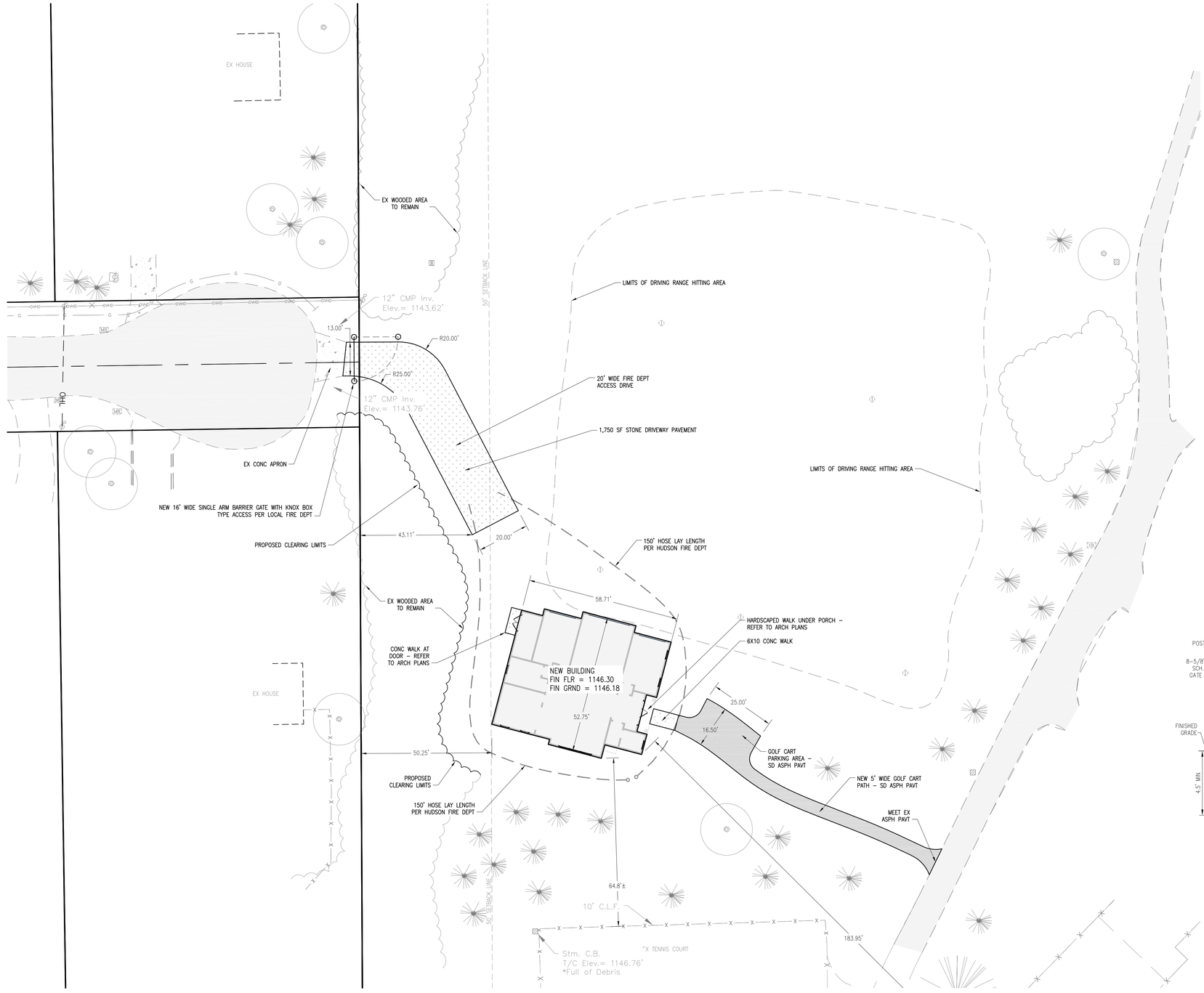
COVER SHEET AND DEMOLITION PLAN

Sheet Name

C100

Sheet #

RC Project # 20-040



PROJECT GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS INCLUDED ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS AND THE CUYAHOGA COUNTY DEPARTMENT OF PUBLIC WORKS (CCDPW) UNIFORM STANDARDS.
2. ANY DEFECTS IN THE CONSTRUCTION WITHIN THE RIGHT OF WAY INCLUDING MATERIALS OR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY REMOVAL AND REPLACEMENT BY THE CONTRACTOR OR OTHER APPROVED METHODS PRIOR TO ACCEPTANCE BY THE MUNICIPAL ENGINEER AT NO ADDITIONAL COST.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO ROAD SURFACES, SIGNS, GUARDRAILS, MAIL/PAPER BOXES, CULVERTS, EASEMENTS OR RIGHT OF WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT. ALL DAMAGES SHALL BE RESTORED AT NO COST TO THE MUNICIPALITY TO THE ORIGINAL CONDITION. THE MUNICIPAL ENGINEER IN WRITING SHALL ACCEPT APPROVAL OF RESTORATION.
4. THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT NOTIFYING THE OFFICE OF THE MUNICIPAL ENGINEER AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
6. THE CONTRACTOR SHALL PROVIDE A TWENTY-FOUR (24) HOUR, SEVEN DAYS A WEEK EMERGENCY CONTACT LIST. THE CONTACT LIST SHALL INCLUDE CONTACT NAMES AND PHONE NUMBERS OF INDIVIDUALS WHO CAN BE REACHED AT ANY TIME. NO CONSTRUCTION SHALL OCCUR BEFORE CONTACT LIST IS PROVIDED TO THE MUNICIPALITY.
7. ALL LAWN AREAS REMOVED OR DISTURBED SHALL BE REPLACED BY SEEDING AND MULCHING IN ACCORDANCE WITH ITEM 659 OF ODOT SPECIFICATIONS AND SHALL BE RESEEDED AND MULCHED WHEN REQUESTED IF SATISFACTORY RE-ESTABLISHMENT OF LAWN DOES NOT OCCUR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING PUBLIC WATER, STORM AND SANITARY SYSTEM RESULTING FROM NON-CONFORMANCE WITH THE APPLICABLE STANDARDS OR THROUGH GENERAL NEGLIGENCE.
9. ALL VOIDS CREATED FROM BORING OF UTILITY LINES SHALL BE BACKFILLED WITH SAND OR GROUT. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES AND SHALL BACKFILL AND GRADE EXCAVATED AREAS TO ELIMINATE PONDING ON THE SITE.

DUST CONTROL:
10. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY INCLUDING A DUST-FREE STREET SWEEPING DEVICE OR AS DIRECTED BY THE MUNICIPAL ENGINEER TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE CONSTRUCTION SITE.

EROSION CONTROL:
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY EROSION CONTROL METHODS IN ACCORDANCE WITH CURRENT COUNTY AND STATE REQUIREMENTS AND AS REQUIRED BY THE MUNICIPAL ENGINEER. EROSION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CLEAN ALL EXISTING STREETS OF MUD AND DIRT DURING THE CONSTRUCTION PHASE AS NEEDED OR DIRECTED BY THE MUNICIPAL ENGINEER.

GENERAL SEWER:
12. AT ALL STORM SEWER, SANITARY SEWER, AND/OR WATERMAIN INTERSECTIONS HAVING LESS THAN EIGHTEEN (18) INCH VERTICAL SEPARATION, ENCASE THE LOWER AND MONOLITHICALLY CRADLE THE UPPER PIPE IN 3000 PSI CONCRETE PER THE REQUIREMENTS OF THE UNIFORM STANDARDS CONCRETE ENCASEMENT DETAIL.

LINE AND GRADE CONTROL:
13. THE LINE AND GRADE OF SEWER MAINS SHALL BE CONTROLLED DURING SEWER CONSTRUCTION BY USE OF AN APPROVED LASER DEVICE. THE LINE AND GRADE OF THE LASER SHALL BE "CHECKED" FROM LINE AND GRADE STAKES AT A MAXIMUM OF FIFTY FOOT (50) INTERVALS.

EARTHWORK:
14. WHEREVER UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED THAT ARE NOT INDICATED ON THE PLANS, THE WORK SHALL BE DISCONTINUED UNTIL THE GEOTECHNICAL ENGINEER APPROVES THE METHOD AND MATERIAL TO BE INCORPORATED INTO THE WORK.
15. ALL UNFORESEEN UNDERGROUND OR ABOVE GROUND UTILITIES OR CONDITIONS THAT ARE DISCOVERED IN THE PROJECT AREA DURING CONSTRUCTION SHALL BE REPORTED BY THE CONTRACTOR TO THE DESIGN ENGINEER IMMEDIATELY FOR EVALUATION / POSSIBLE REDESIGN. THE FIELD DATA SHALL INCLUDE MATERIAL TYPE, SIZE, CONDITION, LOCATION, DEPTH / ELEVATION, ETC...

** REFER TO THE UTILITY PLAN FOR ADDITIONAL EARTHWORK / TRENCH EXCAVATION / BACKFILL REQUIREMENTS.

MAINTENANCE OF TRAFFIC

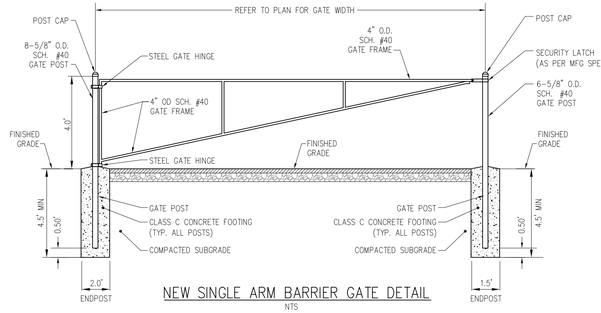
INTERFERENCE WITH TRAFFIC:
THE CONTRACTOR SHALL MAINTAIN SAFE TRAFFIC CONDITIONS IN ACCORDANCE WITH THE MANUAL OF TRAFFIC CONTROL DEVICES. COORDINATE ALL LANE / ROAD CLOSURES WITH THE LOCAL MUNICIPAL ENGINEER(S).

TRAFFIC DIVERSION:
WHENEVER IT IS NECESSARY TO DIVERT TRAFFIC FROM ITS NORMAL CHANNEL INTO ANOTHER CHANNEL, SUCH DIVERSIONS SHALL BE CLEARLY MARKED BY CONES, DRUMS, BARRICADES OR TEMPORARY GUARDRAIL. IF THE MARKERS ARE LEFT IN PLACE AT NIGHT, SUITABLE LIGHTS SHALL BE PROVIDED AND MAINTAINED.

ONE WAY TRAFFIC:
WHENEVER ONE-WAY TRAFFIC IS ESTABLISHED, AT LEAST TWO FLAGGERS SHALL BE USED.

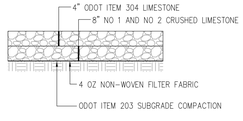
STREET CLOSING:
THE CONTRACTOR MAY NOT CLOSE THE STREET TO THROUGH TRAFFIC.

MAINTENANCE:
IF PROPER MAINTENANCE OF TRAFFIC FACILITIES AND/OR PROPER PROVISION FOR TRAFFIC CONTROL IS NOT BEING PROVIDED, THE MUNICIPALITY MAY TAKE NECESSARY STEPS TO CORRECT TRAFFIC MAINTENANCE. THE COST OF SUCH SERVICE WILL BE CHARGED TO THE CONTRACTOR.



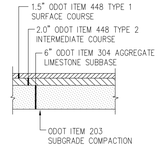
NEW SINGLE ARM BARRIER GATE DETAIL
NTS

NOTES:
1. 4.5" O.D. SCHEDULE #40 POSTS ARE TO BE INSTALLED FOR GATE HOLD BACK(S).
2. ALL SCHEDULE #40 PIPES ARE TO MEET SPECIFICATIONS OF ASTM F1083
3. ALL GATE JOINTS TO BE WELDED, CLEANED, AND PAINTED WITH TWO COATS OF ZINC RICH PAINT.
4. ALL GATE COMPONENTS ARE TO BE FACTORY PAINTED WITH TWO COATS OF ZINC RICH PAINT.

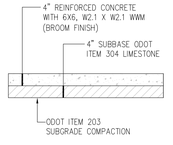


STONE DRIVEWAY PAVEMENT DETAIL
NTS

NOTE 1 - ODOT ITEM 407 TACK COAT TO BE APPLIED BETWEEN 448 AND 448 AT 0.04 GAL/SY



SD ASPHALT PAVEMENT DETAIL
NTS



CONCRETE WALK DETAIL
NTS

CONCRETE PAVING NOTES:
1. PROVIDE EXPANSION JOINTS AT 25' MAX SPACING
2. PROVIDE CONTRACTION JOINTS TO A DEPTH ¼ THICKNESS AT 8' MAX SPACING
3. CONTRACTION JOINTS AT LIMITS OF CONCRETE SHALL BE PERPENDICULAR TO THE EDGES OF THE CONCRETE SURFACES
4. SUBMIT JOINT SPACING PLAN TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

STATE OF OHIO JOHN URBANICK E-66506 REGISTERED PROFESSIONAL ENGINEER

ROCKAWAY CIVIL

Rockaway Civil LLC
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Ben Curtis Golf Academy
2155 Middleton Road
Hudson, Ohio 44236

Project Name

Sheet Revision

1	PC	03-03-21

Project Issue

SITE PLAN

Sheet Name

C101

Sheet #

RC Project # 20-040

STORM PIPE MATERIAL DATA

1. PP = DUAL WALLED POLYPROPYLENE PIPE PER ASTM F2764 (12-60 INCH) AND WATERTIGHT JOINTS PER ASTM D3212. USE ADS SANITITE HP OR APPROVED EQUAL.
2. HDPE = HIGH DENSITY POLYETHYLENE SEWER PIPE, BELL AND SPIGOT TYPE WITH RUBBER GASKETS AND SMOOTH INTERIOR, PER THE LATEST AASHTO M-294 SPECIFICATION.
3. PVC = SDR 35 POLYVINYL CHOLRIDE PIPING PER ASTM D3034 WITH PREMIUM JOINTS PER ASTM F 477 ASTM D 3212.

