MASS GRADING PLANS FOR HILLSIDE GROVES AT HOWEY IN THE HILLS PUD

PUD

PARCEL #: 26-20-25-0100-000-00002, 35-20-25-0003-000-00501, 35-20-25-0002-000-00500, 26-20-25-0100-000-00004, 26-20-25-0100-000-00005, 26-20-25-0100-000-00004, 26-20-25-0100-000-00500, 26-20-25-0100-000-00003 & 26-20-25-0400-D14-00000

HOWEY-IN-THE-HILLS
LAKE COUNTY, FL

PREPARED FOR
LENNAR - ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821

LEGAL DESCRIPTION:

The Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 35, Township 20 South, Range 25 East, Lake County, Florida;

AND

The Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 35, Township 20 South, Range 25 East, Lake County, Florida;

AND

A triangular tract of land described as:

Beginning at the Northeast corner of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4, in Section 35, Township 20 South, Range 25 East, Lake County, Florida; run thence West approximately 330 feet to the Southeast corner of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4; thence run North approximately 330 feet to the Northeast corner of the Two and One-Half Acre Tract last described; thence Southeast to the Point of Beginning;

AND

The Southwest 1/4 of the Northeast 1/4, Less that part lying within Taylor Memorial Cemetery hereinafter particularly described:

The Northwest 1/4 of the Southeast 1/4, lying North and West of State Road 19, now paved. Less and Except such portion of Taylor Memorial Cemetery included therein, which cemetery is more particularly described as follows:

Beginning at the East 1/2 mile corner of Section 35, Township 20 South, Range 25 East, Lake County, Florida; run West 1490 feet to an iron pipe on the North right-of-way line of said State Road now paved; thence Southwesterly along said right-of-way line 446.5 feet to a cement marker and the Point of Beginning of Cemetery property; run thence Southwesterly with the North right-of-way line of said road 509.4 feet; thence North 36°27' West, 573.8 feet; thence North 51°33' East, 500 feet; thence South 38°27' East, 500 feet to the Point of Beginning;

AND

The Southeast 1/4 of the Northeast 1/4, lying North and West of State Road 19, now paved, Less and Except such part thereof as is contained in the plat of Palm Gardens as recorded in the Public Records of Lake County, Florida on February 26, 1951, in Plat Book 12, Page 11;

AND

The West 1/2, Less and Except the North 3/4 of the Northeast 1/4 of the Northwest 1/4, in Section 35, Township 20 South, Range 25 East, Lake County, Florida;

AND

That part of the South 1/4 of the Southwest 1/4 of the Southwest 1/4, lying South of County Clay Rood, in Section 26, Township 20 South, Range 25 East, Lake County, Florida. Subject to the rights-of-way for all existing state, county and town road, streets and highways;

AND

A tract of land located in the Northeast 1/4 of the Northeast 1/4 of Section 35, Township 20 South, Range 25 East, Lake County, Florida, and generally described as lying South of the residence of Don White and West of the Westerly boundary line of Palm Gardens subdivision;

AND

All of Block D-14, according to the plat of Palm Gardens, filed February 26, 1951, and recorded in Plat Book 12, Page 11, of the Public Records of Lake County, Florida.

All of the above Lake County property being more particularly described as follows:

That part of the Northwest 1/4 of the Northeast 1/4 of Section 35, Township 20 South, Range 25 East, in the town of Howey in the Hills, Florida, bounded and described as follows:

Begin at the Northwest corner of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of said Section 35; thence run East along the North line thereof to the Northeast corner of the said Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4; thence run Southeasterly along a straight line to the Northeast corner of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of said Section 35; thence run South along East line thereof, to the Southeast corner of the said Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4; thence run West along the South line thereof to the Southwest corner of the said Northwest 1/4 of the Northeast 1/4; thence run North along the West line of the said Northwest 1/4 of the Northeast 1/4 to the Point of Beginning; Less all rights-of-way for streets in Howey in the Hills, Florida.

All of Block D-14 in Palm Gardens, a subdivision in the town of Howey in the Hills, Florida, according to the plat thereof recorded in Plat Book 12, Page 11 of the Public Records of Lake County, Florida.

The South 3/4 of the West 1/2; the Northwest 1/4 of the Northwest 1/4, Less the right-of-way of a County Clay Road; and the South 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 35, Township 20 South, Range 25 East, Lake County, Florida, in the town of Howey in the Hills, Florida.

That part of the Southwest 1/4 of the Northeast 1/4 and that part of the Northwest 1/4 of the Southeast 1/4 lying North and West of the Westerly line of the right-of-way of State Road No. 19, in Section 35, Township 20 South, Range 25 East, Lake County, Florida, in the town of Howey in the Hills, Florida; Less and Except therefrom that part thereof lying within Taylor Memorial Cemetery, according to the plat thereof recorded in Plat Book 12, Page 5, of the Public Records of Lake County, Florida, and also Less all rights-of-way for streets in Howey in the Hills, Florida.

That part of the East 1/2 of the Northwest 1/4 of Section 35, Township 20 South, Range 25 East, in the town of Howey in the Hills, Florida, bounded and described as follows:

Begin at the Northwest corner of Lot 1, in Block D-14, in Palm Gardens, according to the plat thereof recorded in Book 12, Page 11, of the Public Records of Lake County, Florida; thence run West to the West line of the Northeast 1/4 of the Northwest 1/4 of the said Section 35; thence run South along the West line of the East 1/2 of the Northeast 1/4 of the said Section 35 to a point on the Northwesterly line of the right-of-way of State Road No. 19; thence run Northeasterly along the Northwesterly line of the said right-of-way line of Block D-14, of the said Palm Gardens subdivision; thence run Northwesterly along the Westerly line of the said Block D-14, to the Point of Beginning; Less all rights-of-way for streets in Howey in the Hills, Florida,

That part of the South 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 26, Township 20 South, Range 25 East, Lake County, Florida, lying South of the Southerly line of the right-of-way of the County Road.

LESS the following described parcel:

Commence at the East 1/4 corner of Section 35, Township 20 South, Range 25 East, Lake County, Florida; thence run North 89°21'35" West along the South line of the Northeast 1/4 of said Section 35, 1487.79 feet to a point on the Northwesterly right-of-way line of State Road No. 19; thence run South 52°07'27" West along said Northwesterly right-of-way line, 459.23 feet to the Point of Beginning; thence continue South 52°07'27" West along the arc of said curve and said Northwesterly right-of-way line having a central angle of 14°35'56", a radius of 2341.83 feet, an arc length of 596.69 feet, a chord bearing of South 44°49'31" West and a chord distance of 595.08 feet to the Point of Beginning; thence continue along said Northwesterly right-of-way line being a curve concave Southeasterly; thence run Southwesterly along said curve having a central angle of 22°58'29", a radius of 2341.83 feet, an arc length of 939.04 feet, a chord bearing of South 26°02'16" West and a chord distance of 932.76 feet; thence run North 75°26'58" West, 402.66 feet; thence run South 68°12'24" West, 668.73 feet; thence run North 53°42'00" West, 256.16 feet; thence run North 12°38'17" East, 257.80 feet; thence run North 77°21'43" West, 125.00 feet; thence run North 12°38'17" East, 13.01 feet to the point of curvature of a curve concave Easterly; thence run Northeasterly along the arc of said curve having a central angle of 39°28'41", a radius of 75.00 feet, an arc length of 51.68 feet, a chord bearing of North 32°22'37" East and a chord distance of 50.66 feet to the point of tangency; thence run North 52°06'58" East, 476.63 feet; thence run North 54°47'17" East, 150.16 feet; thence run North 52°06'58" East, 205.75 feet to the point of curvature of a curve concave Southerly; thence run Easterly along the arc of said curve having a central angle of 62°53'19", a radius of 24.99 feet, an arc length of 27.43 feet, a chord bearing of North 83°33'05" East and a chord distance of 26.08 feet to the point of reverse curvature of a curve concave Northwesterly; thence run Northeasterly along the arc of said curve having a central angle of 125°45'33", a radius of 99.99 feet, an arc length of 219.47 feet, a chord bearing of North 52°06'58" East and a chord distance of 178.00 feet to the point of reverse curvature of a curve concave Southeasterly; thence run Northeasterly along the arc of said curve having a central angle of 62°53'19", a radius of 24.99 feet, an arc length of 27.43 feet, a chord bearing of North 20°40'51" East and a chord distance of 26.08 feet to the point of tangency; thence run North 52°06'58" East, 560.98 feet to a point on the Northwesterly extension of the Southwesterly line of Taylor Memorial Cemetery; thence run South 37°58'58" East along said Northwesterly extension line, 613.80 feet to the Point of Beginning.

ALSO LESS the following described parcel:

Commence at the East 1/4 corner of Section 35, Township 20 South, Range 25 East, Lake County, Florida; thence run North 89°21'35" West along the South line of the Northeast 1/4 of said Section 35, 1487.79 feet to a point on the Northwesterly right-of-way line of State Road No. 19; thence run South 52°07'27" West along said Northwesterly right-of-way line, 66.25 feet to the Point of Beginning; thence continue South 52°07'27" West along said Northwesterly right-of-way line, 392.98 feet to the point of curvature of a curve concave Southeasterly; thence run Southwesterly along the arc of said curve having a central angle of 02°12'24", a radius of 2341.83 feet, an arc length of 90.19 feet, a chord bearing of South 51°01'15" West and a chord distance of 90.19 feet to the most Easterly corner of Taylor Memorial Cemetery; thence run North 38°00'31" West, along the Northeasterly line of said Taylor Memorial Cemetery, 547.00 feet; thence run North 52°06'58" East, 484.34 feet to the point of curvature of a curve concave Southerly; thence run Southeasterly along the arc of said curve having a central angle of 90°00'00", a radius of 10.00 feet, an arc length of 15.71 feet, a chord bearing of South 82°53'02" East and a chord distance of 14.14 feet to the point of tangency; thence run South 37°53'02" East, 525.33 feet to the point of curvature of a curve concave Northwesterly; thence run Southeasterly along the arc of said curve having a central angle of 90°00'00", a radius of 10.00 feet, an arc length of 15.71 feet, a chord bearing of South 07°07'12" West and a chord distance of 14.14 feet to the Point of Beginning.