UTILITY PLAN KEY NOTE LEGEND (#)

1. 4" SDR PVC DOWNSPOUT CONNECTION - 24" MIN COVER - CONNECT TO 6" PVC WITH 6X4 WYE OR BY DIRECT CONNECTION TO NEW YARD DRAIN

UTILITY PLAN NOTES

GENERAL
1. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSING DEPTHS, SIZES, TYPES, CONDITIONS, ETC.. PRIOR TO CONSTRUCTION AND SHALL NOTIFY DESIGN ENGINEER WITH ANY CONFLICTS.
2. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING ITEMS AND MATERIALS ENCOUNTERED DURING CONSTRUCTION. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL AND STATE CODES AND REGULATIONS.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL UTILITY AGENCIES AS NECESSARY TO INSURE PROPER INSTALLATION OF SITE UTILITIES.
4. COORDINATE UTILITY CONNECTIONS AT THE BUILDING(S) WITH THE ARCHITECTURAL / MEP PLANS.
5. ANY EXISTING UTILITY CONNECTIONS BEING ABANDONED SHALL BE DISCONNECTED AND/OR CAPPED AS PER JURISDICTION OF THE RESPECTIVE UTILITY AGENCY.
6. ALL NEW FLEXIBLE PUBLIC SEWER PIPE 8" AND LARGER WILL HAVE TO UNDERGO DEFLECTION TESTING AS PER THE REQUIREMENTS OF THE CITY ENGINEER.
7. ALL NEW STORM SEWER AND SANITARY SEWER IMPROVEMENTS SHALL BE INSTALLED, INSPECTED, AND TESTED AS PER THE CURRENT REQUIREMENTS OF THE CITY ENGINEER.
8. CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING CONDITIONS (SIZE, CONDITION, PIPE MATERIAL, INVERT ELEVATION) OF ALL SANITARY SEWER AND STORM SEWER CONNECTION POINT(S). THESE FIELD VERIFICATIONS SHALL BE PERFORMED AS EARLY AS POSSIBLE DURING THE PROJECT CONSTRUCTION PERIOD. PRIOR TO FABRICATION OF ALL PRECAST STRUCTURES, THE CONTRACTOR SHALL CONFIRM WITH THE ARCHITECT/ENGINEER THAT THE FIELD VERIFIED CONDITIONS ARE SUITABLE FOR THE DESIGN. ALL ADDITIONAL PRECAST STRUCTURE RELATED WORK DUE TO THE LACK OF VERIFICATION OF EXISTING CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL UNFORESEEN UNDERGROUND OR ABOVE GROUND UTILITIES OR CONDITIONS THAT ARE DISCOVERED IN THE PROJECT AREA DURING CONSTRUCTION SHALL BE REPORTED BY THE CONTRACTOR TO THE DESIGN ENGINEER IMMEDIATELY FOR EVALUATION / POSSIBLE REDESIGN. THE FIELD DATA SHALL INCLUDE MATERIAL TYPE, SIZE, CONDITION, LOCATION, DEPTH / ELEVATION, ETC...
10. PREMIUM BACKFILL SHALL BE USED FOR STORM SEWER AND SANITARY SEWERS UNDER PAVEMENT ON PRIVATE PROPERTY.

SANITARY
11. NEW PVC SANITARY SEWER SHALL BE ASTM D3034 SDR 35 WITH PREMIUM JOINTS.
12. ALL SANITARY SEWER CONNECTION INSTALLATION SHALL MEET CURRENT REQUIREMENTS OF THE CITY ENGINEER AND SUMMIT COUNTY DSSS.

STORM
10. CONNECTIONS TO EXISTING STRUCTURES OR PIPES SHALL BE CORE DRILLED AND SHALL BE WATERTIGHT. CONTRACTOR SHALL CONFIRM INVERT ELEVATION, CONDITION, EXISTING PIPE SIZES, ETC... OF EX STRUCTURE OR PIPE PRIOR TO CORE DRILLING / MAKING CONNECTION. RESILIENT CONNECTORS ARE REQUIRED..
11. ALL EXISTING STORM SEWERS BEING REUSED OR CONNECTED TO SHALL BE JETTED AND CLEANED TO CONFIRM PROPER FUNCTION.

WATER
12. ALL WATER LINE / FIRE LINE WORK SHALL BE PERFORMED AS PER THE LATEST REGULATIONS OF THE COUNTY HEALTH DEPARTMENT AND THE OEPA.
13. CONTRACTOR SHALL COORDINATE SHUTOFF OF EXISTING WATER SERVICE, IF NECESSARY, TO MAKE NEW CONNECTIONS TO THE EXISTING WATER LINE. AT THE POINT OF CONNECTION, THE CONTRACTOR SHALL INSTALL AN ISOLATION GATE VALVE AS NECESSARY TO COORDINATE EXISTING WATER SERVICE. PROVIDE MIN. 48 HOURS NOTICE TO OWNER PRIOR TO SHUT OFF.

TRENCH EXCAVATION, BOTTOM PREPARATION AND BACKFILLING

GENERAL REQUIREMENTS:
ALL REQUIREMENTS FOR TRENCH EXCAVATION, BOTTOM PREPARATION AND BACKFILLING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND DETAILS. NO BACKFILL MATERIAL SHALL BE FROZEN.

IF MATERIAL OTHER THAN ODOT ITEM 304 MATERIAL IS PROPOSED FOR USE AS TRENCH FILL WITHIN THE RIGHT-OF-WAY, A WRITTEN REQUEST MUST BE SUBMITTED TO THE MUNICIPAL ENGINEER. THE MATERIAL IS SUBJECT TO THE FOLLOWING REQUIREMENTS:

A. PROCTORS MUST BE CONDUCTED ON ALL FILL MATERIALS AND PLANNED COMPACTION METHODS SUBMITTED TO THIS OFFICE PRIOR TO ANY FILLING OPERATIONS BEING PERMITTED.
B. NEW PROCTORS MUST BE OBTAINED AS OFTEN AS THE SOIL MATERIAL CHANGES.
C. NO PROCTOR'S FROM PREVIOUS YEAR'S CONSTRUCTION WILL BE ACCEPTED.
D. SLAG IS NOT PERMITTED.

ALL CONDUITS SHALL BE INSTALLED ON A FIRM BED FOR ITS FULL LENGTH UNLESS OTHERWISE SPECIFIED.

TRENCH BACKFILLING:
WHERE BACKFILLING IS BEING PERFORMED, THE FOLLOWING SHALL CONFORM TO THE FOLLOWING LIMITS:
1) INSTALLATION UNDER PAVEMENT AND/OR WITHIN 45° ZONE OF INFLUENCE LINE OF PAVEMENT EDGE SHALL BE INSTALLED IN ACCORDANCE WITH ODOT ITEM 304 BACKFILL. THE ENTIRE TRENCH SHALL BE FILLED IN LAYERS NOT TO EXCEED EIGHT (8) INCHES IN THICKNESS AND COMPACTED WITH MECHANICAL TAMPERS AT THE SPECIFIED MOISTURE CONTENT UNTIL DRY DENSITY IS NOT LESS THAN 98% OF THE STANDARD PROCTOR. SLAG MATERIAL IS NOT ACCEPTABLE.

2) WITHIN THE RIGHT-OF-WAY (R/W) BUT NOT UNDER PAVEMENT OR NOT WITHIN 45° ZONE OF INFLUENCE LINE OF PAVEMENT EDGE, SUITABLE BACKFILL MATERIAL SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR, AT THE SPECIFIED MOISTURE CONTENT. THE ENTIRE TRENCH SHALL BE FILLED IN LAYERS NOT TO EXCEED EIGHT (8) INCHES WITH A MECHANICAL TAMPER.

THESE REQUIREMENTS PERTAIN TO INSTALLATION OF ALL UTILITIES.

TRENCH WIDTH:
WIDTHS OF TRENCHES SHALL BE HELD TO A MINIMUM TO ACCOMMODATE THE PIPE AND APPURTENANCES. NO SLAG IS ACCEPTABLE. THE TRENCH WIDTH SHALL BE MEASURED AT THE TOP OF THE PIPE BARREL AND SHALL CONFORM TO THE FOLLOWING LIMITS:

1) ALL PIPE HAVING A DIAMETER LESS THAN TWENTY-FOUR (24) INCHES SHALL HAVE A MINIMUM WIDTH OF NINE (9) INCHES MEASURED FROM OUTSIDE OF PIPE BARREL TO TRENCH WALL.
2) ALL PIPE HAVING A DIAMETER GREATER THAN TWENTY-FOUR (24) INCHES BUT LESS THAN SIXTY-SIX (66) INCHES SHALL HAVE A MINIMUM WIDTH OF TWELVE (12) INCHES MEASURED FROM OUTSIDE OF PIPE BARREL TO TRENCH WALL.
3) ALL PIPE HAVING A DIAMETER GREATER THAN SIXTY-SIX (66) INCHES SHALL HAVE A MINIMUM WIDTH OF FIFTEEN (15) INCHES MEASURED FROM OUTSIDE OF PIPE BARREL TO TRENCH WALL.

TRENCH PROTECTION:
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT ANY CAVING OR SETTLING OF EXCAVATION OR TRENCH WALLS WHICH COULD ENDANGER THE SAFETY OF ANY PERSON ENGAGED IN THE WORK OR IN ANY WAY DAMAGE THE UNDERGROUND INSTALLATIONS OF ADJACENT UTILITIES OR PROPERTY; OR DIMINISH THE TRENCH WIDTH NECESSARY FOR THE PROPER CONSTRUCTION OF THE UNDERGROUND INSTALLATION OR OTHERWISE INJURE OR DELAY THE WORK. THE TYPE AND AMOUNT OF SUCH PROTECTION, SUCH AS TRENCH BOXES, SHEETING, SHORING, OR BRACING SHALL BE CONSISTENT WITH THE DEPTH AND WIDTH OF EXCAVATION, THE COMPOSITION AND WATER CONTENT OF THE SOIL, THE PROXIMITY OF STRUCTURES OR OTHER UTILITIES, THE VIBRATION FROM EQUIPMENT AND THE SPOIL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.

DEWATERING:
IN ORDER TO REDUCE GROUND WATER SEEPAGE AND PROVIDE A STABLE TRENCH BOTTOM IT MAY BE NECESSARY TO DEWATER PRIOR TO EXCAVATION OF THE SEWER TRENCH AND/OR PROVIDE TEMPORARY SUMPS.

FOUNDATION BOTTOM:
FOUNDATION MATERIAL BELOW THE PIPE AND SIX (6) INCHES OF SUBBEDDING SHALL BE SUITABLE MATERIAL THAT PREVENTS PIPE FROM DEFLECTION DUE TO SETTLEMENT. IF, IN THE ENGINEER'S OPINION, THE MATERIAL FORMING THE TRENCH BOTTOM IS NOT SUITABLE FOR A SOLID FOUNDATION, FURTHER DEPTH SHALL BE EXCAVATED AND THE SAME FILLED WITH MATERIAL AND THICKNESS SPECIFIED BY THE ENGINEER.

SUBBEDDING MATERIAL:
AFTER PREPARATION OF THE TRENCH BOTTOM, BEDDING MATERIAL SHALL BE PLACED BELOW PIPE. BEDDING MATERIAL SHALL BE #57 LIMESTONE WITH A MINIMUM THICKNESS OF SIX (6) INCHES AND SPREAD THE FULL WIDTH OF THE TRENCH BOTTOM. BEDDING MATERIAL SHALL NOT HAVE STANDING WATER AND BE FREE OF DEBRIS. ALL CONDUITS SHALL BE INSTALLED ON A FIRM BED FOR ITS FULL LENGTH..

PIPE PROTECTION:
ALL TRENCH EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER PIPE IS PLACED. AGGREGATE MATERIAL #57 LIMESTONE, THOROUGHLY COMPACTED AND INSTALLED AS PER ASTM D-2321 SHALL PROTECT PIPE ACCORDING TO SPECIFICATIONS HEREIN. FLEXIBLE PIPE SHALL HAVE A MINIMUM COVERAGE OF TWELVE (12) INCHES OVER OUTSIDE PIPE BARREL. RIGID PIPE SHALL HAVE A MINIMUM COVERAGE OF SIX (6) INCHES OVER OUTSIDE PIPE BARREL.

UNDERGROUND UTILITY CONSTRUCTION REQUIREMENTS

UNDERGROUND UTILITIES:
UTILITIES INCLUDING GAS PIPES, TELEPHONE CABLES AND ELECTRICAL POWER AND STREET LIGHTING CIRCUITS ARE RECOMMENDED TO BE UNDERGROUND. ALL TRENCH BACKFILL IN PAVEMENT AREAS SHALL BE ODOT ITEM #304 AGGREGATE BASE COMPACTED BY VIBRATORY OR MECHANICAL TAMPING IN EIGHT (8) INCH LAYERS. ALL WIRING AND CABLES NOT CONTAINED WITHIN CONDUIT AND DIRECT BURIED, SHALL HAVE THEIR LOCATIONS MARKED WITH TECTO-TAPE OR FACSIMILE TWELVE (12) INCHES ABOVE SUCH DIRECT BURIED WIRING OR CABLE. REFER TO TRENCH EXCAVATION, BOTTOM PREPARATION AND BACKFILLING SECTION HEREIN.

ALL CONSTRUCTION OF UTILITY PIPE, CONDUIT, CABLE, WIRES, VAULTS AND PERTINENT EQUIPMENT SHALL COMPLY WITH THE CURRENT REGULATIONS OF THE PUBLIC UTILITIES COMMISSION OF OHIO AND WITH THE REQUIREMENTS OF THE UTILITIES INVOLVED.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAS BEEN OBTAINED BY DILIGENT FIELD CHECK AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE DESIGN ENGINEER DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS AND THE CONTRACTOR IS THEREFORE URGED TO PROCEED WITH CAUTION.

EXISTING APPURTENANCES SUCH AS UTILITY POLES, VALVE BOXES, ETC. ARE TO BE SAFEGUARDED BY THE CONTRACTOR DURING CONSTRUCTION.

THE CONTRACTOR SHALL CONTACT THE UTILITIES PROTECTION SERVICE, 1-800-362-2764 AT LEAST FORTY-EIGHT (48) HOURS BEFORE ANY UNDERGROUND WORK IS COMMENCED IN EXISTING STREETS.