AND, ALSO LESS the following described parcel:

Commence at the East 1/4 corner of Section 35, Township 20 South, Range 25 East, Lake County, Florida; thence run North 89°21'35" West along the South line of the Northeast 1/4 of said Section 35, 1487.79 feet to a point on the Northwesterly right-of-way line of State Road No. 19 thence run North 52°07'27" East along said Northwesterly right-of-way line, 673.75 feet to the Point of Beginning; thence run North 37°53'02" West, 1008.88 feet; thence run North 00°35'47" East, 116.78 feet to a point on the North line of the Southwest 1/4 of the Northwest 1/4 of said Section 35; thence run South 89°24'13" East along said North line, 270.08 feet to a point on the West line of the Northeast 1/4 of the Northeast 1/4 of said Section 35; thence run North 00°35'58" East along said West line, 256.12 feet to a point on the South line of the residence of Don White; thence run South 89°24'13" East along said South line, 418.17 feet; thence run South 00°35'47" West, 709.10 feet; thence run South 37°52'33" East, 317.47 feet to a point on said Northwesterly right-of-way line of State Road No. 19; thence run South 52°07'27" West along said Northwesterly right-of-way line, 329.54 feet to the Point of Beginning.

ALSO, LESS AND EXCEPT the following described parcel:

That parcel described as the Taylor Memorial Cemetery in that Quitclaim Deed recorded in Official Records Book 1147, Page 1398, of the Public Records of Lake County, Florida.

Parcel 2 (Easement Estate):

Together with those appurtenant easements as set forth and granted by Eagles Landing at Ocoee, Inc., a Florida corporation, to Howey in the Hills, a Florida limited partnership, in that Development Agreement and Grant of Easements, recorded November 10, 2005 in Official Records Book 3003, Page 1377, of the Public Records of Lake County, Florida.

PROJECT LOCATION

LOCATION MAP
1" = 3000'

INDEX OF SHEETS	
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C400	MASTER SITE PLAN
C500-C504	MASS GRADING PLAN
C505	STRUCTURE TABLES
C510	CONTROL STRUCTURE DETAILS
C950	SWPPP

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture

10060 SKINNER LAKE DR., SUITE 500
JACKSONVILLE, FLORIDA 32246
(904) 265-3030 FAX: (904) 265-3031

1560 NORTH ORANGE AVE., SUITE 210
WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099

FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311
www.cwieng.com

DEVELOPER
LENNAR - ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821

CIVIL ENGINEER
CONNELLY & WICKER INC
1560 NORTH ORANGE AVENUE, SUITE 210
WINTER PARK, FL 32789
(407) 261-3100
CONTACT: RYAN BLAIDA, P.E.

PLANNER
William (Bill) A. Ray, AICP
Ray and Associates
Planning and Environmental Services
2712 SE 29th Street,
Ocala, FL 34471
Office & Cell; 352-425-8881

OWNER
EASTON & ASSOCIATES
10165 NW 19TH ST
MIAMI, FL 33172

Ryan R Blaida
Digitally signed by Ryan R Blaida
DN: c=US, o=CONNELLY AND WICKER INC., ou=A01410D000001770172 83E200013904, cn=Ryan R Blaida
Date: 2022.04.01 09:57:39 -04'00'

RYAN R. BLAIDA LICENSE No 61017 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Ryan Blaida on the date indicated here using SHA authentication code. Printed copies of this document are not considered signed

Apr 01, 2022
RYAN R. BLAIDA, P.E.
FL P.E. #61017
Reg. Engineer

Project No.: 21-04-0008	
Designed: RRB	Drawn: RAH
Checked: RRB	O.C.: RCW
Date: APRIL 2021	
Scale: N/A	DATUM:

Sheet C100

COVER

MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

No.	Date	Revision	By

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099 www.cwieng.com
FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311

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GENERAL NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE CITY OF ORLANDO, FDOT AND FDEP.

2. PAVEMENT STRIPING TO BE IN ACCORDANCE WITH THE FLORIDA D.O.T. ROADWAY & TRAFFIC STANDARDS, INDEX 17346, AND AS REQUIRED BY THE CITY OF ORLANDO.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF SIZE AND LOCATION OF ALL EXISTING UTILITIES AND RELATED CONSTRUCTION PRIOR TO COMMENCEMENT OF WORK. SHOULD THE CONTRACTOR OBSERVE ANY DEVIATIONS FROM WHAT IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF SAID DEVIATIONS PRIOR TO COMMENCEMENT OF WORK. ANY WORK THAT MUST BE REDONE DUE TO FAILURE OF CONTRACTOR TO NOTIFY THE ENGINEER OF DEVIATIONS PRIOR TO CONSTRUCTION WILL BE AT THE CONTRACTORS SOLE EXPENSE.

4. WHERE MUCK OR OTHER ORGANIC MATERIAL IS FOUND, IT SHALL BE REPLACED WITH GOOD QUALITY BACKFILL MATERIAL OBTAINED FROM THE GRADING OPERATIONS OR OTHER SOURCE APPROVED BY THE GEOTECHNICAL ENGINEER. THE ORGANIC MATERIAL SHALL BE THEN USED AS TOP DRESSING WHEN MIXED WITH CLEAN BACKFILL SOIL AS APPROVED BY THE GEOTECHNICAL ENGINEER OR PLACED AS APPROVED BY OWNER.

5. ALL FINISHED GRADES AND ELEVATIONS ARE AS DENOTED BY THE APPLICABLE LEGEND.

6. AS PART OF THE CLEARING AND GRUBBING OPERATION, THE CONTRACTOR IS TO REMOVE ALL FENCING AND/OR EXISTING FACILITIES FROM THE SITE AS DIRECTED BY ARCHITECT.

7. MAINTAIN MINIMUM 3' COVER OVER PROPOSED LINES, UNLESS OTHERWISE NOTED.

8. THE CONTRACTOR SHALL NOTIFY THE CITY OF ORLANDO AND OUC CONSTRUCTION DEPARTMENTS 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION.

9. THE LIMITS OF THE SWALES SHALL BE SODDED AS INDICATED ON THE PLANS.

10. THE CONSTRUCTION OF ALL UTILITIES CONNECTING TO UTILITY SYSTEMS SHALL CONFORM TO STANDARDS AND CONSTRUCTION SPECIFICATIONS OF THE UTILITY OWNER.

11. CONTRACTOR IS RESPONSIBLE FOR OBTAINING FDEP GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY IN ACCORDANCE OF FLORIDA ADMINISTRATIVE CODE 62-621.300 (2), 62-620, AND FLORIDA STATUTES CHAPTER 403.

12. ALL EXCESS FILL MATERIAL SHALL BE HAULED OFFSITE

13. ALL DESIGNATED ENTRANCES AND EXITS FOR CONSTRUCTION SITE SHALL BE STABILIZED USING FILTER FABRIC AND GRAVEL OR OTHER PRE-APPROVED METHODS TO PREVENT OFF-SITE TRACKING OF SEDIMENTS.

EROSION CONTROL NOTES:

1. DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO INSURE AGAINST POLLUTING, SILTING OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING SURFACE WATERS. SUCH MEASURES SHALL BE APPROVED BY THE PROJECT ENGINEER AND MAY INCLUDE, BUT NOT LIMITED TO, CONSTRUCTION OF TEMPORARY EROSION CONTROL STRUCTURES, SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, OR SILT BARRIERS.

2. SODDING (OR OTHER STABILIZATION) OF STORMWATER DETENTION AREAS SHOULD BE ACCOMPLISHED WITH IN SEVEN (7) DAYS FOLLOWING COMPLETION OF GRADING TO MINIMIZE EROSION POTENTIAL.

3. AT A MINIMUM, THE RETENTION/DETENTION STORAGE AREA MUST BE EXCAVATED TO ROUGH GRADE PRIOR TO BUILDING CONSTRUCTION OR PLACEMENT OF IMPERVIOUS SURFACE WITHIN THE AREA TO BE SERVED BY THOSE FACILITIES TO PREVENT REDUCTION IN STORAGE VOLUME AND PERCOLATION RATES. ALL ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE STORAGE AREA PRIOR TO FINAL GRADING AND STABILIZATION.

4. IF DURING CONSTRUCTION, THE PROPOSED EROSION CONTROL SYSTEM DOES NOT PERFORM SATISFACTORILY, ALTERNATIVES AND ADDITIONAL METHODS OF PROTECTION SHALL BE IMPLEMENTED BY THE CONTRACTOR IN ORDER TO COMPLY WITH THE CITY OF ORLANDO EROSION PROTECTION STANDARDS. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ALL EROSION CONTROL COSTS INCLUDING ANY COSTS ASSOCIATED WITH COMPLIANCE ISSUES AND ENFORCEMENT ACTIONS.

5. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A DETAILED EROSION CONTROL PLAN TO THE CITY OF ORLANDO FOR REVIEW AND APPROVAL A MINIMUM OF 2 WORKING DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. AT A MINIMUM, THE EROSION CONTROL PLAN SHALL PROPOSE SILT SCREEN OR SYNTHETIC HAY BALES AND TURBIDITY BARRIERS, IN ACCORDANCE WITH THE CONSTRUCTION PLANS.

6. ALL PERMANENT EROSION CONTROL MEASURES SHALL BE COMPLETED WITHIN 7 DAYS OF FINAL GRADING. ALL TEMPORARY EROSION CONTROL SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE COMPLETED AND ESTABLISHED.

7. CONTRACTOR SHALL INSPECT THE EROSION/SEDIMENT CONTROL EFFORTS TO DETERMINE THE EFFECTIVENESS. INSPECTIONS SHALL BE CONDUCTED DAILY AND WITHIN 24 HOURS AFTER EACH 0.50 INCH OR GREATER RAINFALL EVENT. ANY NECESSARY REMEDIES SHALL BE PERFORMED IMMEDIATELY.

8. SEDIMENTATION CONTROLS/BMP'S SHALL PREVENT STORMWATER RUNOFF WITH TURBIDITY GREATER THAN 29 NTUs FROM LEAVING THE CONSTRUCTION SITE.

MAINTAINENCE OF TRAFFIC:

1. FDOT INDEX 102-602 & 102-603 TO BE USED.

UTILITY NOTES:

1. ALL PIPE, MATERIALS, AND WASTEWATER CONSTRUCTION SHALL COMPLY WITH CHAPTER 9 OF THE CITY OF ORLANDO ENGINEERING STANDARDS MANUAL (ESM).