STATE OF OHIO JOHN URBANICK E-66506 REGISTERED PROFESSIONAL ENGINEER

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Project Issue

UTILITY PLAN

Sheet Name

C102

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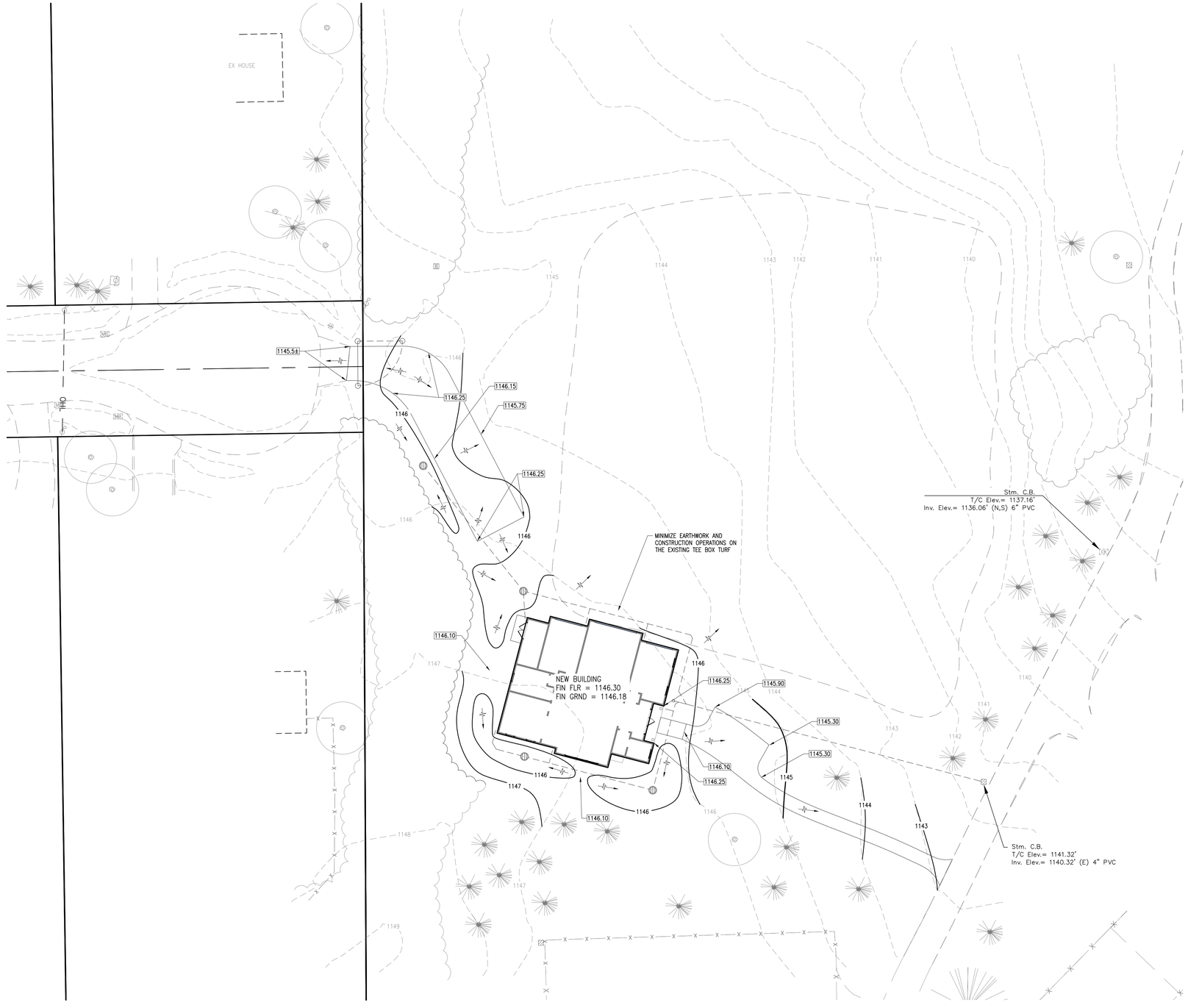

GRADING PLAN NOTES

1. IF THE CONTRACTOR BELIEVES THAT SOME OR ALL OF THE EXISTING INFORMATION SHOWN ON THE PROJECT SURVEY IS INACCURATE, THEN THEY ARE REQUIRED TO HAVE A CERTIFIED SURVEY PERFORMED OF THE PROJECT AREA IN QUESTION. THIS CERTIFIED SURVEY MUST BE PERFORMED PRIOR TO ANY DEMOLITION OR EARTHWORK. THIS CERTIFIED SURVEY WILL BE USED AS THE BASIS FOR CONFIRMING ACCURACY OF THE INFORMATION PROVIDED AS PART OF THE CONTRACT DOCUMENTS.
2. ALL NEW EARTHWORK SHALL BE BLENDED TO MEET EXISTING SITE CONDITIONS WHICH ARE TO REMAIN. GRADED SLOPES ARE SHOWN AT 3:1 MAXIMUM.
3. ALL PROPOSED LAWN AND HARD SURFACE GRADED AREAS SHALL HAVE POSITIVE SURFACE DRAINAGE TOWARDS STORM DRAINAGE STRUCTURES AND AWAY FROM ALL STRUCTURES WHERE APPLICABLE. CONTRACTOR SHALL CONTACT ENGINEER IF DRAINAGE CONFLICTS ARISE IN FIELD DURING CONSTRUCTION.
4. PROPOSED GRADING SHALL NOT INHIBIT THE SURFACE DRAINAGE FOR ADJOINING PARCELS.
5. ALL PROPOSED PAVEMENT SHALL HAVE A MINIMUM SURFACE SLOPE OF 1.20% AND A MAXIMUM SURFACE SLOPE OF 5.00% UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL CONSTRUCT ALL IMPROVEMENTS SO AS TO MINIMIZE DAMAGE TO PAVED AREAS CALLED TO REMAIN OR PAVED AREAS TO BE MILLED AND RESURFACED.
7. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF OHIO'S STANDARDS FOR STORMWATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION ENTITLED "RAINWATER AND LAND DEVELOPMENT" (LATEST EDITION).
8. ALL GRADED SLOPES GREATER THAN OR EQUAL TO 6:1 SHALL HAVE EROSION CONTROL BLANKETS INSTALLED AS PER PROJECT SPECIFICATIONS.
9. ALL NEW DRIVEWAY APRONS WITHIN THE PUBLIC RIGHT OF WAY(S) SHALL MAINTAIN ADA ACCESSIBLE ACCESS WHERE THE PUBLIC SIDEWALK CROSSES THE NEW DRIVEWAY APRON.
10. ALL LAWN AREAS REMOVED OR DISTURBED SHALL BE REPLACED BY SEEDING AND MULCHING IN ACCORDANCE WITH ITEM 659 OF ODOT SPECIFICATIONS AND SHALL BE RESEEDED AND MULCHED WHEN REQUESTED IF SATISFACTORY RE-ESTABLISHMENT OF LAWN DOES NOT OCCUR.

SITE PREPARATION AND EARTHWORK NOTES

EARTHWORK NOTES

THE RECOMMENDATIONS ARE NOT BASED ON TEST BORINGS, OR ANY KNOWN KNOWLEDGE OF SUBSURFACE CONDITIONS AT THE SITE. ALL RECOMMENDATIONS HAVE BEEN MAINTAINED ON A HIGHLY GENERALIZED PLAN AND ARE NOT TO BE CONSTRUED AS SPECIFIC AND/OR FINALIZED. A DETAILED SITE INVESTIGATION INCLUDING TEST BORINGS, LABORATORY TESTS AND ANALYSIS WILL BE REQUIRED PRIOR TO ANY FINAL DESIGN FOR FUTURE IMPROVEMENTS.

SITE PREPARATION

PRECAUTIONS SHOULD BE EXERCISED DURING THE REMOVAL OF THE EXISTING BUILDING OR UTILITY STRUCTURES AT THE PROPOSED SITE. ALL EXISTING FOUNDATIONS, FLOOR SLABS, BASEMENTS, UTILITY CONDUITS, ETC., SHOULD BE COMPLETELY REMOVED FROM THE SITE. THE EXCAVATIONS SHOULD BE CLEANED OF ALL FOREIGN DEBRIS AND THEN BACKFILLED WITH COMPACTED ENGINEERED FILL MATERIALS TO LESSEN POTENTIAL SETTLEMENT THAT MAY OCCUR.

FOLLOWING THE SITE CLEARING, STRIPPING AND UNDERCUTTING, AND PRIOR TO PLACING SUITABLE FILL, THE EXPOSED SUBGRADES SHOULD BE PROOFROLLED WITH A LOADED 20-TON TO 30-TON TANDEM-AXLE DUMP TRUCK UNTIL THE GRADE OFFERS AN UNYIELDING SURFACE. AREAS OF YIELDING SHOULD BE EXCAVATED AND BACKFILLED WITH COMPACTED SUITABLE FILL AND/OR THE UNSTABLE SOILS CAN BE STABILIZED BY CHOKING THE EXPOSED BEARING SURFACE WITH CRUSHED LIMESTONE OR SIMILAR COARSE AGGREGATE. AFTER THE EXISTING SUBGRADE MATERIALS ARE EXCAVATED PROPER CONTROL OF SUBGRADE COMPACTION AND THE PLACEMENT AND COMPACTION OF NEW FILL MATERIALS SHOULD BE PERFORMED.

IT IS RECOMMENDED THAT THE SITE PREPARATION, PROOFROLLING AND EARTHWORK ACTIVITIES SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER, WHICH CAN SIGNIFICANTLY REDUCE THE REQUIRED EXTENT OF SOIL STABILIZATION, DRAINAGE AND SURFACE REPAIRS.

DURING SITE PREPARATION, BURN PITS, TRASH PITS OR OTHER ISOLATED DISPOSAL AREAS MAYBE ENCOUNTERED. ANY SUCH MATERIALS ENCOUNTERED DURING SITE WORK ON CONSTRUCTION SHOULD BE COMPLETELY EXCAVATED AND REMOVED FROM THE SITE.

SUITABLE FILL

SUITABLE FILL MATERIALS SHOULD CONSIST OF NON-EXPANSIVE MATERIALS, POTENTIALLY EXPANSIVE MATERIALS SHOULD NOT BE USED AS SUITABLE FILL MATERIAL. MATERIALS SELECTED FOR USE AS SUITABLE FILL SHOULD NOT CONTAIN ORGANIC MATTER, WASTE CONSTRUCTION DEBRIS, OR OTHER DELETERIOUS MATERIALS. FILL MATERIALS SHOULD GENERALLY HAVE A STANDARD PROCTOR MAXIMUM DRY DENSITY GREATER THAN 110 POUNDS PER CUBIC FOOT (PCF), AN ATTERBERG LIQUID LIMIT LESS THAN 40, A PLASTICITY INDEX OF LESS THAN 20, AND A MAXIMUM PARTICLE SIZE OF 2 INCHES OR LESS.

REPRESENTATIVE SAMPLES OF THE PROPOSED FILL MATERIAL SHOULD BE COLLECTED AT LEAST ONE WEEK PRIOR TO THE START OF THE FILLING OPERATIONS. THE SAMPLES SHOULD BE TESTED TO DETERMINE THE MAXIMUM DRY DENSITY, OPTIMUM MOISTURE CONTENT, PARTICLE SIZE DISTRIBUTION AND PLASTICITY CHARACTERISTICS. THESE TESTS ARE NEEDED TO DETERMINE IF THE MATERIAL IS ACCEPTABLE AS SUITABLE FILL AND FOR QUALITY CONTROL DURING THE COMPACTION PROCESS.

THE FILL SHOULD BE PLACED IN LAYERS OF NOT MORE THAN 8 INCHES IN THICKNESS, WITH EACH LAYER BEING COMPACTED TO A MINIMUM DENSITY OF 98 PERCENT OF THE MAXIMUM DRY DENSITY AND WITH +/- 2% OF THE OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D-698. MOISTURE CONTROL OF THE SUITABLE FILL MATERIALS MAY BE NECESSARY FOR COMPACTION.

SUITABLE FILL OPERATIONS WILL REQUIRE MONITORING/TESTING BY A GEOTECHNICAL CONSULTANT / TESTING AGENCY TO ENSURE PROPER COMPACTION REQUIREMENTS ARE MET.

GROUNDWATER CONTROL AND DRAINAGE

WATER SEEPING MAY BE ENCOUNTERED DURING FOUNDATION EXCAVATION AND DEMOLITION. ACCORDINGLY, A GRAVITY DRAINAGE SYSTEM, SUMP PUMP OR OTHER CONVENTIONAL DEWATERING PROCEDURE AS DEEMED NECESSARY BY THE FIELD CONDITIONS MAY BE NECESSARY. EVERY EFFORT SHOULD BE MADE TO KEEP THE EXCAVATIONS DRY IF WATER IS ENCOUNTERED.

POSITIVE SITE DRAINAGE SHOULD BE PROVIDED TO REDUCE INFILTRATION OF SURFACE WATER AROUND THE PERIMETER OF THE FILL AREA. OVERALL SITE AREA DRAINAGE IS TO BE ARRANGED IN A MANNER SUCH THAT THE POSSIBILITY OF WATER IMPOUNDING OVER THE STRUCTURAL FILL IS PREVENTED.

EXCAVATIONS

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE, TEMPORARY EXCAVATIONS AND SHOULD SHORE, SLOPE, OR BENCH THE SIDES OF THE EXCAVATIONS AS REQUIRED TO MAINTAIN STABILITY OF BOTH THE EXCAVATION SIDES AND BOTTOM. THE CONTRACTOR SHOULD EVALUATE THE SOIL EXPOSED IN THE EXCAVATIONS AS PART OF THE CONTRACTOR'S SAFETY PROCEDURES. IN NO CASE SHOULD SLOPE HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH INCLUDING UTILITY TRENCH EXCAVATION DEPTH, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.

MATERIALS REMOVED FROM THE EXCAVATION SHOULD NOT BE STOCKPILED IMMEDIATELY ADJACENT TO THE EXCAVATION, INASMUCH AS THIS LOAD MAY CAUSE A SUDDEN COLLAPSE OF THE EMBANKMENT.

WEATHER CONSIDERATIONS

THE SOILS COULD BE SENSITIVE TO DISTURBANCES CAUSED BY CONSTRUCTION TRAFFIC AND TO CHANGES IN MOISTURE CONTENT. DURING WET WEATHER PERIODS, INCREASES IN THE MOISTURE CONTENT OF THE SOIL CAN CAUSE SIGNIFICANT REDUCTION IN THE SOIL STRENGTH AND SUPPORT CAPABILITIES. CARE SHOULD BE EXERCISED DURING THE GRADING OPERATIONS AT THE SITE. TRAFFIC OF HEAVY EQUIPMENT, INCLUDING HEAVY COMPACTION EQUIPMENT, MAY VERY WELL CREATE PUMPING AND A GENERAL DETERIORATION OF THE SOILS IN THE PRESENCE OF WATER. THEREFORE, THE GRADING SHOULD, IF AT ALL POSSIBLE, BE PERFORMED DURING A DRY SEASON. A LAYER OF CRUSHED STONE MAY BE REQUIRED TO ALLOW THE MOVEMENT OF CONSTRUCTION TRAFFIC OVER THE SITE DURING THE RAINY SEASON. THE CONTRACTOR SHOULD MAINTAIN POSITIVE SITE DRAINAGE AND IF WET/PUMPING CONDITIONS OCCUR, THE CONTRACTOR WILL BE RESPONSIBLE TO OVER EXCAVATE THE WET SOILS AND REPLACE THEM WITH A PROPERLY COMPACTED ENGINEERED FILL.