2. PER SECTION 9.03.05 OF THE ESM THE CONTRACTOR SHALL PROVIDE A DVD RECORDING OF VIDEO INSPECTION OF THE PRIVATE GRAVITY SANITARY SEWER SYSTEM TO THE CITY FOR WASTEWATER DIVISION REVIEW PRIOR TO ACCEPTANCE.

3. SEWER PIPE SHALL COMPLY WITH ASTM D3034 FOR GRAVITY SEWER.

4. SEWER JOINTS SHALL COMPLY WITH SECTION 9.03.01.B ASTM D3212 PUSH-ON ELASTOMERIC COMPRESSION GASKET TYPE.

PAVING AND DRAINAGE NOTES:

1. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCE BETWEEN CENTERLINES OF DRAINAGE STRUCTURES.

2. ALL CONCRETE DRAINAGE STRUCTURES TO BE CONSTRUCTED PER D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED.

3. DITCH BOTTOM AND CONTROL STRUCTURE INLET GRATES SHALL BE SECURED WITH CHAIN AND EYEBOLT.

4. FIVE (5) FEET OF SOD IS REQUIRED AROUND ALL DITCH BOTTOM INLETS, MANHOLES, HEADWALLS AND MITERED END SECTIONS.

5. CONTRACTOR SHALL PLACE BLUE REFLECTIVE MARKERS ON PAVEMENT IN FRONT OF FIRE HYDRANTS.

6. TOP ELEVATIONS OF MANHOLES IN GRASSED AREAS SHALL BE AT MINIMUM 4 INCHES ABOVE FINISH GRADE.

AS-BUILT NOTE:

1. THE CONTRACTOR SHALL SUBMIT A CERTIFIED SET OF RECORD DRAWINGS TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING INFORMATION ON THE APPROVED PLANS CONCURRENTLY WITH CONSTRUCTION PROGRESS. RECORD DRAWINGS SUBMITTED TO THE ENGINEER AS PART OF THE PROJECT ACCEPTANCE SHALL COMPLY WITH THE CITY OF ORLANDO REQUIREMENTS AND THE FOLLOWING REQUIREMENTS.

A. DRAWINGS SHALL BE LEGIBLY MARKED TO RECORD ACTUAL CONSTRUCTION.

B. DRAWINGS SHALL SHOW ACTUAL LOCATION OF ALL UNDERGROUND AND ABOVE GROUND STORM DRAINAGE, POTABLE WATER AND WASTEWATER PIPING, AND RELATED APPURTENANCES. ALL CHANGES TO PIPING LOCATION INCLUDING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES AND APPURTENANCES SHALL BE CLEARLY SHOWN AND REFERENCED TO PERMANENT SURFACE IMPROVEMENTS. DRAWINGS SHALL ALSO SHOW ACTUAL INSTALLED PIPE MATERIAL, CLASS, ETC.

C. DRAWINGS SHALL CLEARLY INDICATE VERTICAL AND HORIZONTAL SEPARATION BETWEEN POTABLE WATER MAIN AND STORM DRAINAGE/SANITARY SEWER/RECLAIMED WATER MAINS AT POINTS OF CROSSING IN ACCORDANCE WITH FDEP CRITERIA AT UTILITY CROSSINGS.

D. DRAWINGS SHALL CLEARLY SHOW ALL FIELD CHANGES OF DIMENSION AND DETAIL INCLUDING CHANGES MADE BY FIELD ORDER OR BY CHANGE ORDER.

E. DRAWINGS SHALL CLEARLY SHOW ALL DETAILS NOT ON ORIGINAL CONTRACT DRAWINGS, BUT CONSTRUCTED IN THE FIELD. ALL EQUIPMENT AND PIPING RELOCATION SHALL BE CLEARLY SHOWN.

F. LOCATION OF ALL INLETS, MANHOLES, HYDRANTS, VALVES, AND VALVE BOXES SHALL BE SHOWN. ALL VALVES SHALL BE REFERENCED BY STATE PLANE COORDINATES.

G. DIMENSIONS BETWEEN ALL INLETS AND MANHOLES SHALL BE FIELD VERIFIED AND THE INVERTS, AND GRADE ELEVATIONS OF ALL INLETS AND MANHOLES SHALL BE SHOWN.

H. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY FOR POND GRADING. AS-BUILT POND CONTOURS SHALL BE PROVIDED AT TOP OF BANK, POND BOTTOM, AND ALL GRADE BREAKS AND ELEVATIONS SPECIFIED ON THE PLANS. CONTRACTOR SHAL BE RESPONSIBLE FOR RE-GRADING POND SLOPES THAT ARE STEEPER THAN SHOWN ON THE DESIGN PLANS.

I. EACH SHEET OF THE PLANS SHALL BE SIGNED, SEALED AND DATED BY REGISTERED SURVEYOR WITH A NOTE READING "THESE AS-BUILT DRAWINGS ACCURATELY DEPICT THE ACTUAL IMPROVEMENTS AS CONSTRUCTED".

J. WHERE THE POTABLE WATER MAIN CROSSES OTHER UTILITIES (STORM, GRAVITY SEWER, FORCEMAIN AND RECLAIMED WATER), THE CERTIFIED AS-BUILT DRAWINGS SHALL CLEARLY INDICATE THE CONSTRUCTED ELEVATIONS IN SUCH A WAY THAT THE VERTICAL SEPARATION BETWEEN THE WATER MAIN AND OTHER UTILITIES MAY BE VERIFIED BY THE ENGINEER. FAILURE TO PROVIDE THIS INFORMATION WILL RESULT IN THE CONTRACTOR EXCAVATING AND SURVEYING THE UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

K. WHERE THE POTABLE WATER MAIN CROSSES OTHER UTILITIES (STORM, GRAVITY SEWER, FORCEMAIN AND RECLAIMED WATER), THE CERTIFIED AS-BUILT DRAWINGS SHALL CLEARLY INDICATE THE LOCATIONS OF PIPE JOINTS IN SUCH A MANNER AS TO DEMONSTRATE THE PIPE IS CENTERED AT ALL THE CROSSINGS. FAILURE TO PROVIDE THIS INFORMATION WILL RESULT IN THE CONTRACTOR EXCAVATING AND SURVEYING THE UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

2. CERTIFIED AS-BULT DRAWINGS SHALL BE PROVIDED TO THE ENGINEER PRIOR TO BACTERIOLOGICAL TESTING. FAILURE TO PROVIDE ACCURATE DRAWINGS MAY RESULT IN EXPIRED TEST RESULTS AND REQUIRE ADDITIONAL TESTING AT THE CONTRACTOR'S EXPENSE.

3. COORDINATE DATA SHALL BE PROVIDED IN STATE PLANE COORDINATES.

4. AS-BUILTS SHALL REFERENCE THE REQUIREMENTS OF CHAPTER 5 OF THE CITY'S ENGINEERING STANDARDS MANUAL.

ENGINEER'S CERTIFICATION NOTE:

"I, RYAN BLAIDA, P.E. HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED AND THE LOCATION AND ELEVATION DEPICTED ON THESE PLANS IS BASED ON ACTUAL SURVEY, GROUND PENETRATING RADAR, SOFT DIG EXCAVATIONS, AND OTHER INDUSTRY METHODS. I FURTHER CERTIFY THAT ALL MEASURES HAVE BEEN TAKEN WITH REGARD TO UTILITY PROVIDERS' NOTIFICATION TO MARK UTILITIES IN ACCORDANCE WITH CHAPTER 556 F.S., SUNSHINE STATE ONE CALL."

⚠ "I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THE STORMWATER MANAGEMENT SYSTEM FOR THE PROJECT KNOWN AS: MASS GRADING RALEIGH STREET MEETS ALL OF THE REQUIREMENTS AND HAS BEEN DESIGNED SUBSTANTIALLY IN ACCORDANCE WITH THE CITY OF ORLANDO STORMWATER MANAGEMENT CRITERIA."

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099 www.cwleng.com
FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311

No.	Date	Revision	By

GENERAL NOTES

MASS GRADING PLANS
FOR HILLSIDE GROVES
HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

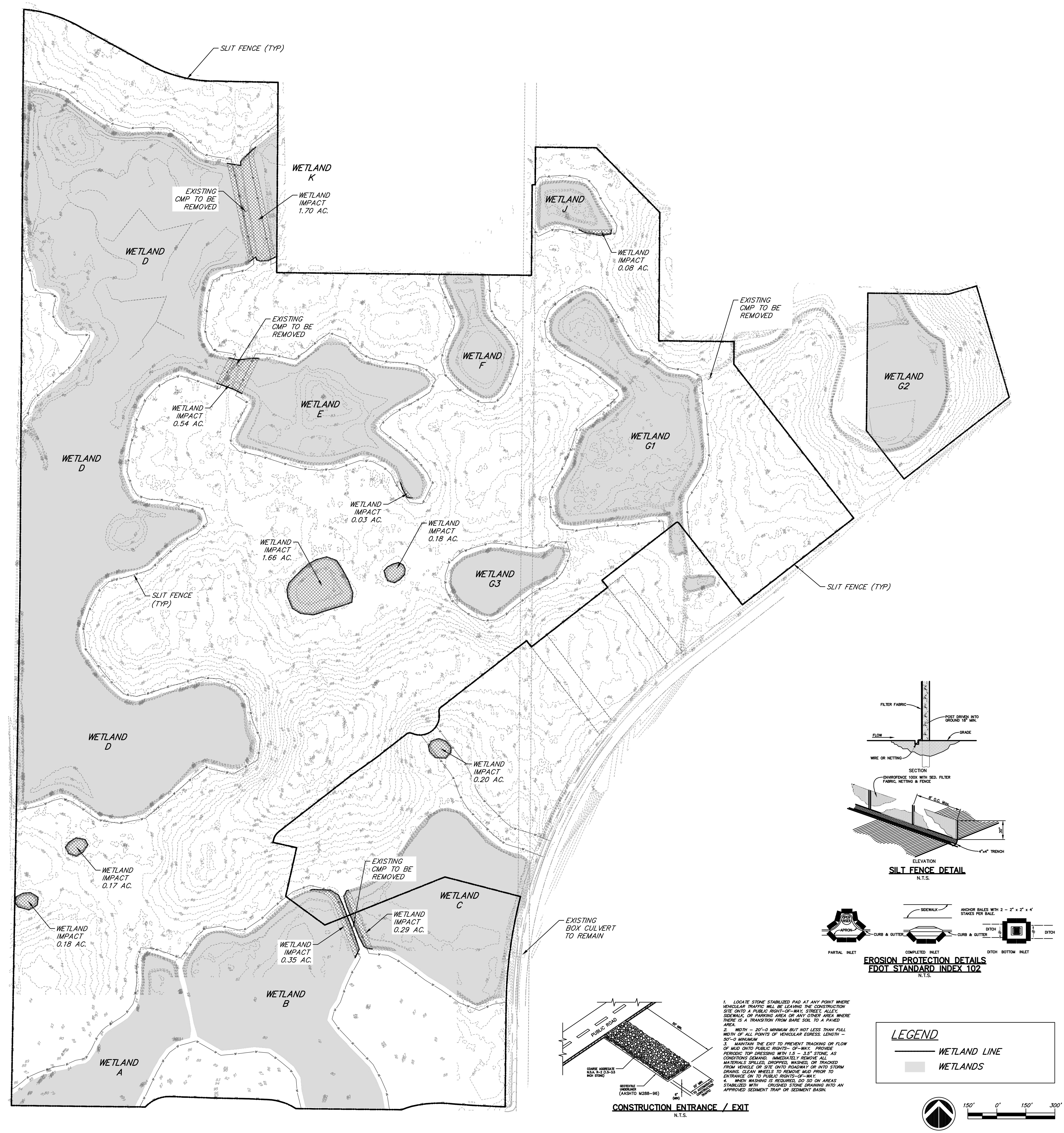
Apr 01, 2022
RYAN R. BLAIDA, P.E.
FL P.E. #61017
Reg. Engineer