STATE OF OHIO · JOHN URBANICK · E-66506 · REGISTERED PROFESSIONAL ENGINEER

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Project Issue

GRADING PLAN

Sheet Name

C103

Sheet #

RC Project # 20-040

ABBR. SWP3-1 KEY NOTE LEGEND

1. CONSTRUCTION ENTRANCE, PER DETAIL
2. STAGING AREA
3. WASTE CONTAINER AREA
4. CONCRETE WASHOUT AREA, PER DETAIL
5. MATERIAL STOCKPILE AREA – PROVIDE FILTER SOCK AT LIMITS
6. FILTER SOCK, PER DETAIL
7. INLET PROTECTION, PER DETAIL
8. EARTH DISTURBANCE AREA

OEPA NPDES STORMWATER REQUIREMENTS

**OHIO EPA FACILITY PERMIT NUMBER: NA – SITE DISTURBANCE IS LESS THAN 1 ACRE

SITE DESCRIPTION

A. THIS PROJECT WILL CONSIST OF CONSTRUCTION OF SITE IMPROVEMENTS FOR THE PROPOSED BEN CURTIS GOLF ACADEMY AND WILL INCLUDE SITE CLEARING, GRADING, DRAINAGE SWALES AND STORM SEWER INSTALLATION, AND BUILDING AND CART PATH CONSTRUCTION.
B. THE TOTAL SITE AREA IS 109.27 ACRES AND THE EXPECTED AREA TO BE DISTURBED WITHIN THAT SITE IS 0.61 ACRES
C. PRE DEV CN = 79.35 POST DEV CN = 84.44
D. AS PER THE USDA SOIL SURVEY, THE SOIL TYPE(S) FOR THE SITE IS/ARE MgB – MAHONING SILT LOAM, 2 TO 6 PERCENT SLOPES.
E. THIS SITE HAS BEEN PREVIOUSLY DEVELOPED AS A GOLF COURSE. NO OTHER PRIOR LAND USES ARE KNOWN.
F. SEE STORM WATER POLLUTION PREVENTION PLAN IMPLEMENTATION SCHEDULE.
G. IMMEDIATE RECEIVING STREAM OR SURFACE WATER – THE STORM WATER FROM THE PROJECT SITE DRAINS INTO A PRIVATE STORM SEWER SYSTEM WITHIN THE GOLF COURSE WHICH ULTIMATELY OUTLETS TO A TRIBUTARY TO TINKERS CREEK.
H. NOT APPLICABLE – NOT A SUBDIVIDED DEVELOPMENT
I. THERE ARE NOT STORM WATER DISCHARGES ASSOCIATED WITH DEDICATED ASPHALT OR DEDICATED CONCRETE PLANTS ASSOCIATED WITH THIS SITE.
J. A COPY OF THE PERMIT REQUIREMENTS – OHC000004 IS AVAILABLE ON THE OEPA WEBSITE WWW.OEPA.COM. A COPY OF THE PERMIT REQUIREMENTS CAN ALSO BE PROVIDED UPON FORMAL REQUEST TO THE ENGINEER.
K. SEE COVER SHEET FOR PROJECT INFORMATION.

CONTACT INFORMATION

A. OPERATOR RESPONSIBLE FOR IMPLEMENTATION OF STORM WATER POLLUTION PREVENTION PLAN
CONTRACTOR TBD
ADDRESS
ADDRESS

B. THE CERTIFIED PROFESSIONAL WHO PREPARED THE COMPREHENSIVE STORM WATER MANAGEMENT PLAN AND IS AUTHORIZED TO AMEND SAID PLAN.
JOHN URBANICK – ROCKAWAY CIVIL LLC
10191 SPERRY ROAD
KIRTLAND, OH 44094
JURBANICK@ROCKAWAYCIVIL.COM

C. THE SITE OWNER:
COUNTRY CLUB OF HUDSON
2155 MIDDLETON ROAD HUDSON OHIO 44236

APPROXIMATE PROJECT START DATE MAY 2021
APPROXIMATE PROJECT END DATE OCT 2021

STORM WATER POLLUTION PREVENTION PLAN IMPLEMENTATION SCHEDULE

ITEMS LISTED IN THIS IMPLEMENTATION SCHEDULE ARE TO BE ADDRESSED CHRONOLOGICALLY IN THE ORDER THEY ARE LISTED. THIS IMPLEMENTATION SCHEDULE IS TO BE USED AS A GENERAL GUIDE FOR STORM WATER POLLUTION PREVENTION ITEMS. AT A MINIMUM, ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD. EROSION AND SEDIMENT CONTROLS THAT ARE FOUND TO BE IN NEED OF REPAIR DURING THE INSPECTION ARE TO BE REPAIRED WITHIN 3 DAYS OF THE INSPECTION.

1. CONTRACTOR IS TO REVIEW THIS PLAN PRIOR TO INITIATING ANY WORK ON SITE. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REVIEWING AND OBTAINING AN NPDES PERMIT FROM THE OHIO EPA PRIOR TO INITIALIZATION OF WORK ON THE SITE.
2. CONSTRUCTION ACCESS DRIVE SHALL BE LIMITED AS SHOWN ON THE PLANS. ALL VEHICLES ENTERING THE SITE DURING CONSTRUCTION ARE TO USE THIS DRIVE FOR INGRESS AND EGRESS. THIS IS THE ONLY POINT OF INGRESS AND EGRESS TO BE USED DURING THE ENTIRE CONSTRUCTION PROCESS IN ORDER TO REDUCE CONSTRUCTION MATERIALS FROM BEING MOVED ONTO PUBLIC ROADWAYS. THE DRIVE IS TO BE INSPECTED FOR INTEGRITY AT THE END OF EACH DAY. REPAIRS ARE TO BE MADE AND THE DRIVE SHALL BE CLEANED AS NECESSARY.
3. THE LIMITS OF DISTURBANCE / CLEARING SHALL BE STAKED OUT PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
4. THE STAGING AREA IS TO BE INSTALLED AT THE LOCATION DEPICTED ON THIS SWPPP. ALL VEHICLES THAT ARE NOT IN USE OR ARE TO REMAIN OVERNIGHT ARE TO BE KEPT IN THE STAGING AREA AND SHALL NOT LIE IDLE IN ANY OTHER AREAS ON SITE.
5. INSTALL THE CONCRETE WASHOUT PIT AND BRING WASTE CONTAINERS TO THE SITE IMMEDIATELY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT WASTE CONTROL PROCEDURES ARE BEING PERFORMED TO PREVENT POLLUTION INTO THE STORM WATER SYSTEM DURING CONSTRUCTION.
6. CONTRACTOR IS TO INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES PRIOR TO THE START OF DEMOLITION. EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED WITHIN 7 DAYS OF GRUBBING. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, FILTER SOCKS, SILT FENCE, DANDY BAGS AND INLET PROTECTION. SILT FENCE POSTS ARE TO BE SET A MAXIMUM OF 6' FROM EACH OTHER AND THE ENDS OF THE GEOTEXTILE FABRIC OF THE SILT FENCE ARE TO BE SLOPED TOWARD THE UP SLOPE OF THE AREA IT IS SERVING TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE. SILT FENCE IS TO BE INSPECTED AT THE BEGINNING OF EACH DAY AND REPAIRS ARE TO BE MADE IMMEDIATELY. REPAIRS MAY INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: TEARS IN THE GEOTEXTILE FABRIC, COLLAPSED POSTS FROM TOO MUCH RUNOFF OF SILT / SOIL, MISDIRECTION OF SEDIMENT DUE TO IMPROPER INSTALLATION OF EROSION, VANDALISM, ETC.
7. THE CONTRACTOR MUST INSTALL EROSION CONTROLS AND SEDIMENT CONTROLS INCLUDING, BUT NOT LIMITED TO, FILTER SOCKS, SILT FENCE, DIVERSION BERMS, SEDIMENT TRAPS) AS MORE AREAS BECOME DISTURBED THROUGHOUT CONSTRUCTION. THIS SHALL BE DONE PRIOR TO DISTURBING PREVIOUSLY UNDISTURBED LANDS.
8. ALL TRENCH AND GROUND WATER COLLECTED IS TO BE PUMPED INTO THE SEDIMENT TRAP TO BE TREATED FOR WATER QUALITY AND DEWATERING DURING CONSTRUCTION.
9. THE SOIL IS TO BE STRIPPED OF ITS TOP ORGANIC LAYER AS NECESSARY ONLY AFTER ALL SEDIMENT AND EROSION CONTROLS HAVE BEEN INSTALLED AND INSPECTED FOR PROPER OPERATION.
10. CLEARING OF THE SITE AND STRIPPING OF EXISTING TOPSOIL WILL BE PERFORMED IN A MANNER THAT DOES NOT DISTURB NEIGHBORING LAND OR PUBLIC ROADWAYS FROM THEIR NORMAL CONDITION. DURING AND AT THE END OF EACH DAY OF TOPSOIL STRIPPING, THE DISTURBED SOIL IS TO BE TREATED WITH OEPA RECOMMENDED DUST SUPPRESSANTS SO THAT DUST DOES NOT ACCUMULATE NOR HAVE THE ABILITY TO SPREAD ONTO NEIGHBORING PROPERTIES, PUBLIC ROADWAYS, OR INTO STORM SEWER STRUCTURES DURING NORMAL WORKING HOURS.
11. ALL REUSABLE EXCAVATED EARTH IS TO BE PLACED AT A SEPARATE STOCKPILE LOCATION AS SHOWN ON THIS SWPPP, WHICH IS TO BE SURROUNDED BY SILT FENCE OR FILTER SOCK AT THE END OF THE FIRST DAY OF BUILDING OF THE STOCKPILES. IF THE STOCKPILE IS TO REMAIN UNDISTURBED FOR LONGER THAN A PERIOD OF 7 DAYS, THEN TEMPORARY SEEDING MUST BE PERFORMED ON THE STOCKPILE AS PER SPECIFICATIONS OF THE SWPPP. SILT FENCE OR FILTER SOCKS MUST BE PLACED AROUND THE PERIMETER OF THE SOIL STOCKPILE ONCE IT HAS BEEN ESTABLISHED.
12. TEMPORARY SEEDING IS TO TAKE PLACE AS PER THE SPECIFICATIONS DESCRIBED ON THE PLANS. TEMPORARY SEEDING IS TO BE PLACED IN AREAS THAT WILL REMAIN IDLE FOR LONGER THAN 7 DAYS
13. CONSTRUCTION VEHICLES USED IN CONCRETE RELATED WORK ARE TO BE CLEANED OFF AT THE CONCRETE WASH OUT AREA AS DEPICTED ON THIS SWPPP. THIS IS TO BE PERFORMED AT THE END OF EACH DAY OF CONCRETE DEMOLITION AND AT THE END OF ENTIRE CONCRETE DEMOLITION PORTION OF PROJECT. IF THE PRIMARY CONCRETE WASH OUT AREA BECOMES TOO HARD AND DOES NOT ALLOW THE CONCRETE WASH OFF TO PROPERLY WASH OUT, THEN A NEW WASH OUT AREA SHALL BE CREATED AND USED FOR CLEANING WHILE THE OTHER WASH OUT AREA IS REPAIRED.
14. ALL EXCAVATED UTILITY TRENCHES MUST BE STABILIZED AT THE END OF EACH DAY WITH GRAVEL BACKFILL FROM THE BOTTOM OF THE TRENCH TO THE SURFACE TO PREVENT EROSION OF THE TRENCH OVERNIGHT.
15. ALL SPARE AND WASTE CONSTRUCTION MATERIALS ARE TO BE DISPOSED OF IN WASTE CONTAINERS, WHICH ARE TO BE EMPTIED PRIOR TO REACHING THEIR MAXIMUM CAPACITY. SPARE CONSTRUCTION MATERIALS MAY ALSO BE TRANSPORTED OFFSITE TO AN APPROPRIATE LOCATION DETERMINED BY THE CONTRACTOR (I.E. THE CONTRACTOR'S STORAGE WAREHOUSE), OTHERWISE MATERIALS ARE TO BE DISPOSED OF AT AN OFFSITE CONSTRUCTION AND DEBRIS DEMOLITION LANDFILL AS PER ORC 3714.
16. WHEN TOXIC MATERIALS (I.E. FUEL) ARE USED TO CLEAN THE MACHINERY, THE CLEANING MUST TAKE PLACE ON THE STAGING AREA. THE STAGING AREA MUST BE BARRICADED/BERMED AS TO NOT ALLOW RUNOFF FROM THE STAGING AREA ONTO PERMEABLE AREAS. THE TOXIC RUNOFF FROM CLEANING OF MACHINERY IS TO BE COLLECTED VIA VACUUM AND PLACED INTO BARRELS WHICH ARE TO BE DISPOSED OF OFF SITE AT A CONSTRUCTION AND DEBRIS DEMOLITION LANDFILL AS PER ORC 3714.

SWP3 INSPECTIONS

1. TEMPORARY BMPS ARE TO BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5 INCHES WITHIN A 24 HOUR PERIOD.
2. AN INSPECTION WAIVER REQUEST IS TO BE SUBMITTED TO THE OEPA TO REDUCE THE AMOUNT OF MONTHLY INSPECTION IF THE SITE IS TO LIE DORMANT FOR AN EXTENDED PERIOD OF TIME.
3. INSPECTIONS ARE TO BE PERFORMED BY "QUALIFIED INSPECTION PERSONNEL." INSPECTION RECORDS ARE TO BE KEPT FOR A MINIMUM 3 YEARS AFTER THE TERMINATION OF CONSTRUCTION ACTIVITIES.
4. AN INSPECTION CHECKLIST WILL BE COMPLETED AND SIGNED BY THE INSPECTOR AFTER EVERY INSPECTION.
5. NON-SEDIMENT BMPS ARE TO BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS ARE TO BE REPAIRED AND CLEANOUT WITHIN 10 DAYS OF INSPECTION. BMPS THAT ARE NOT MEETING THE INTENDED FUNCTION OR HAVE NOT BEEN INSTALLED ARE TO BE REINSTALLED/INSTALLED WITHIN 10 DAYS OF INSPECTION.

STATE OF OHIO ENGINEER JOHN URBANICK E-66506 REGISTERED PROFESSIONAL
ROCKAWAY CIVIL
Rockaway Civil LLC
10191 Sperry Road Kirtland Ohio 44094
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N

0 20'
SCALE: 1"= 20'

Ben Curtis Golf Academy
2155 Middleton Road
Hudson, Ohio 44236

Project Name

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1	PC	03-03-21

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Sheet Name

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Sheet #

RC Project # 20-040

SEEDING DATES	SPECIES	LB/1000 FT²	LB/ACRES
MARCH 1 TO AUGUST 15	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREEPING RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREEPING RED FESCUE	0.4	40
	KENTUCKY BLUEGRASS	0.4	
NOVEMBER 1 TO FEBRUARY 29	USE MULCH ONLY, SODDING PRACTICES OR DORMANT SEEDING.		
NOTE: OTHER APPROVED SEED SPECIES MAY BE APPROVED.			

ADDITIONAL TEMPORARY STABILIZATION NOTES:

1. TEMPORARY SEEDING IS REQUIRED FOR ANY AREAS THAT WILL REMAIN IDLE OVER THE WINTER PRIOR TO THE ONSET OF WINTER WEATHER.
2. TEMPORARY SEEDING IS REQUIRED WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE FOR AN AREA WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE THAT WILL REMAIN IDLE FOR 14 DAYS OR MORE.
3. TEMPORARY SEEDING IS REQUIRED ON ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL LIE DORMANT FOR MORE THAN 14 DAYS, BUT LESS THAN ONE YEAR AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.

TEMPORARY SEEDING SPECIFICATIONS

SEED MIX	SEEDING RATE LBS/ACRE	SEEDING RATE LBS/1000	NOTES:
GENERAL USE			
CREEPING RED FESCUE	20-40	1/2-1	FOR CLOSE MOWING AND FOR WATERWAYS WITH <2.0 FT/SEC VELOCITY
DOMESTIC RYEGRASS	10-20	1/4-1/2	
KENTUCKY BLUEGRASS TALL FESCUE	20-40	1/2-1	
TURF-TYPE (DWARF) FESCUE	40-50	1-1 1/4	
STEEP BANKS OR CUT SLOPES	90	2	
TALL FESCUE	40-50	1-1 1/4	
CROWN VETCH	10-20	1/4-1/2	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20-30	1/2-3/4	
FLAT PEA	20-25	1/2-3/4	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20-30	1/2-3/4	
ROAD DITCHES AND SWALES			
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE (DWARF) FESCUE	90	2	
KENTUCKY BLUEGRASS	5	1/4	
LAWNS*			
KENTUCKY BLUEGRASS	100-120	2	
PERENNIAL RYEGRASS		2	
KENTUCKY BLUEGRASS	100-120	2	FOR SHADED AREAS
CREEPING RED FESCUE		1-1/2	

*NOTE: FOLLOWING SOIL TEST RECOMMENDATIONS IS PREFERRED TO FERTILIZER RATES SHOWN ABOVE

ADDITIONAL PERMANENT SEEDING REQUIREMENTS:

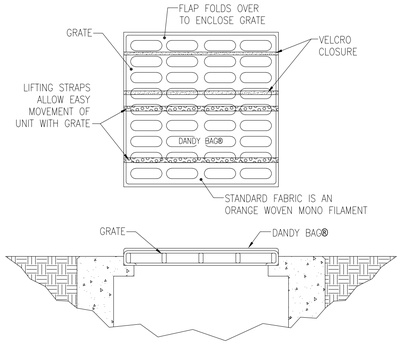
1. PERMANENT SEEDING IS REQUIRED FOR ANY DISTURBED AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
2. PERMANENT SEEDING IS REQUIRED FOR ANY AREA WITHIN 50 FEET OF A SURFACE WATER BODY OF THE STATE AND AT FINAL GRADE WITHIN 2 DAYS OF REACHING FINAL GRADE.
3. PERMANENT SEEDING IS REQUIRED FOR ANY AREA AT FINAL GRADE WITHIN 7 DAYS OF REACHING FINAL GRADE.

PERMANENT SEEDING SPECIFICATIONS

SPECIFICATIONS FOR
CONSTRUCTION ENTRANCE
(NOT TO SCALE)

1. STONE SIZE–ODOT #2(1.5–2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT. WHEN THE CONSTRUCTION ENTRANCE IS PROPOSED IN AN EXISTING PAVED AREA, THE EXISTING PAVEMENT MAY BE UTILIZED IN LIEU OF STONE.
2. 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).
3. THICKNESS–THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH–THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. 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:
6. TIMING–THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT–A PIPE OR CULVERT DISCONSTRUCTED 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.
8. 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.
9. MAINTENANCE–TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD 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.
10. 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.
11. REMOVAL–THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

GEOTEXTILE SPECIFICATIONS FOR CONSTRUCTION ENTRANCE	
MINIMUM TENSILE STRENGTH	200 LBS.
MINIMUM PUNCTURE STRENGTH	80 PSI
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.



INSTALLATION AND MAINTENANCE GUIDELINES

INSTALLATION: THE EMPTY DANDY BAG® SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW–GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.

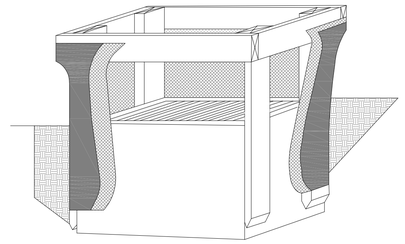
MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG® AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS; REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

ADS FLEX–STORM IS AN ACCEPTABLE INLET PROTECTION ALTERNATIVE.

** DANDY BAGS MAY ONLY BE USED FOR INLET PROTECTION WHEN THE DRAINAGE STRUCTURE IS COMPLETELY SURROUNDED BY PAVEMENT.

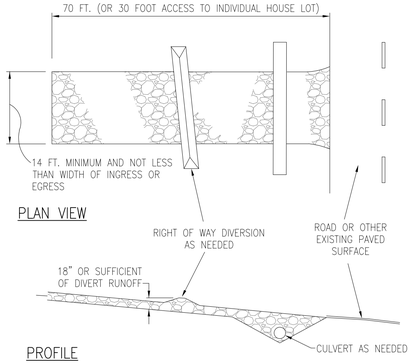
DANDY BAC**®
NOT TO SCALE

SPECIFICATIONS FOR
GEOTEXTILE INLET PROTECTION
(NOT TO SCALE)

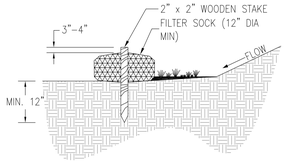


1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18 INCHES.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2–INCH BY 4–INCH POSTS SHALL BE DRIVEN ONE (1 FT.) INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2–INCH BY 4–INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WILL POSE A SAFETY HAZARD TO TRAFFIC.
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
5. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20–40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION.
6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6–INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
7. A COMPACTED EARTH DIKE OR CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A SDEPRESSION.THE TOP OF THE DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.
8. STRUCTURES IN NEED ON INLET PROTECTION IN PAVEMENT AREAS ARE TO USE DANDY BAGS OR FILTER SOCK TYPE INLET PROTECTION.

SPECIFICATIONS FOR
CONSTRUCTION ENTRANCE
(NOT TO SCALE)



SPECIFICATIONS FOR
FILTER SOCK
(NOT TO SCALE)



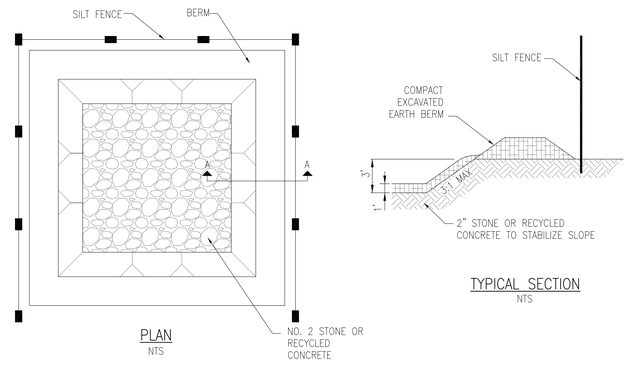
1. MATERIALS – COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL–DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
2. FILTER SOCKS SHALL BE 3 OR 5 MILL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST MASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

INSTALLATION

3. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID–SLOPE
4. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION OF ESTABLISHMENT OF PERMANENT VEGETATION.
5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

MAINTENANCE:

6. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
7. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THE REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
8. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
9. REMOVAL – FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDLINGS.



NOTES:

1. TEMPORARY TRUCK WASHOUT FACILITIES SHOULD BE CONSTRUCTED AS SHOWN ON THIS DETAIL. THE QUANTITY AND VOLUME SHOULD BE SUFFICIENT TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
2. THE WASHOUT AREA SHALL BE LOCATED ADJACENT TO A STABILIZED DRIVE/AREA.
3. CONCRETE WASTE SHALL BE CLEANED OUT PERIODICALLY TO MAINTAIN AN ADEQUATE VOLUME.
4. FOLLOWING CONSTRUCTION, THE WASHOUT SHALL BE REMOVED BY CONTRACTOR.

TEMPORARY CONCRETE WASHOUT DETAIL

APPENDIX G – SWPPP AMENDMENT LOG

SWPPP CONTACT:

AMENDMENT NO.	DESCRIPTION OF THE AMENDMENT	DATE OF AMENDMENT	AMENDMENT PREPARED BY:

APPENDIX I – GRADING AND STABILIZATION ACTIVITIES LOG

SWPPP CONTACT:

DATE GRADING ACTIVITY INITIATED	DESCRIPTION OF GRADING ACTIVITY	DATE GRADING ACTIVITY CEASED (INDICATE TEMPORARY OR PERMANENT)	DATE WHEN STABILIZATION MEASURES ARE INITIATED	DESCRIPTION OF STABILIZATION MEASURE AND LOCATION

STATE OF OHIO JOHN URBANICK E-66506 REGISTERED PROFESSIONAL ENGINEER

ROCKAWAY CIVIL

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Hudson, Ohio 44236

Project Name

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SWP3-2

Sheet Name

C201

Sheet #

RC Project # 20-040

PAVEMENT DRIVE APRONS, SIDEWALK, CURBS AND CURB RAMP REQUIREMENTS

GENERAL REQUIREMENTS:
THE FOLLOWING REQUIREMENTS APPLY TO ALL PAVEMENT DRIVE APRONS, SIDEWALKS AND CURB RAMPS. ALL PAVEMENT DRIVES, SIDEWALKS AND/OR CURB RAMPS SHALL CONFORM TO ODOT SPECIFICATIONS IF NOT SPECIFIED HEREIN. ALL PAVEMENT DRIVES, SIDEWALKS AND CURB RAMP REPLACEMENTS SHALL CONFORM TO THE GRADE OF THE EXISTING PAVEMENT DRIVE, SIDEWALK AND/OR CURB RAMP.

MATERIAL:
ALL CONCRETE SHALL BE CLASS "C" PER ODOT 499 AND PROPERLY CONSOLIDATED (NO SLAG).

SITE ACCESS:
EXCAVATION IN TRAFFIC AREAS SHALL NOT BE LEFT OPEN OVERNIGHT. ALL DRIVE APRON CONSTRUCTION SHALL FOLLOW A SCHEDULE THAT ALLOWS ACCESS TO AND FROM PROJECT SITE AT ALL TIMES. THE DISRUPTION OF ACCESS TO DRIVEWAYS DUE TO THIS WORK SHALL BE KEPT TO A MINIMUM.

SIGNAGE:
THE CONTRACTOR MUST PROVIDE ADEQUATE SIGNS, MARKERS AND BARRICADES TO PROTECT PEDESTRIAN TRAFFIC, VEHICULAR TRAFFIC AND CONSTRUCTION PERSONNEL DURING THE PROGRESS OF THIS WORK. ADDITIONAL SIGNS INDICATING ENTRANCES FOR BUSINESSES IN A CONSTRUCTION ZONE ARE REQUIRED AS DIRECTED BY THE MUNICIPAL ENGINEER.

PAVEMENT DRIVE APRONS:
ALL PAVEMENT DRIVE APRONS SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES FOR RESIDENTIAL DRIVEWAYS AND EIGHT (8) INCHES FOR ALL OTHER DRIVEWAYS. REFER TO DETAILS.

SIDEWALK:
ALL SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF FOUR (4) INCHES EXCEPT WITHIN THE LIMITS OF THE DRIVEWAYS, WHERE THE MINIMUM THICKNESS SHALL BE SIX (6) INCHES FOR ONE OR TWO FAMILY RESIDENTIAL DRIVEWAYS AND EIGHT (8) INCHES FOR ALL OTHER DRIVEWAYS.

ONE-HALF (1/2) INCH EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED FIFTY (50) FEET. EXPANSION JOINTS SHALL BE SEALED WITH 1/2" THICK SELF LEVELING URETHANE CHALK, LIMESTONE GRAY IN COLOR. ALL CONCRETE SIDEWALK AND/OR CURB SHALL BE OF MONOLITHIC CONSTRUCTION. ALL SIDEWALKS SHALL HAVE A FOUR (4) INCH MINIMUM SUBBASE, ODOT ITEM 304, COMPACTED TO 95% COMPACTION.

CURB RAMPS:
CURB RAMPS SHALL BE PLACED AS SHOWN ON THE PLANS. ALL SIDEWALKS SHALL CONNECT TO THE PAVEMENT OR CURB AT INTERSECTIONS WITH WHEELCHAIR RAMPS AND ONE-HALF (1/2) INCH EXPANSION JOINTS BETWEEN THE WALK AND CURB. EXPANSION JOINTS SHALL BE SEALED WITH 1/2" THICK SELF LEVELING URETHANE CHALK, LIMESTONE GRAY IN COLOR. ALL CURB RAMPS SHALL MEET THE CURRENT ADA REQUIREMENTS. REFER TO DETAILS.

CONSTRUCTION SAW CUTTING:
WHERE IT IS NECESSARY TO DISTURB EXISTING PAVEMENT DRIVES, CURB RAMPS OR SIDEWALKS THE CONCRETE SHALL BE SAW CUT IN NEAT STRAIGHT LINES AS DIRECTED BY ENGINEER / MUNICIPALITY. THE DEPTH OF SAW CUT SHALL BE FULL DEPTH. WHERE IT IS NECESSARY TO DISTURB EXISTING PAVEMENT DRIVES, CURBS AND/OR WALKS THE ASPHALT CONCRETE SHALL BE LINE CUT WITH STRAIGHT VERTICAL EDGES. ALL CUT BITUMINOUS SURFACES SHALL BE SEALED WITH A 4" WIDE RUBBERIZED JOINT SEALER USING A SQUEEGEE.

CONCRETE SHALL BE REMOVED IN SECTIONS. SAW CUT LINES ARE TO TAKE PLACE AT EXISTING JOINTS.

CURING COMPOUND:
AN APPROVED SEALER SHALL SEAL ALL EXPOSED CONCRETE APPROPRIATE TO APPLICATION ON SURFACE OF CONCRETE. SEE CURRENT ODOT SPECIFICATIONS FOR APPLICATION METHODS.

STRUCTURES ENCOUNTERED:
THE CONTRACTOR SHALL ADJUST ANY "SURFACE STRUCTURE" IN THE AREA OF SIDEWALK AND/OR PAVEMENT DRIVE TO GRADE. THE CONTRACTOR SHALL FURNISH NECESSARY PARTS AND REPAIR ALL "SURFACE STRUCTURES" DAMAGED BY CONSTRUCTION OF IMPROVEMENT.

ASPHALT PAVEMENT CONSTRUCTION REQUIREMENTS

GENERAL REQUIREMENTS:
THE FOLLOWING REQUIREMENTS APPLY TO ALL PAVEMENT IMPROVEMENTS.

COLD WEATHER:
NO ASPHALTIC PAVEMENT COURSE AND/OR CONCRETE PAVEMENT OR CURBING SHALL BE LAID ON FROZEN PAVEMENT, BASE OR SUBBASE.

SURFACE TEMPERATURES FOR ASPHALT PAVEMENT PLACEMENT SHALL BE 40 DEGREES FAHRENHEIT FOR THICKNESS GREATER THAN 1.5 INCHES AND 50 DEGREES FAHRENHEIT FOR SURFACE COURSES LESS THAN 1.5 INCHES. THE AIR TEMPERATURE SHOULD NOT BE LESS THAN 40 DEGREES FAHRENHEIT FOR ASPHALT PLACEMENT.