Project No.: 21-04-0008	
Designed: RRB	Drawn: RAH
Checked: RRB	O.C.: RCW
Date: APRIL 2021	
Scale: N/A	DATUM:

Sheet C101

Printed: Apr 01, 2022 - 8:03am Printed By: Rob

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\MG\21-04-0008-MG-EXC.dwg



FILTER FABRIC
POST DRIVEN INTO GROUND 18" MIN.
FLOW
GRADE
WIRE OR NETTING
SECTION
ELEVATION
4"x4" TRENCH

SILT FENCE DETAIL
N.T.S.

SIDEWALK
ANCHOR BALES WITH 2 - 2" x 2" x 4' STAKES PER BALE.
APRON
CURB & GUTTER
COMPLETED INLET
DITCH
PARTIAL INLET
DITCH BOTTOM INLET

EROSION PROTECTION DETAILS
FDOT STANDARD INDEX 102
N.T.S.

PUBLIC ROAD
50' MIN.
20' MIN. TO ACCOMODATE CONSTRUCTION TRAFFIC
6" (MIN)

1. LOCATE STONE STABILIZED PAD AT ANY POINT WHERE VEHICULAR TRAFFIC WILL BE LEAVING THE CONSTRUCTION SITE ONTO A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA OR ANY OTHER AREA WHERE THERE IS A TRANSITION FROM BARE SOIL TO A PAVED AREA.
2. WIDTH – 20'-0 MINIMUM BUT NOT LESS THAN FULL WIDTH OF ALL POINTS OF VEHICULAR EGRESS. LENGTH – 50'-0 MINUMUM
3. MAINTAIN THE EXIT TO PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS- OF-WAY. PROVIDE PERIODIC TOP DRESSING WITH 1.5 – 3.5" STONE, AS CONDITIONS DEMAND. IMMEDIATELY REMOVE ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO ROADWAY OR INTO STORM DRAINS. CLEAN WHEELS TO REMOVE MUD PRIOR TO ENTRANCE ON TO PUBLIC RIGHTS-OF-WAY.
4. WHEN WASHING IS REQUIRED, DO SO ON AREAS STABILIZED WITH CRUSHED STONE DRAINING INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION ENTRANCE / EXIT
N.T.S.

LEGEND
WETLAND LINE
WETLANDS

150' 0' 150' 300'

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099 www.cwieng.com
FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311

No.	Date	Revision	By

EXISTING CONDITIONS PLAN

MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS

PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

Apr 01, 2022
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Project No.: 21-04-0008	
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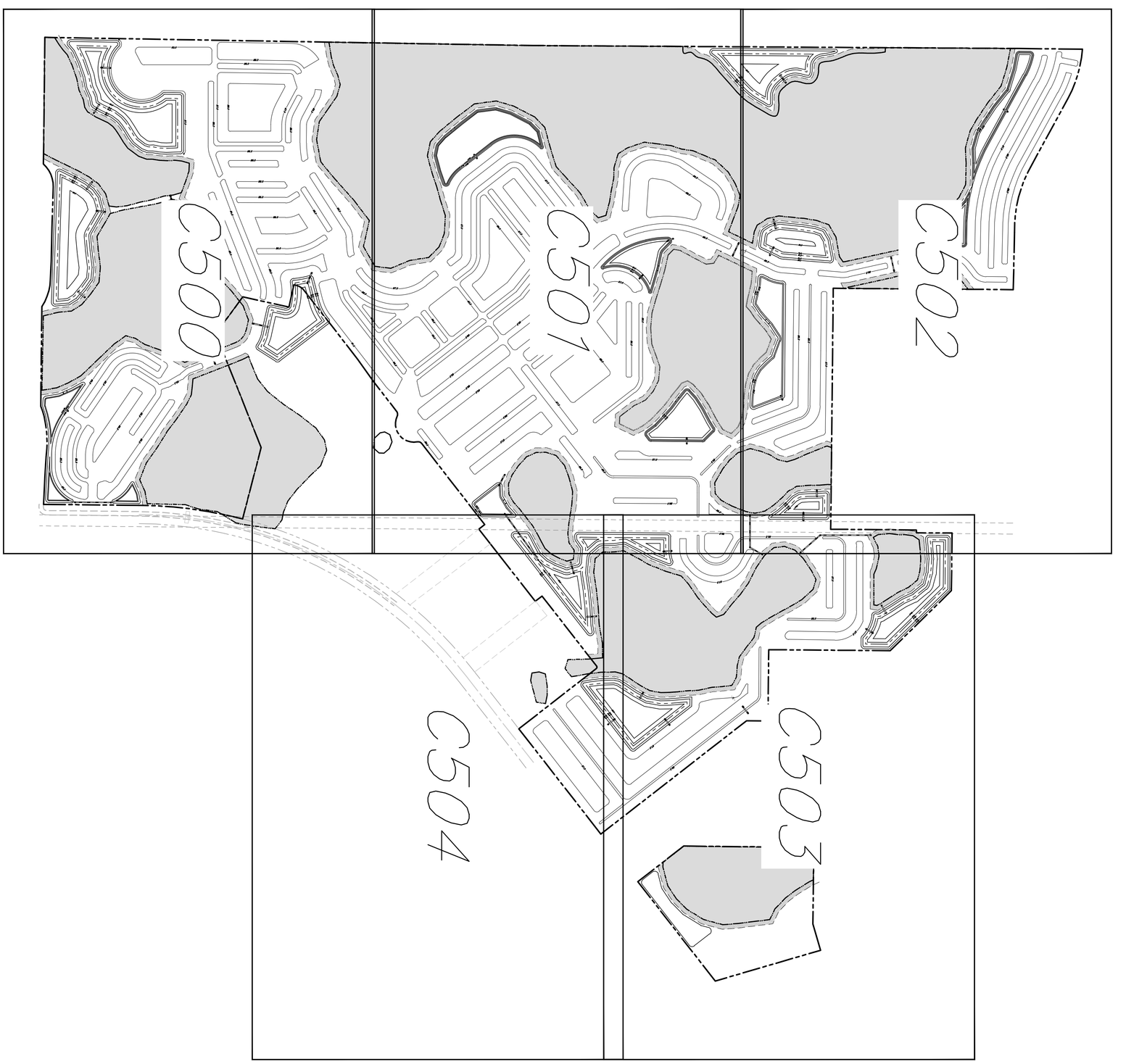
Date: APRIL 2021	
Scale: 1" = 300'	DATUM:

Sheet C150



150' 0' 150' 300'

Sheet C400

Project No.: 21-04-0008
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MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS

PREPARED FOR
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ORLANDO, FL

MASTER SITE PLAN

No.	Date	Revision	By

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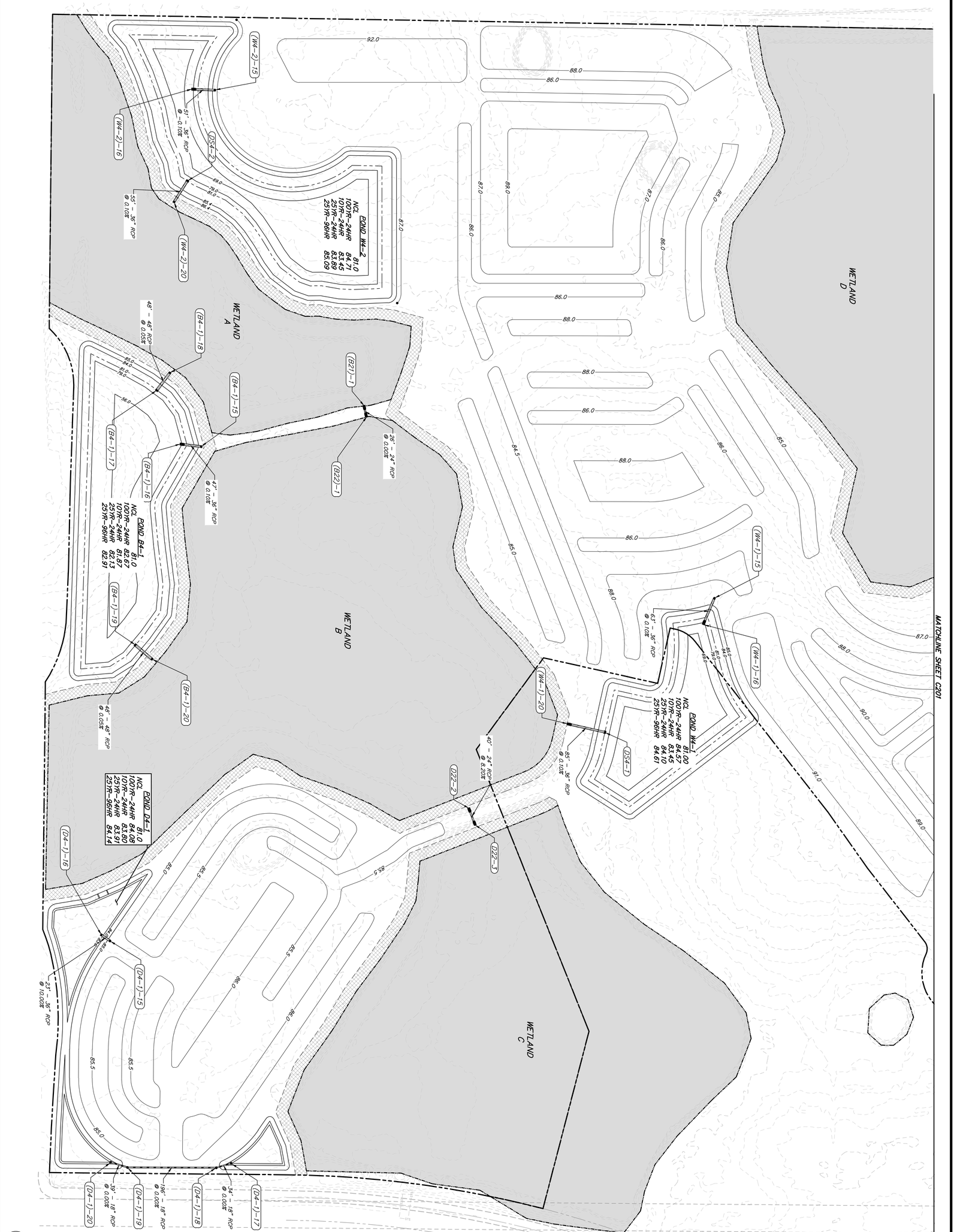