AMBIENT TEMPERATURE SHALL BE 35 DEGREE FAHRENHEIT AND RISING FOR CONCRETE PLACEMENT. WINTER PROTECTION SHALL BE IN EFFECT WHEN TEMPERATURES FALL BELOW 40 DEGREES FAHRENHEIT FOR A PERIOD OF 3 SUCCESSIVE DAYS. PROTECTION CONSISTS OF VISQUEEN AND BLANKETS.

EARTHWORK:
ALL FILLED AREAS, EXCLUDING TRENCHES WITHIN RIGHT-OF-WAY AREAS, SHALL BE COMPACTED IN ACCORDANCE WITH ODOT ITEM 203. IN ADDITION, FOR ANY FILL IN EXCESS OF TWO (2) FEET, AN APPROVED TESTING COMPANY IN ACCORDANCE WITH ODOT ITEM 203 SHALL PERFORM NUCLEAR COMPACTION TESTS.

ASPHALT PAVEMENT:
ALL MATERIAL MUST BE OBTAINED FROM A SOURCE APPROVED BY THE OHIO DEPARTMENT OF TRANSPORTATION. ASPHALT PAVING SHALL BE AS SHOWN ON THE TYPICAL SECTION.

MATERIALS:
AGGREGATE BASE – AGGREGATE BASE SHALL BE THE REQUIRED THICKNESS ACCORDING TO THE ATTACHED DETAILS AND IN ACCORDANCE TO ODOT ITEM 304 LIMESTONE. AGGREGATE BASE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY.

SURFACE ASPHALT CONCRETE – SURFACE ASPHALT CONCRETE SHALL BE AS PER THE ATTACHED DETAILS. THE SURFACE COURSE SHALL BE FINISHED 1/4 INCH ABOVE THE GUTTER AND ALL CASTINGS IN ROADWAY AS APPLICABLE.

INTERMEDIATE ASPHALT CONCRETE – INTERMEDIATE ASPHALT CONCRETE SHALL BE AS PER THE ATTACHED DETAILS.

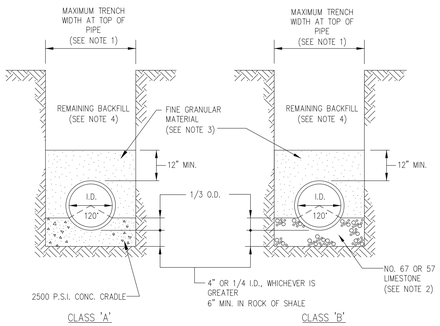
BITUMINOUS AGGREGATE BASE – BITUMINOUS AGGREGATE BASE SHALL BE THE REQUIRED THICKNESS ACCORDING TO THE ATTACHED DETAILS AND IN ACCORDANCE TO ODOT ITEM 301.

JOINT SEALER – THE JOINT BETWEEN THE CONCRETE CURB AND PAVEMENT SURFACE SHALL BE SEALED WITH A FOUR (4) INCH WIDE APPLICATION OF RUBBERIZED JOINT SEALER OVERLAPPING THE CURB 1/2 INCH. THE SEAL SHALL BE LIGHTLY APPLIED IN A STRAIGHT LINE, SQUEEGEE AND LIGHTLY COVERED WITH SAND. THIS IS ALSO TO BE APPLIED TO THE PERIMETER OF UTILITY STRUCTURES IN PAVEMENT AREAS AS WELL AS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. THESE AREAS SHALL BE SEALED WITH A FOUR (4) INCH WIDE APPLICATION OF RUBBERIZED JOINT SEALER OVERLAPPING THE UTILITY CASTING/EXISTING PAVEMENT SURFACE BY 1/2 INCH.

ASPHALT PAVEMENT REPAIR:
ASPHALT PAVEMENT REPAIR SHALL CONFORM TO ALL ODOT REQUIREMENTS AND SPECIFICATIONS HEREIN. IN ADDITION ASPHALT PAVEMENT REPAIRS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1) SUBBASE REPAIR SHALL INCLUDE REMOVAL AND DISPOSAL OF DAMAGED AGGREGATE AND REPLACEMENT WITH COMPACTED ODOT ITEM 304 LIMESTONE. AREAS FOR REPAIR SHALL BE DETERMINED AS DIRECTED BY THE ENGINEER.
2) COLD WEATHER REPAIRS: DURING ADVERSE WEATHER CONDITIONS, LOW STRENGTH MORTAR (LSM) SHALL BE USED TO FILL THE TRENCH AND A 6" CONCRETE CAP TEMPORARILY INSTALLED USING A VISQUEEN BOND BREAKER.

ABUTTING ASPHALT CONTACT:
AT ANY POINT WHERE THE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE FULL DEPTH SAW CUT. THIS CUT SHALL BE PERPENDICULAR TO CENTERLINE REMOVING APPROXIMATELY ONE (1) FOOT OR ALL DAMAGED PAVEMENT AS DIRECTED BY THE ENGINEER. AN ADDITIONAL 18" OF ADJOINING ASPHALT SHALL BE MILLED 1 1/2" PRIOR TO APPLYING THE SURFACE COURSE. ASPHALT SURFACE CONCRETE PER DETAILS SHALL BE USED TO FEATHER THE TRANSITION AND MAINTAIN POSITIVE DRAINAGE BETWEEN THE EXISTING AND PROPOSED PAVEMENT.

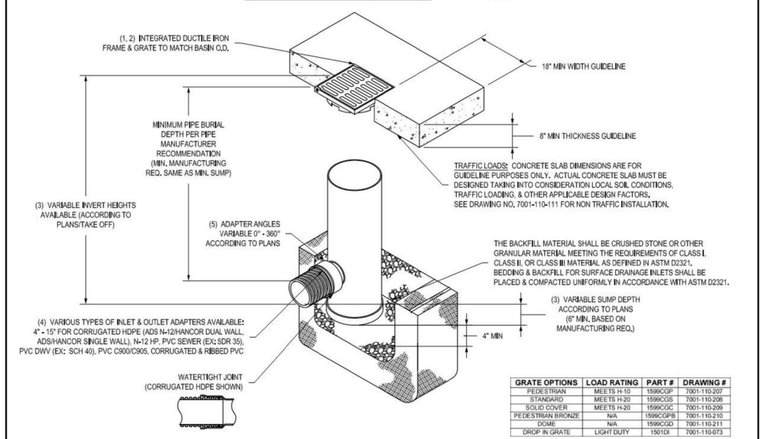


NOTES:

1. MAXIMUM TRENCH AT TOP OF PIPE SHALL BE O.D.+ 24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D.; O.D.+ 30" FOR PIPE LARGER THAN 24" I.D. TO 66" I.D.; AND O.D.+ 48" FOR PIPE SIZES 72" AND OVER.
2. PIPE BEDDING SHALL BE NO. 67 OR NO. 57 LIMESTONE.
3. PIPE BACKFILL SHALL BE NO. 67 OR NO. 57 LIMESTONE TO 12" ABOVE TOP OF PIPE.
4. ALL BACKFILL SHALL BE TAMPED WITH MACHINE MOUNTED TAMPING EQUIPMENT. NO FLOODING, JETTING OR PUDDLING OF BACKFILL WILL BE PERMITTED. BACKFILL SHALL BE COMPLETED TO 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D698. REMAINING TRENCH BACKFILL SHALL BE PREMIUM FILL (LIMESTONE SCREENINGS) TO TOP OF TRENCH UNDER PAVEMENT.
5. ALL BEDDING SHALL BE CLASS 'B' UNLESS OTHERWISE NOTED ON THE PLANS OR AUTHORIZED BY THE ENGINEER.
6. SLAG SHALL NOT BE USED.
7. CLAY DAMS SHALL BE REQUIRED WHEN AND WHERE NECESSARY PER PLAN OR AS DIRECTED BY THE ENGINEER.

SEWER TRENCH & BEDDING DETAILS

NYLOPLAST 15" DRAIN BASIN: 2815AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1596CGP	7001-110-207
STANDARD	MEETS H-20	1596CGS	7001-110-208
SOLID COVER	MEETS H-20	1596CGC	7001-110-209
PEDESTRIAN BRONZE	N/A	1596CGPB	7001-110-210
DOME	N/A	1596CGD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1501DI	7001-110-073

1 = GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 = FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 = DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-055
4 = DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWERS.
5 = ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

DRAWN BY	EBC	MATERIAL	
DATE	03-30-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-14-16		
DWG SIZE	A	SCALE 1:25	SHEET 1 OF 1

Nyloplast — 3128 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplastus.com

TITLE: 15 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-100 REV E

Section 2721

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for structure sizes 8", 10", 12", 15", 18", 24", 30" and 36" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

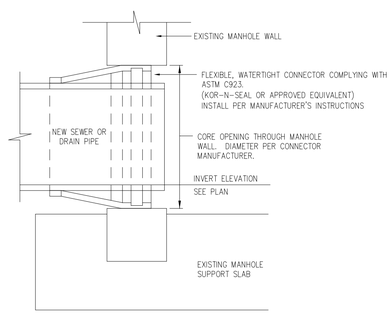
INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

DRAWN BY	CJA	MATERIAL	
DATE	3-19-09		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-24-16		
DWG SIZE	A	SCALE 1:1	SHEET 1 OF 1

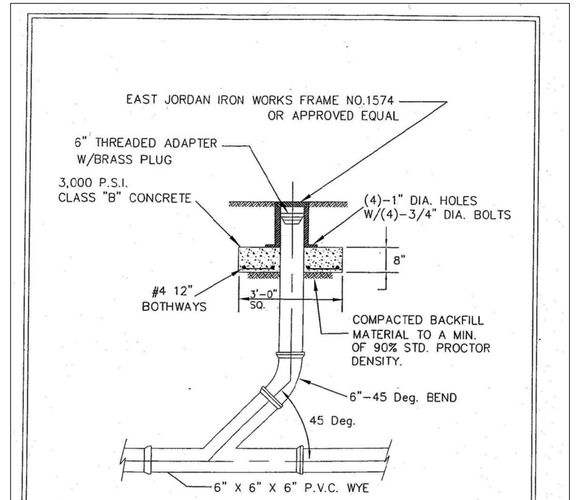
Nyloplast — 3128 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplastus.com

TITLE: 8 IN - 36 IN DRAIN BASIN SPECIFICATIONS

DWG NO. 7001-110-011 REV J



CORE DRILL DETAIL – CONNECTION TO EXISTING MANHOLE
NTS



SANITARY SEWER CLEANOUT DETAIL

SUMMIT COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWN BY: A.D.C.
APPROVED BY: DESIGN/CONSTRUCTION ADMINISTRATOR DATE:

XXXXX XXXXX XXXXX XXXXX
STANDARD DWG. #96-X

18

FLEXIBLE PIPE
BEDDING AND BACKFILLING
TYPE I

NOT TO SCALE

NOTE:
△ ALL BEDDING AND BACKFILLING SHALL BE IN ACCORDANCE WITH A.S.T.M. D-2321 UNLESS OTHERWISE DIRECTED HEREIN OR BY THE ENGINEER.

* NOT APPLICABLE UNDER DRIVEWAYS, AND/OR TRAVELED ROADWAYS. SEE STANDARD DRAWING No. 24

△ "AS DIRECTED" SHALL MEAN "AS DIRECTED BY THE PROJECT OR DESIGN ENGINEER"

Bc DENOTES THE OUTSIDE DIAMETER OF THE BARREL OF THE PIPE.

FLEXIBLE PIPE

1) A.S.T.M. D 2680, ACRYLONITRILE - BUTADINE STYRENE (A.B.S.) COMPOSITE PIPE
2) A.S.T.M. D 2751, ACRYLONITRILE - BUTADINE STYRENE (A.B.S.) SOLID WALL PIPE
3) A.S.T.M. D 3034, POLYVINYL CHLORIDE (P.V.C.) PIPE S.D.R. 35 MAXIMUM
4) UNI-B-11-85, POLYVINYL CHLORIDE (P.V.C.) SOLID WALL PIPE S.D.R. 25 MAXIMUM

STANDARD DETAIL DWG. NO. 18
DEPARTMENT OF ENVIRONMENTAL SERVICES
BEDDING AND BACKFILLING - FLEXIBLE PIPE - TYPE I
APPROVED BY:
CONSTRUCTION ADMINISTRATOR
DATE 6/15/96

18

STATE OF OHIO JOHN URBANICK E-66506 REGISTERED PROFESSIONAL ENGINEER
ROCKAWAY CIVIL
Rockaway Civil LLC
10191 Sperry Road Kirtland Ohio 44094
440 655 8182 www.rockawaycivil.com

Ben Curtis Golf Academy
2155 Middleton Road
Hudson, Ohio 44236

Project Name

Sheet Revision

1 PC 03-03-21

Project Issue

NOTES & DETAILS

Sheet Name

C300

Sheet #

RC Project # 20-040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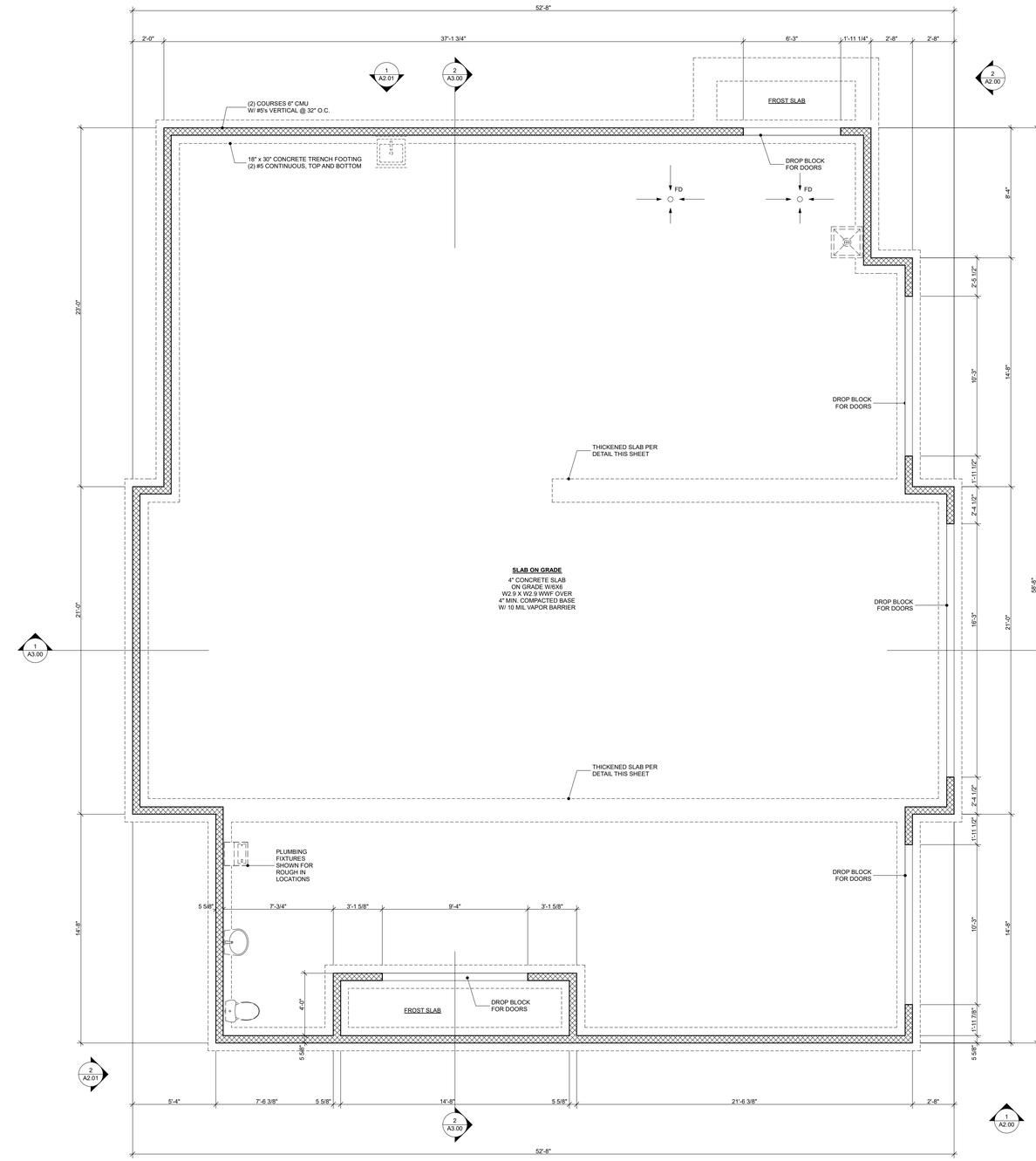


1 FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

BEN CURTIS GOLF ACADEMY

PENINSULA ARCHITECTS

P.O. Box 235 | 1775 Main Street
Peninsula, OH 44264
v 330.657.2800 | f 330.657.2419
www.pa-architects.com

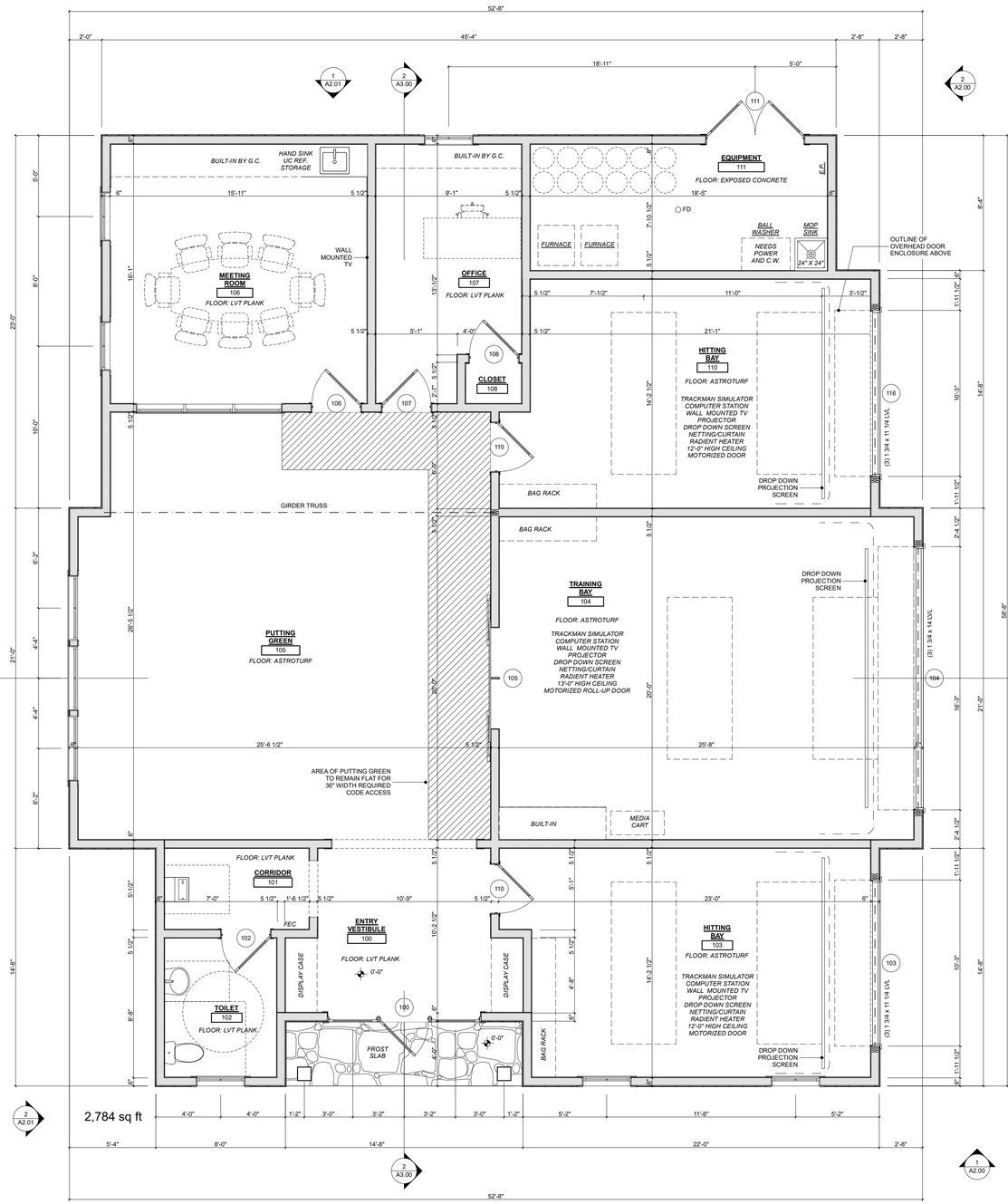
PROGRESS NOT FOR CONSTRUCTION 01/08/2021

BEN CURTIS GOLF ACADEMY
2155 MIDDLETON ROAD
HUDSON, OHIO 44236

PROJECT #: 1927	
DATE	ISSUE
11/22/19	100% SCHEMATIC DESIGN
12/10/20	REVISIONS
12/15/20	REVISIONS
01/08/21	FOR PRICING
SCALE	AS NOTED

FOUNDATION PLAN

A1.00



1 FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES:

ALL INTERIOR DOORS TO BE 1 7/8" SOLID CORE WOOD DOORS.

ALL OVERHEAD ROLLING DOORS TO BE BY OVERHEAD DOOR COMPANY. MODEL NO. 627. PRIMED AND PAINTED WHITE WITH FIT-265 SLAT, WEATHERSTRIPPING AND OPTIONAL AIR INFILTRATION PACKAGE. DOORS TO BE AUTOMATIC WITH FACE OF WALL MOUNTED OPTION.

ALL INTERIOR TRIM TO BE POPLAR OR APPROVED EQUAL.

WALL BASE:	4" FLAT STOCK POPLAR, PAINTED
TOILET WALL BASE:	6" FLAT STOCK POPLAR, PAINTED
WINDOW:	4" FLAT STOCK POPLAR, PAINTED

MILLWORK PER OWNER AND G.C..

CEILINGS TO BE SMOOTH FINISH, PAINTED.

PROVIDE EPOXY PAINT ON ALL WALLS AND CEILINGS OF TOILET ROOM

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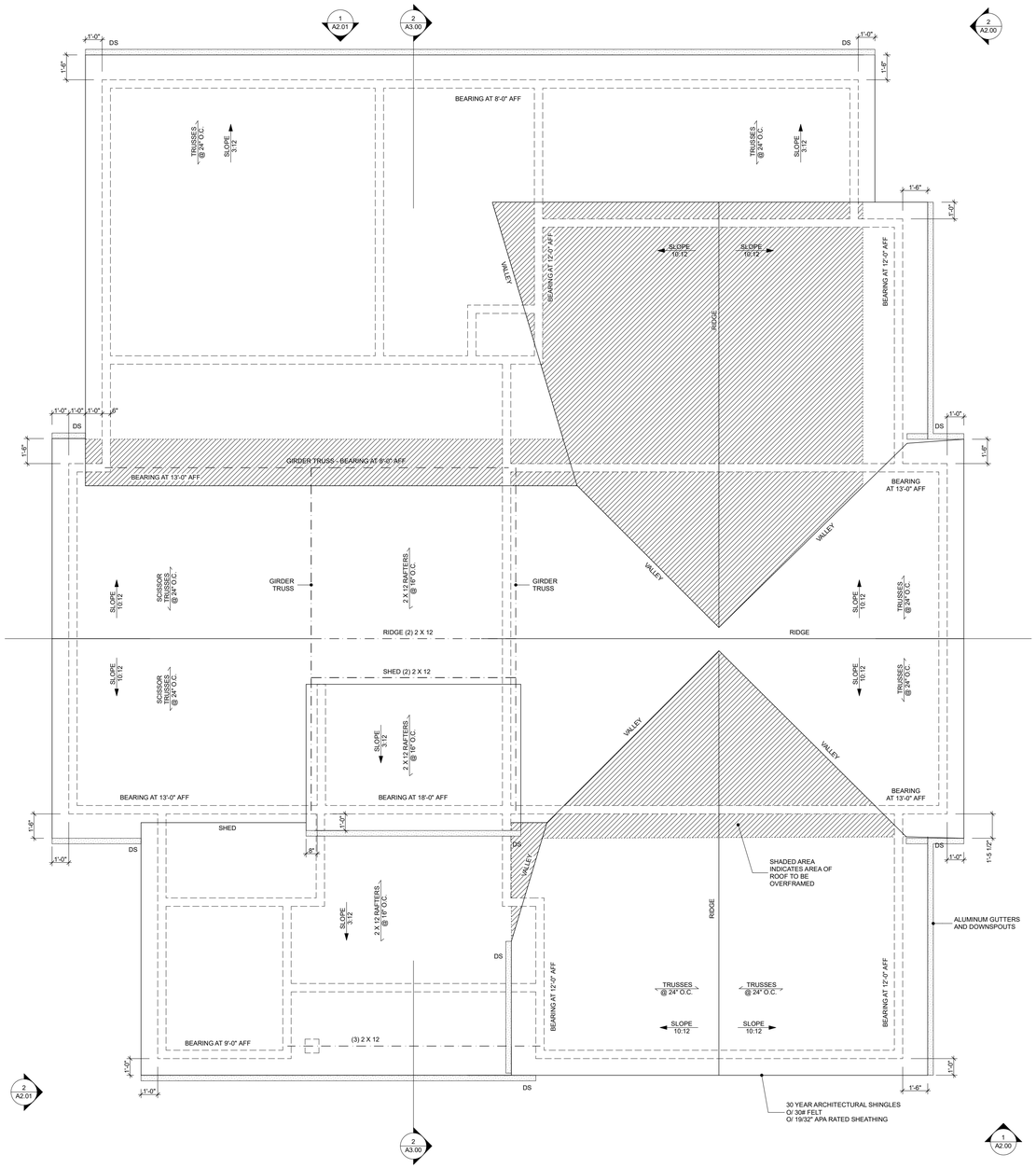
SCALE	AS NOTED

FIRST FLOOR PLAN

A1.01



2 ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

1 FIRST FLOOR REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

EST. 1967

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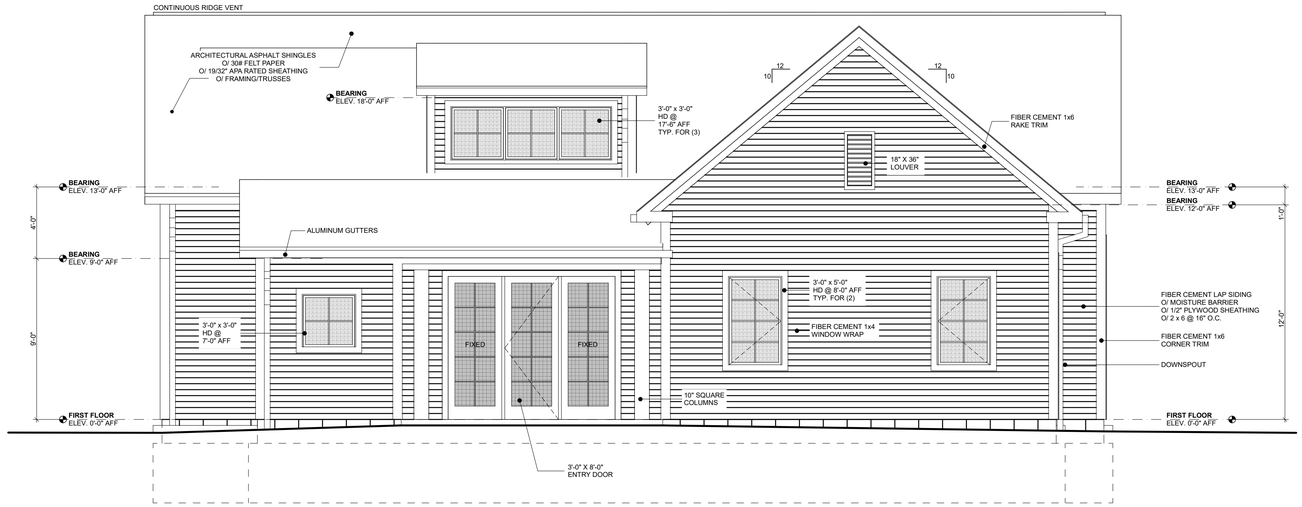
01/08/21	FOR PRICING
SCALE	AS NOTED

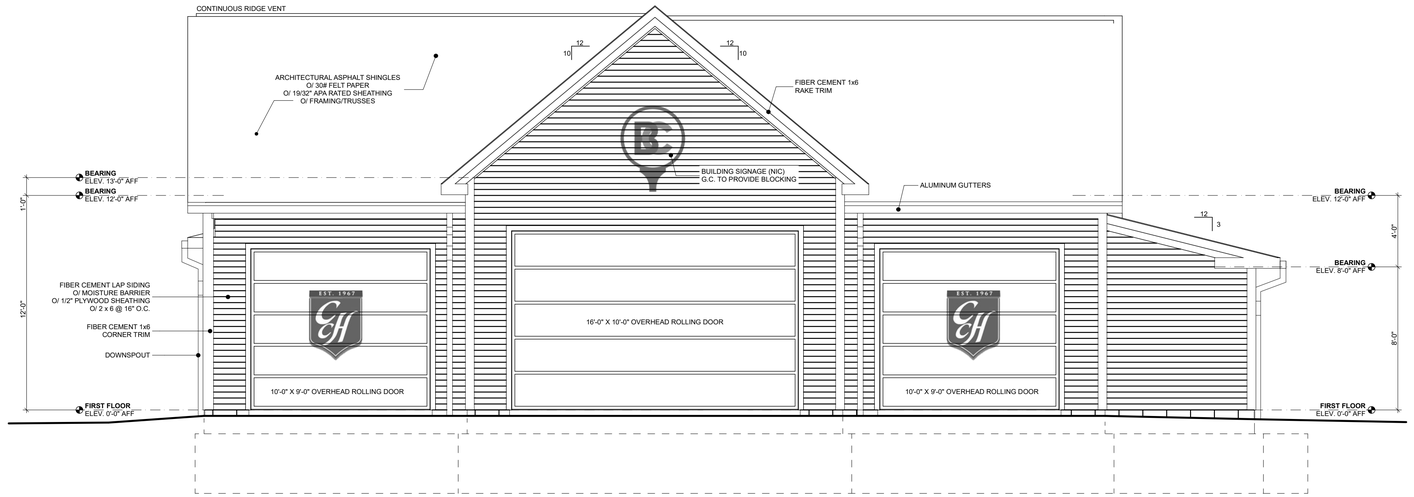
CEILING PLAN AND ROOF FRAMING PLAN

A1.01



1 EAST ELEVATION

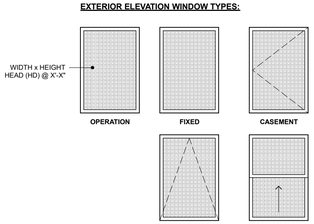
SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