Sheet C500

Project No.: 21-04-0008
Drawn: RAH
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O.C.: RCW
Date: APRIL 2021
Scale: 1" = 100'
DATUM:

Apr 01, 2022
RYAN R. BLAIDA, P.E.
FL P.E. #61017
Reg. Engineer

MASS GRADING PLANS
FOR HILLSIDE GROVES
HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

MASS GRADING PLAN

No.	Date	Revision	By

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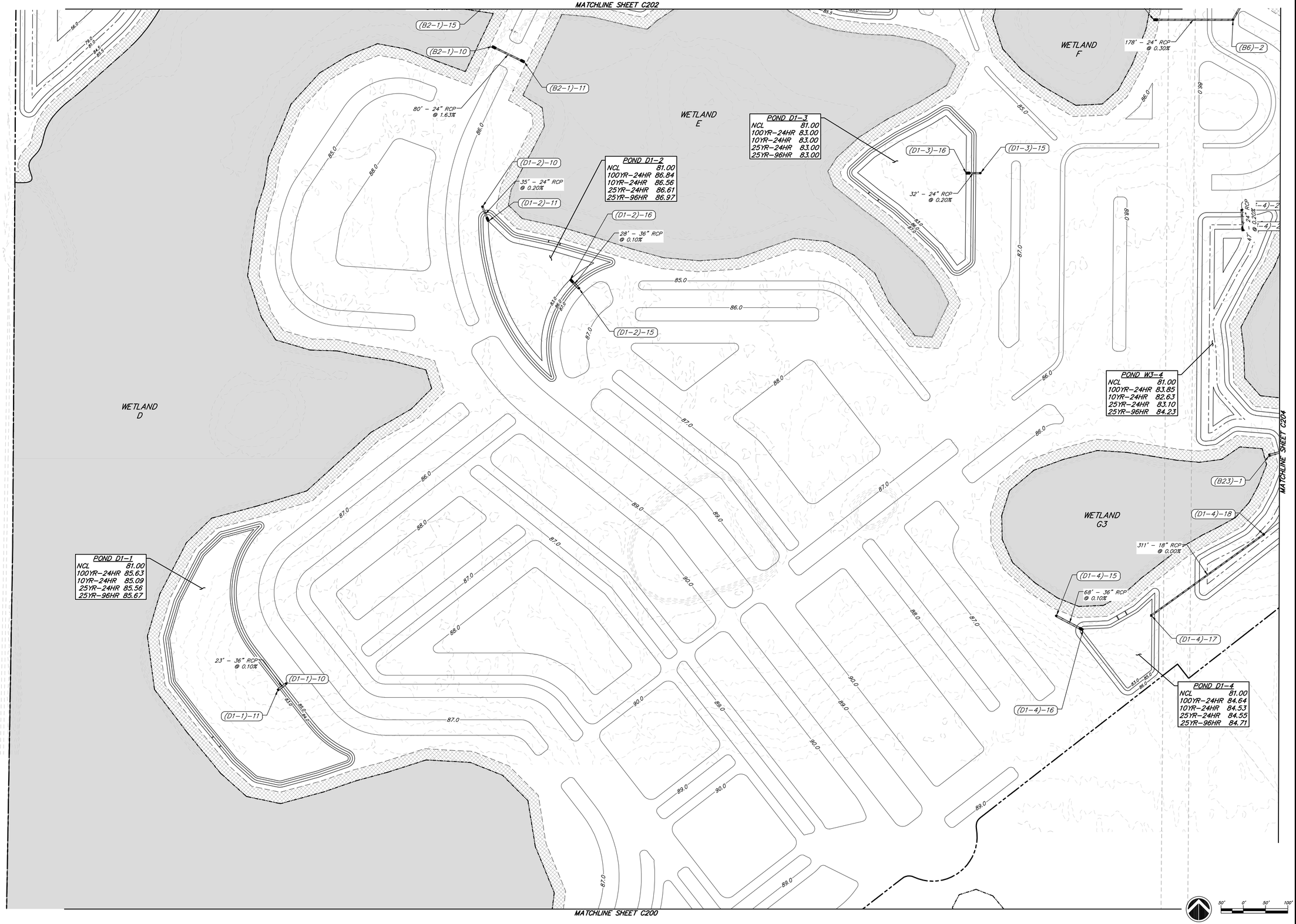

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No.	Date	Revision	By

MASS GRADING PLAN

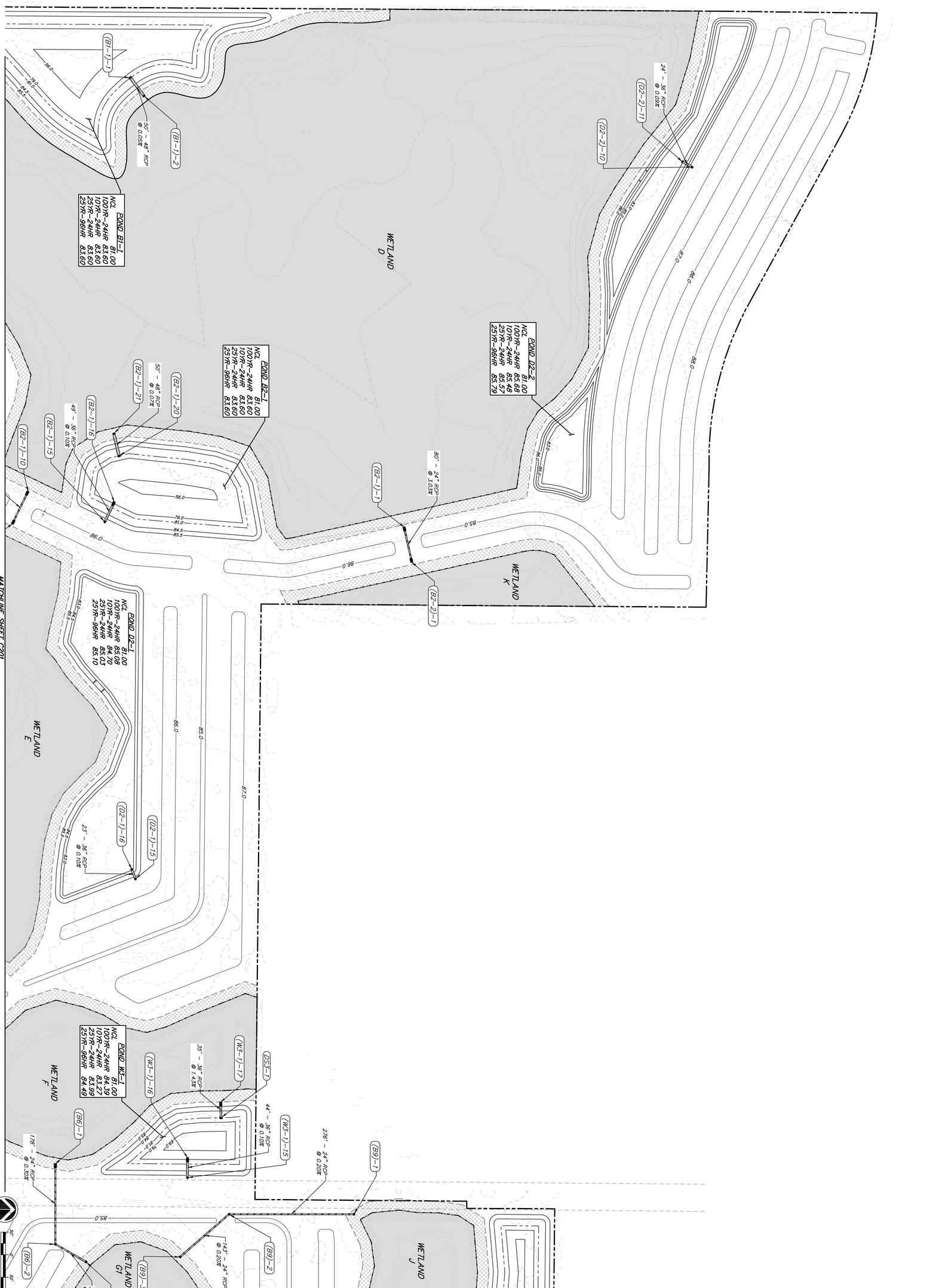
MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS

PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

Apr 01, 2022
RYAN R. BLAIDA, P.E.
FL P.E. #61017
Reg. Engineer

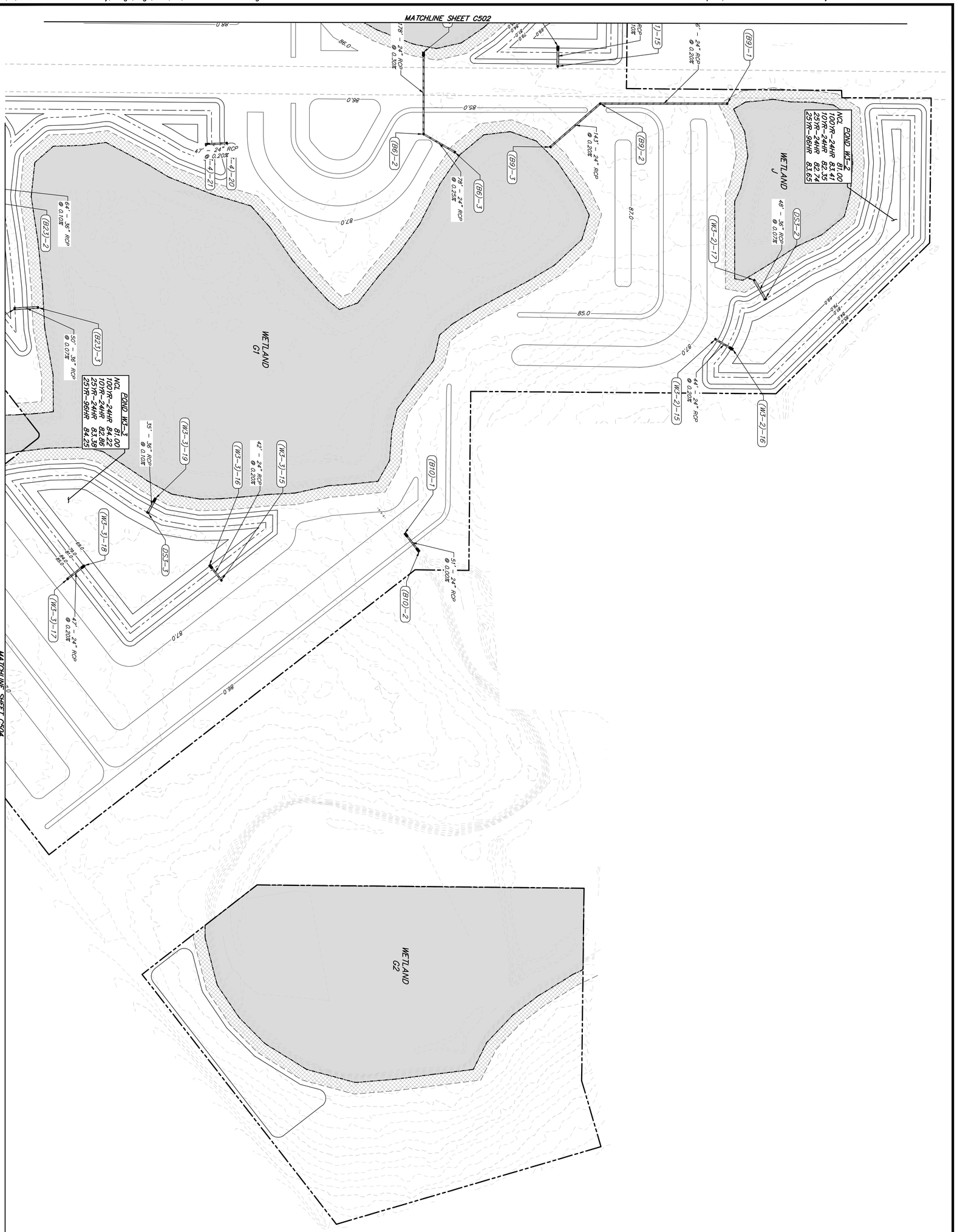
Project No.: 21-04-0008	
Designed: RRB	Drawn: RAH
Checked: RRB	O.C.: RCW
Date: APRIL 2021	
Scale: 1" = 100'	DATUM:

Sheet C501



Sheet C502	Project No.: 21-04-0008	Apr 01, 2022 RYAN R. BLAIDA, P.E. FL P.E. #61017 Reg. Engineer	MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS PREPARED FOR LENNAR - ORLANDO ORLANDO, FL	MASS GRADING PLAN	Connelly & Wicker Inc. Planning · Engineering · Landscape Architecture 1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789 (407) 261-3100 FAX: (407) 261-3099 www.cwieng.com FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311
	Drawn: RAH				
	Checked: RRB				
	O.C.: RCW				
	Date: APRIL 2021				
	Scale: 1" = 100'				
	DATUM:				

No. Date Revision By



MASS GRADING PLANS
FOR HILLSIDE GROVES
HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

MASS GRADING PLAN

Apr 01, 2022
RYAN R. BLAIDA, P.E.
FL P.E. #61017
Reg. Engineer

No.	Date	Revision	By

Project No.: 21-04-0008
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Date: APRIL 2021
Scale: 1" = 100'
DATUM:
Sheet C503

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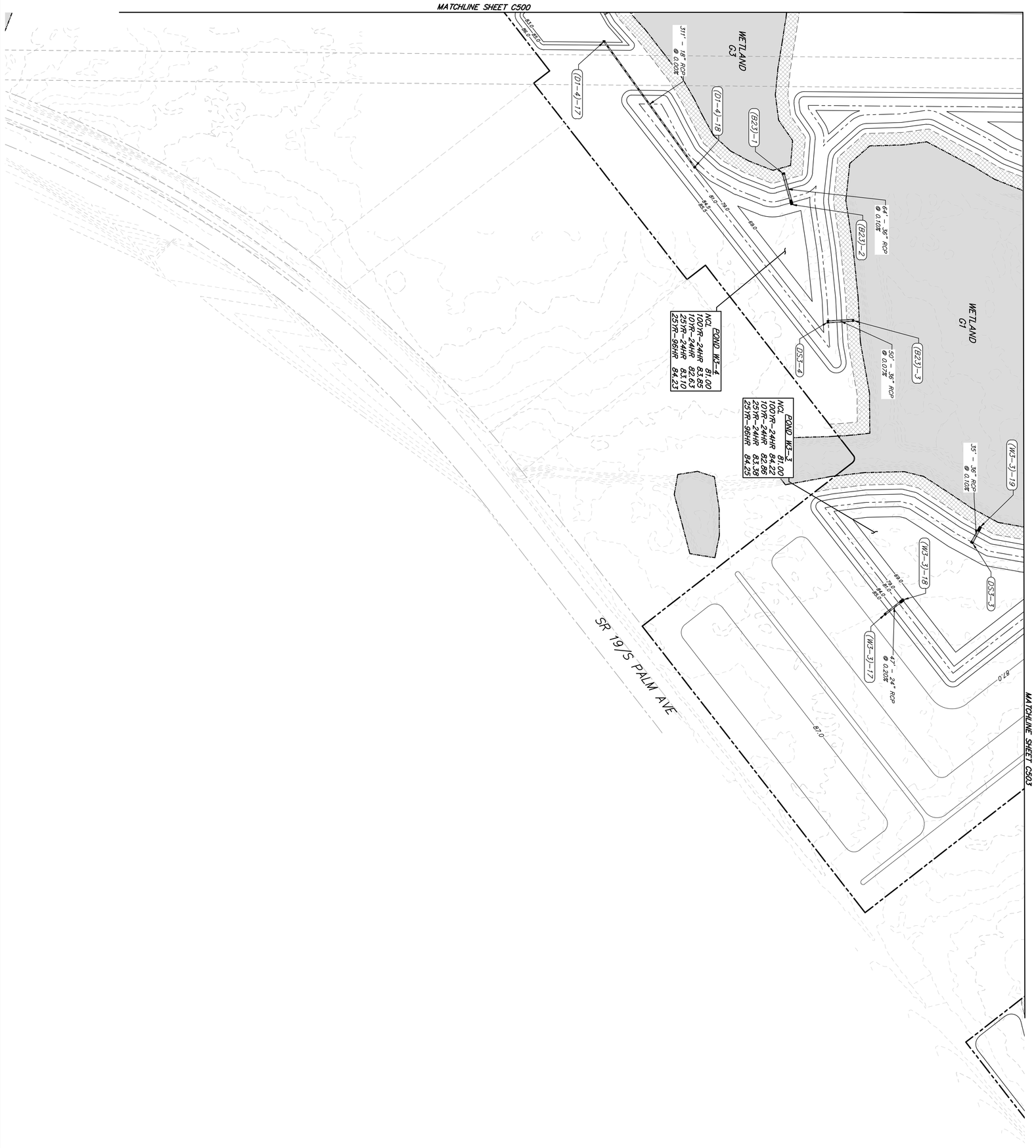

50' 0' 50' 100'

Sheet C504	Project No.: 21-04-0008	Drawn: RAH	Date: APRIL 2021
	Designed: RRB	Checked: RRB	Scale: 1" = 100'
		O.C.: RCW	DATUM:

Apr 01, 2022
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FL P.E. #61017
Reg. Engineer

MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS

PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

MASS GRADING PLAN

No.	Date	Revision	By

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Drainage Structure Table			
Name	Type	Details	Location
(B1-1)-1	'H' DBI	RIM = 81.00 INV OUT = 74.00 (NE)	N: 1590487.4478 E: 403555.7193
(B1-1)-2	'C' DBI	RIM = 83.72 INV IN = 73.97 (SW)	N: 1590517.3890 E: 403593.7635
(B2-1)-15	'P' MH	RIM = 86.00 INV OUT = 77.05 (NW)	N: 1590430.5877 E: 404537.1609
(B2-1)-20	'H' DBI	RIM = 81.00 INV OUT = 74.00 (W)	N: 1590462.3094 E: 404391.1381
(B2-1)-21	'C' DBI	RIM = 79.22 INV IN = 73.96 (E)	N: 1590450.9195 E: 404342.4526
(B4-1)-15	'P' MH	RIM = 85.50 INV OUT = 77.05 (S)	N: 1586798.7540 E: 404300.1438
(B4-1)-17	'H' DBI	RIM = 81.00 INV OUT = 74.00 (NW)	N: 1586701.2472 E: 404175.7825
(B4-1)-18	'C' DBI	RIM = 84.69 INV IN = 73.98 (SE)	N: 1586729.7237 E: 404137.7254
(B4-1)-19	'H' DBI	RIM = 81.00 INV OUT = 74.00 (NE)	N: 1586654.0025 E: 404737.3604
(B4-1)-20	'C' DBI	RIM = 85.00 INV IN = 73.98 (SW)	N: 1586690.3546 E: 404768.0442
(B6)-2	'P' MH	RIM = 86.50 INV IN = 78.97 (W) INV OUT = 78.97 (NE)	N: 1590321.5469 E: 406133.5094
(B6)-3	'C' DBI	RIM = 82.99 INV IN = 78.77 (SW)	N: 1590389.3743 E: 406172.8217
(B9)-1	'C' DBI	RIM = 84.00 INV OUT = 79.22 (S)	N: 1590981.5085 E: 406067.3943
(B9)-2	'P' MH	RIM = 85.00 INV IN = 78.67 (N) INV OUT = 78.67 (SE)	N: 1590705.4672 E: 406067.3943
(B9)-3	'C' DBI	RIM = 83.38 INV IN = 78.38 (NW)	N: 1590597.3202 E: 406161.5856
(B23)-1	'E' DBI	RIM = 82.99 INV OUT = 77.00 (E)	N: 1589343.3217 E: 406216.2088
(B23)-3	'C' DBI	RIM = 82.98 INV IN = 73.96 (S)	N: 1589483.2381 E: 406510.5162
(D1-1)-10	'P' MH	RIM = 86.50 INV OUT = 77.02 (SW)	N: 1588830.1178 E: 404006.8948
(D1-1)-11	'C' DBI	RIM = 83.00 INV IN = 77.00 (NE)	N: 1588815.9923 E: 403988.7435
(D1-2)-10	'P' MH	RIM = 87.50 INV OUT = 83.07 (SE)	N: 1589901.3196 E: 404447.5867

Drainage Structure Table			
Name	Type	Details	Location
(D1-2)-15	'P' MH	RIM = 87.50 INV OUT = 83.03 (NW)	N: 1589717.9666 E: 404664.3054
(D1-3)-15	'P' MH	RIM = 87.00 INV OUT = 83.06 (W)	N: 1589976.7082 E: 405566.0790
(D1-4)-15	'P' MH	RIM = 87.25 INV OUT = 83.07 (SE)	N: 1588981.9451 E: 405736.7175
(D1-4)-17	'C' DBI	RIM = 83.00 INV IN = 79.50 (NE)	N: 1588983.0146 E: 405950.1727
(D1-4)-18	'C' DBI	RIM = 83.00 INV OUT = 79.50 (SW)	N: 1589165.1794 E: 406202.7459
(D2-1)-15	'P' MH	RIM = 86.00 INV OUT = 77.02 (W)	N: 1590498.5179 E: 405326.3260
(D2-1)-16	'C' DBI	RIM = 83.00 INV IN = 77.00 (E)	N: 1590490.4766 E: 405305.3121
(D2-2)-10	'P' MH	RIM = 86.50 INV OUT = 77.02 (SW)	N: 1591728.4355 E: 403752.9500
(D2-2)-11	'C' DBI	RIM = 83.00 INV IN = 77.00 (NE)	N: 1591706.9440 E: 403741.1979
(D4-1)-15	'P' MH	RIM = 85.00 INV OUT = 79.00 (SW)	N: 1586597.9018 E: 405388.5952
(D4-1)-16	'C' DBI	RIM = 83.00 INV IN = 76.70 (NE)	N: 1586578.9438 E: 405375.5723
(D4-1)-17	'C' DBI	RIM = 83.00 INV IN = 79.50 (S)	N: 1586864.7710 E: 405878.6754
(D4-1)-18	'P' MH	RIM = 86.50 INV IN = 79.50 (S) INV OUT = 79.50 (N)	N: 1586831.8669 E: 405888.2502
(D4-1)-19	'P' MH	RIM = 85.00 INV IN = 79.50 (S) INV OUT = 79.50 (N)	N: 1586636.2773 E: 405887.4845
(D4-1)-20	'C' DBI	RIM = 85.54 INV OUT = 79.50 (N)	N: 1586599.4136 E: 405876.2749
(W3-1)-15	'P' MH	RIM = 85.50 INV OUT = 77.04 (W)	N: 1590613.2596 E: 405986.4912
(W3-2)-15	'P' MH	RIM = 86.00 INV OUT = 77.09 (NE)	N: 1590955.8999 E: 406579.4621
(W3-2)-17	'C' DBI	RIM = 79.22 INV IN = 73.97 (NE)	N: 1591040.2441 E: 406451.1525
(W3-3)-15	'P' MH	RIM = 87.00 INV OUT = 78.08 (SW)	N: 1589882.1068 E: 407103.2258
(W3-3)-17	'P' MH	RIM = 87.00 INV OUT = 78.09 (NW)	N: 1589547.6729 E: 407100.2470

Drainage Structure Table			
Name	Type	Details	Location
(W3-4)-20	'P' MH	RIM = 86.50 INV OUT = 77.09 (S)	N: 1589893.7446 E: 406153.0898
(W4-1)-15	'P' MH	RIM = 87.50 INV OUT = 77.06 (SE)	N: 1587928.8718 E: 404634.1131
(W4-2)-15	'P' MH	RIM = 86.50 INV OUT = 76.95 (S)	N: 1586828.8646 E: 403514.8492
(W4-2)-20	'C' DBI	RIM = 85.00 INV IN = 76.95 (NW)	N: 1586739.1286 E: 403761.1542

Drainage Structure Table (MES/Headwall)			
Name	Type	Details	Location
(B2-1)-1	MES	INV OUT = 82.42 (E)	N: 1591091.9691 E: 404548.4631
(B2-1)-10	MES	INV IN = 79.46 (SE)	N: 1590261.2829 E: 404469.7152
(B2-1)-11	MES	INV OUT = 80.76 (NW)	N: 1590226.6484 E: 404541.8294
(B2-1)-16	MES	INV IN = 77.00 (SE)	N: 1590451.8013 E: 404492.9909
(B2-2)-1	MES	INV IN = 80.00 (W)	N: 1591109.2309 E: 404626.5786
(B4-1)-16	MES	INV IN = 77.00 (N)	N: 1586752.4108 E: 404294.5408
(B6)-1	MES	INV OUT = 79.50 (E)	N: 1590321.5469 E: 405955.4683
(B10)-1	MES	INV OUT = 81.00 (NE)	N: 1590280.9307 E: 407001.3127
(B10)-2	MES	INV IN = 81.00 (SW)	N: 1590311.9616 E: 407041.1971
(B21)-1	MES	INV OUT = 85.00 (E)	N: 1587157.1827 E: 404209.6026
(B22)-1	MES	INV IN = 85.00 (W)	N: 1587162.8809 E: 404234.9060
(B23)-2	MES	INV IN = 76.94 (W)	N: 1589360.4420 E: 406277.8764
(D1-2)-11	MES	INV IN = 83.00 (NW)	N: 1589869.0135 E: 404461.1340
(D1-2)-16	MES	INV IN = 83.00 (SE)	N: 1589738.0965 E: 404645.0567
(D1-3)-16	MES	INV IN = 83.00 (E)	N: 1589976.9796 E: 405534.0802
(D1-4)-16	MES	INV IN = 83.00 (NW)	N: 1588950.5011 E: 405796.7379
(W3-1)-16	MES	INV IN = 77.00 (E)	N: 1590613.5903 E: 405942.4926
(W3-1)-17	MES	INV IN = 76.50 (E)	N: 1590686.9868 E: 405819.1722
(W3-2)-16	MES	INV IN = 77.00 (SW)	N: 1590993.8058 E: 406601.8036
(W3-3)-16	MES	INV IN = 78.00 (NE)	N: 1589856.3162 E: 407070.0770

Drainage Structure Table (MES/Headwall)			
Name	Type	Details	Location
(W3-3)-18	MES	INV IN = 78.00 (SE)	N: 1589584.7306 E: 407071.3378
(W3-3)-19	MES	INV IN = 76.97 (SE)	N: 1589739.1179 E: 406925.3072
(W3-4)-21	MES	INV IN = 77.00 (N)	N: 1589847.3574 E: 406156.3374
(W4-1)-16	MES	INV IN = 77.00 (NW)	N: 1587904.4818 E: 404691.8339
(W4-1)-20	MES	INV IN = 76.92 (N)	N: 1587604.9019 E: 404910.4966
(W4-2)-16	MES	INV IN = 77.00 (N)	N: 1586777.9057 E: 403512.8034
D22-2	MES	INV OUT = 81.79 (E)	N: 1587387.8934 E: 405096.2266
D22-3	MES	INV IN = 78.51 (W)	N: 1587402.3245 E: 405133.5096

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STRUCTURE TABLES

MASS GRADING PLANS FOR HILLSIDE GROVES HOWEY IN THE HILLS

PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

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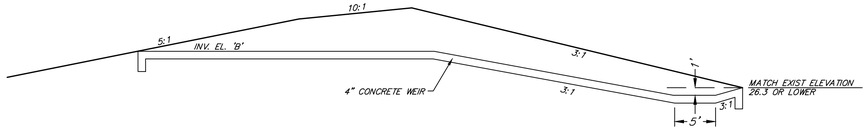
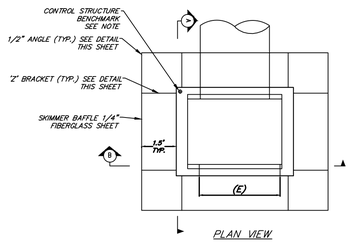
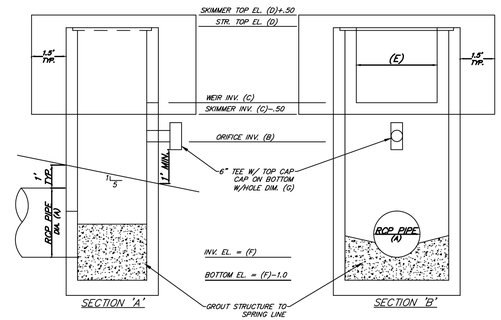


TYPICAL SECTION A
N.T.S.