EXTERIOR ELEVATION WINDOW TYPES:



EXTERIOR ELEVATION GENERAL NOTES:

ALL MATERIAL ASSEMBLIES LISTED BELOW TO OCCUR OVER THE FOLLOWING UNLESS NOTED OTHERWISE:

O/ WEATHER BARRIER
O/ APA RATED EXTERIOR GRADE OSB SHEATHING
O/ 2X6 STUDS W/ R-21 KRAFT FACED BATT INSULATION

FIBER CEMENT SIDING - (FC-1)
FIBER CEMENT LAP SIDING TO BE JAMES HARDIE LAP SIDING OR APPROVED EQUAL. REFER TO EXTERIOR ELEVATIONS AND WALL SECTIONS FOR EXPOSURE WIDTHS. ALL LAP SIDING IS TO BE PAINTED, COORDINATE FINAL COLOR WITH ARCHITECT AND OWNER

ASPHALT SHINGLE ROOF
30 YEAR ARCHITECTURAL SHINGLE
O/ MANUFACTURER'S RECOMMENDED UNDERLAYMENT
O/ 19/32" APA RATED EXTERIOR GRADE SHEATHING. ICE GUARD SHOULD BE INSTALLED AT ALL EAVES AND VALLEYS, UP 72", AND WRAPPED OVER THE FACE OF ALL FASCIAS.

ROOF SOFFITS TO BE AC PLYWOOD WITH A CONTINUOUS LINEAR VENT UNLESS NOTED OTHERWISE.

ALL WINDOWS ARE TO BE PELLA VINYL WINDOW OR APPROVED EQUAL.

ALL FIBER CEMENT EXTERIOR TRIM TO BE AZEK OR BORAL, PAINTED, OR APPROVED EQUAL.

BEN CURTIS GOLF ACADEMY

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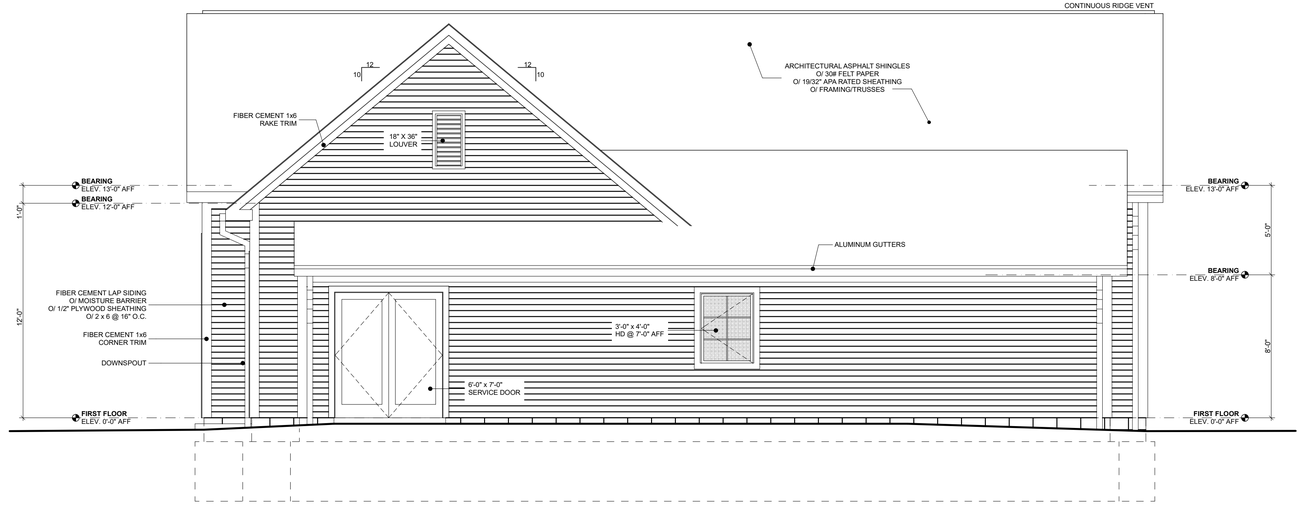
01/08/21	FOR PRICING
SCALE	AS NOTED

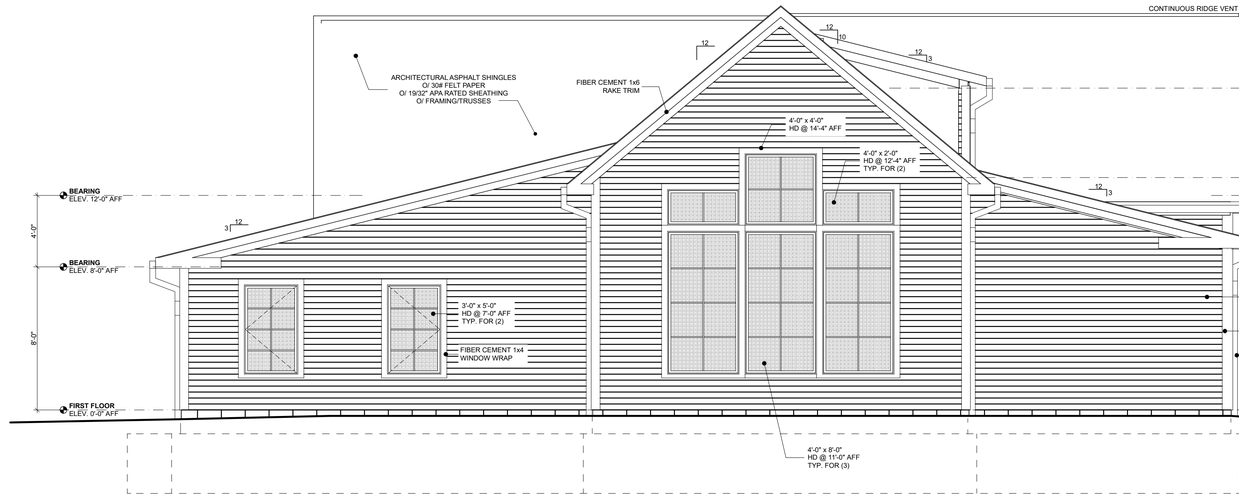
EXTERIOR ELEVATIONS

A2.00



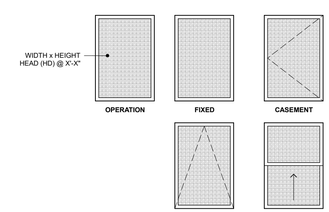
1 WEST ELEVATION

SCALE: 1/4" = 1'-0"



2 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



ALL MATERIAL ASSEMBLIES LISTED BELOW TO OCCUR OVER THE FOLLOWING UNLESS NOTED OTHERWISE:

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O/ APA RATED EXTERIOR GRADE OSB SHEATHING
O/ 2X6 STUDS W/ R-21 KRAFT FACED BATT INSULATION

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30 YEAR ARCHITECTURAL SHINGLE
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BEN CURTIS GOLF ACADEMY

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PROGRESS NOT FOR CONSTRUCTION 01/08/2021

BEN CURTIS GOLF ACADEMY
2155 MIDDLETON ROAD
HUDSON, OHIO 44236

PROJECT #:	1927
DATE	ISSUE
11/22/19	100% SCHEMATIC DESIGN
12/10/20	REVISIONS
12/15/20	REVISIONS
01/08/21	FOR PRICING
SCALE	AS NOTED

EXTERIOR ELEVATIONS

A2.01

SHAWN KASSON
Fire Marshal
skasson@hudson.oh.us
(330) 342-1869

M E M O R A N D U M

DATE: March 9, 2021

TO: Nick Sugar, City Planner

FROM: Shawn Kasson, Fire Marshal SK

SUBJECT: Ben Curtis Golf Academy at Country Club of Hudson – 2155 Middleton Road

I have reviewed the 03/03/21 revision of the site plan set for the Ben Curtis Golf Academy at Country Club of Hudson – 2155 Middleton Road for conditional use approval. Upon review I have no comments regarding the conditional use, but provide the following comments to address with the subsequent submittal for site plan approval:

- Fire apparatus access road must be designed to support fire apparatus weighing 60,000 pounds. Provide documentation from qualified design professional.
- Fire apparatus access road is designated as a fire lane.
- Fire lane areas must be identified with approved signage stating *Fire Lane – No Parking*.
- Provide an approved walkway/clear area between fire apparatus access road and the proposed building.
- The 2017 Ohio Fire Code Section 507.5.1 requires that "*Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400' from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official."* One of the following two options must be selected to address this requirement:
    - Extend water service to the site and install a fire hydrant in an approved location.
    - Install an approved fire detection and alarm system to protect the building with the following features:
        - Automatic fire detection throughout the entire building.
        - Manual fire alarm pull stations at all designated exits within the building.
        - Audio-visual notification appliances throughout the entire building.
        - UL Listed central station monitoring.
        - UL Listed central station monitoring must report to HPD dispatch to access from Garden Lane.
        - Compliant with all pertinent requirements of the 2017 Ohio Fire Code.
        - Compliant with all pertinent requirements of 2016 NFPA 72, the National Fire Alarm and Signaling Code
- Install approved signage to identify access to fire apparatus access road for Ben Curtis Golf Academy – 2155 Middleton Road. (Garden Lane entry to fire apparatus access road)

Note: The scope of this review is limited the conditional use approval. The applicant must submit detailed design plans for review and final approval.

Please contact me with any questions.

OHIO HUDSON
ENGINEERING ● 1140 Terex Road ● Hudson, Ohio 44236 ● (330) 342-1770

Date: March 24, 2021

To: Nick Sugar, City Planner, Community Development

From: Nate Wonsick, P.E., Assistant City Engineer

Re: **2155 Middleton Road – Ben Curtis Golf Academy**
Engineering Review - Viewpoint #21-214

The City of Hudson Engineering Department has reviewed the plans submitted and the comments are below. Note: The City of Hudson Engineering Standards (Engineering Standards) and Land Development Code (LDC) are available online at the City of Hudson Website www.hudson.oh.us under the Engineering Dept. and Community Development Department respectively. The standards are also available in print for a fee. Please contact our office (330-342-1770) if you would like a cost for the printed version.

The City of Hudson Engineering Department has the following comments:

Approvals that will be needed prior to the City of Hudson Engineering Acceptance include:

1. Summit County Building Standards shall review the building structures and any fire lines.
2. Summit County DSSS shall review and approve the sanitary sewer for this site.
3. US Army Corp. of Engineers for any wetland disturbed areas, if applicable.
4. Submit documentation of approval of all the above.

General Comments:

5. The City will perform a complete and thorough review when the complete set of improvement plans and reports are submitted to the City at a future date and the City reserves the right to add to these comments as needed.
6. Submit a current approved wetland delineation or a letter from a wetland biologist stating that they have visited the site and no wetlands exist on the project area.

Overall plan comments:

7. Add the City of Hudson Engineering General Notes to the plans. These notes are available on the internet at the City of Hudson website.
8. The surface of all fire access lanes shall be engineered to provide a bearing weight of 60,000 pounds. Provide calculations to support this (example calculations are available upon request). Fire access shall be determined by the fire department.
9. Show all temporary soil stockpiles on the plans, as applicable. Add the following note regarding all temporary soil stockpiles: “Excess soil stockpiles that will not be used on the site must be removed within 48 hours.”
10. Label all major cut and fill slopes (i.e. %, or 3:1, etc.) Note that 3:1 is the max. allowable slope for site grading.
11. Please include the pre and post impervious box on the first page of the plans per section 1.7 of the Engineering Standards.
12. An engineer’s estimate based on prevailing wages and 110% of the construction value shall be submitted to the City at the final approval, in order to calculate the R/W bond and permit fees. This estimate shall include all work in the R/W, storm water retention basin work, and all erosion and sediment controls.

13. An inspection escrow will be needed at the final approval of the plans, prior to a pre-construction meeting. This escrow account will be based on the R/W bond, meetings, etc.
14. A pre-construction meeting shall be held prior to any construction with the City of Hudson and Summit Soil and water District.

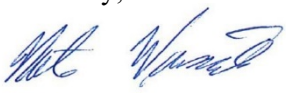
Storm Sewer/ Storm Water Management Comments:

15. The storm water management calculations submitted do not meet the requirements of the City of Hudson Engineering Standards. Per the City of Hudson Engineering Standards Section 5 - The storm water runoff shall be designed for the 25-year post-developed storm to be detained to the 1-year pre-developed storm for this site, due to the flooding in the downstream areas adjacent to this site, per the City. Note that if previously approved calculations can be submitted to show that this site has previously met the 25 to 1 storm water management criteria, then this site would only need to match pre and post developed flows for all design storms.
16. Show that the 100-year design storm reaches all storm water management BMP's via the storm sewers or an overland flow path. If overland, show the 100-year overland flow path on the drainage area maps.
17. Review Section 5 of the Hudson Engineering Standards for the 100-year flood path requirements on the emergency spillways for the detention basins for this site and make any applicable changes, as needed. Also, provide emergency spillways for all detention basins and ensure that they meet the requirements of Section 5.
18. Provide details of all outlet structures and include top, front, right and left side views of the structures.
19. A professional engineer shall stamp and sign the storm water management plans and calculations.
20. A City of Hudson Long Term Maintenance Agreement must be signed for the storm water management SCD's. See attached template.
21. All storm sewer pipes from an outlet structure to a City sewer (or open discharge point) shall meet City of Hudson standards for pipe material per City Engineering standards section 4.1.A.
22. A 30' wide access easement to the City of Hudson shall granted to each storm water management basin/BMP and shall also be 30' past the 100-year water surface of each basin. Show the limits of this easement on the improvement plans. This easement shall be recorded prior to completion of construction and acceptance of the improvements.

<u>Please resubmit the plans and storm water management report for further review.</u>

If you have any questions, please contact our office.

Sincerely,



Nate Wonsick, P.E.
Assistant City Engineer

Attachments: long-term maint. agreement

C: File.

Site Photos

Looking West towards Garden Lane

Looking South along property boundary with Garden Lane

Drive Entrance from Garden Lane

Looking South along internal drive