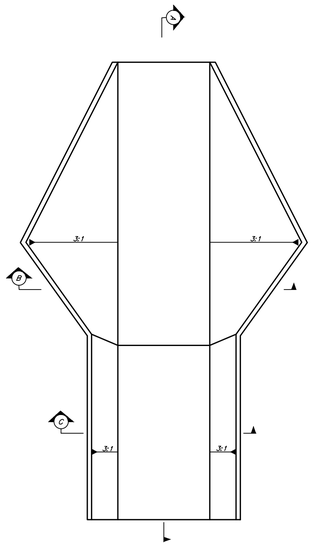
PLAN VIEW

NOTE:
STRUCTURES SHALL HAVE AN OSCEOLA COUNTY BRASS DISK BENCHMARK PERMANENTLY SET ON TOP OF THE STRUCTURE USING NON-SHRINK GROUT. ELEVATION OF BENCHMARK SHALL BE CERTIFIED TO OSCEOLA COUNTY BY A FLORIDA REGISTERED PROFESSIONAL SURVEYOR.



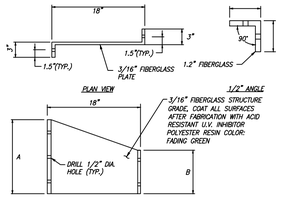
TYPICAL CONTROL STRUCTURE DETAIL
N.T.S.

CONTROL STRUCTURE ELEVATIONS										
POND	I.D. NO.	STR. TYPE	PIPE DIA. (A)	ELEV. (B)	ELEV. (C)	ELEV. (D)	DIM. (E)	ELEV. (F)	DIM. (G)	ORIFICE QUANTITY
W3-1	DS3-1	DS	36"	81.00	84.00	85.00	36"	77.00	3.00"	1
W3-2	DS3-2	DS	36"	81.00	84.00	85.00	36"	77.00	3.00"	1
W3-3	DS3-3	DS	36"	81.00	84.00	85.00	36"	77.00	3.00"	1
W3-4	DS3-4	DS	36"	81.00	84.50	85.50	36"	77.00	3.00"	1
W4-1	DS4-1	DS	36"	81.00	84.00	85.00	36"	77.00	3.00"	1
W4-2	DS4-2	DS	36"	81.00	82.50	86.40	36"	77.00	3.00"	1



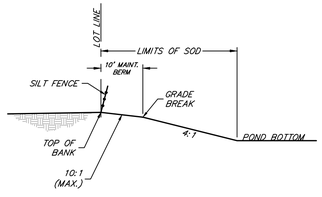
PLAN VIEW
N.T.S.

BROADCRESTED WEIR STRUCTURE DIM.		
POND	EL. (B)	DIM. (C)
W1-1	85.50	25'
W1-2	86.50	25'
W1-3	86.50	25'
W1-4	84.50	25'
W2-1	85.00	25'
W2-2	85.50	25'
W4-1	83.50	25'

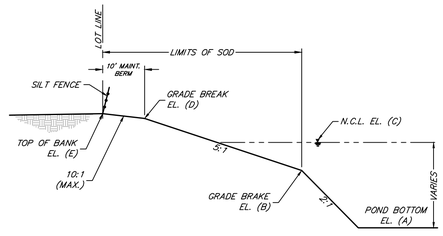


NOTES:
1. MOUNT BRACKETS TO SKIMMERS W/ 1/4" STAINLESS STEEL BOLTS.
2. MOUNT BRACKETS TO STRUCTURES W/ 3/8" x 3-1/2" STAINLESS STEEL WEDGE ANCHORS.
3. A PERMANENT BENCH MARK IS TO BE SET IN A PERMANENT MANNER ON TOP OF THE OUTFALL CONTROL STRUCTURE.
4. SKIMMER TO BE MOUNTED TO DBI IN ACCORDANCE WITH MANUFACTURES SPECIFICATIONS USING "Z" BRACKETS.
5. THE CONTROL STRUCTURES ARE TO BE LOCATED IN THE POND PER THE CONTROL STRUCTURE DETAIL.
6. ALL BOX STRUCTURES ARE TO INCLUDE GRATES AND CHAINS.

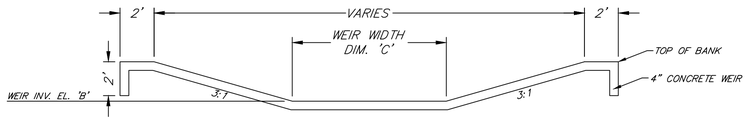
MOUNTING "Z" BRACKET DETAIL
N.T.S.



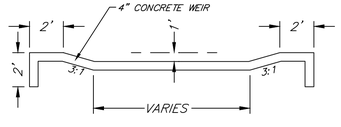
TYPICAL DRY POND SECTION
N.T.S.



TYPICAL WET POND SECTION
N.T.S.



TYPICAL SECTION B
N.T.S.



TYPICAL SECTION C
N.T.S.

BROADCRESTED WEIR STRUCTURE DETAIL
N.T.S.

PEAK STAGE SUMMARY						
POND	NCL	TOP OF BANK	25YR/24HR	10YR/24HR	100YR/24HR	25YR/96HR
B1-1	81.0	85.5	83.6	83.6	83.6	83.6
B2-1	81.0	85.5	83.6	83.6	83.6	83.6
B4-1	81.0	85.00	82.1	81.9	82.7	81.9
D1-1	81.0	85.0	85.6	85.1	85.6	85.1
D1-2	81.0	87.0	86.6	86.6	86.8	86.9
D1-3	81.0	87.0	83.0	83.0	83.0	83.0
D2-1	81.0	85.8	85.0	84.7	85.1	84.7
D2-2	81.00	86.1	85.6	85.5	85.7	85.5
D4-1	81.00	85.0	83.9	83.8	84.1	83.8
W3-1	81.00	85.0	83.99	83.3	84.4	83.3
W3-2	81.00	85.0	82.7	82.4	83.4	82.4
W3-3	81.00	85.0	83.4	82.9	84.2	82.9
W3-4	81.00	85.5	83.1	82.6	83.9	82.6
W4-1	81.00	85.0	84.1	83.5	84.6	83.5
W4-2	81.00	86.4	83.9	83.5	84.7	83.5

POND ELEVATIONS					
POND	ELEV. (A)	ELEV. (B)	ELEV. (C)	ELEV. (D)	ELEV. (E)
B1-1	71.0	79.0	81.0	84.5	85.5
B2-1	71.0	79.0	81.0	84.5	85.5
B4-1	69.0	79.0	81.0	84.0	85.0
D1-1	69.0	79.0	81.0	84.0	85.0
D1-2	69.0	79.0	81.0	86.0	87.0
D1-3	69.0	79.0	81.0	86.0	87.0
D2-1	69.00	79.00	81.00	84.50	85.5
D2-2	71.0	79.0	81.00	85	86.1
D4-1	69.0	79.00	81.00	84	85.0
W3-1	69.0	79.00	81.00	84	85.0
W3-2	69.0	79.0	81.00	84.00	85.00
W3-3	69.00	79.00	81.00	84.00	85.00
W3-4	69.00	79.0	81.0	84.00	85.5
W4-1	71.00	79.00	81.00	84.00	85.00
W4-2	71.5	79.00	81.00	85.4	86.4

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099 www.cwleng.com
FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311

No.	Date	Revision	By

CONTROL STRUCTURE DETAILS

MASS GRADING PLANS
FOR HILLSIDE GROVES
HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

Apr 01, 2022
RYAN R. BLADA, P.E.
FL P.E.: #61017
Reg. Engineer

Project No.: 21-04-0008	
Designed: RRB	Drawn: RAH
Checked: RRB	O.C.: RCW
Date: APRIL 2021	
Scale: 1" = 100'	DATUM:

Sheet C510

Printed By: Rob
Printed: Apr 01, 2022 - 9:07am

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
HILLSIDE GROVES
HOWEY-IN-THE-HILLS
LAKE COUNTY, FL

OWNER NAME AND ADDRESS:
LENNAR - ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821

DESCRIPTION:
RESIDENTIAL SUBDIVISION

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
CLEARING AND GRUBBING; EARTHWORK, PAVEMENT AND GRADING; STORM SEWER, AND PREPARATION FOR FINAL PLANTING AND SEEDING.

RUNOFF COEFFICIENT:
1. PRE-CONSTRUCTION = .3
2. DURING CONSTRUCTION = .8
3. POST-CONSTRUCTION = .8

SOILS:
SEE SOIL BORING REPORT FOR SOILS DATA

SITE MAPS:
* SEE ATTACHED GRADING PLAN FOR PRE & POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.
* SEE ATTACHED EROSION & TURBIDITY CONTROL PLAN FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS
* SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.

SITE AREA:
1. TOTAL AREA OF SITE = 375.2 AC
2. TOTAL AREA TO BE DISTURBED = 239.3 AC

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY (DESRIPTION:) _____ _____ WET & DRY DETENTION AREAS _____

FOR THE PROJECT. AREAS WHICH ARE NOT TO BE CONSTRUCTED ON, BUT WILL BE REGARDED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE. THE SITE DISCHARGES TO A DRAINAGE SYSTEM AS SHOWN ON THE PLANS. WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN.

TIMING OF CONTROLS/MEASURES

REFER TO " CONTRACTORS RESPONSIBILITY" FOR THE TIMING OF CONTROL/MEASURES.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS RELATED TO STORM WATER MANAGEMENT AND EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED.

D.E.P. DREDGE/FILL PERMIT # _____
C.O.E. DREDGE/FILL PERMIT # _____
S.J.R.W.M.D. M.S.S.W. PERMIT # _____

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____

DATED: _____

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN
4. CONSTRUCT SEDIMENTATION BASIN
5. CONTINUE CLEARING AND GRUBBING
6. STOCK PILE TOP SOIL IF REQUIRED
7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED
8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE
9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.
10. APPLY BASE TO PROJECT
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING
12. COMPLETE FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT FROM BASINS
14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES AND STABILIZED CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED , MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED,TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

1. HAY BALE BARRIER: HAY BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
   D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.

   REFER TO LOCAL JURISDICTION DETAIL FOR CONSTRUCTING THE HAY BALE BARRIER.

2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.

3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.

4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE

CONTRACTOR'S REQUIREMENTS

CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE. LEVEL SPREADER SHALL BE CONSTRUCTED IN ACCORDANCE TO LOCAL JURISDICTION DETAIL.

5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.

6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODEABLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.

7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.

8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.

9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.

10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.

11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.

12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.

13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.

14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

STRUCTURAL PRACTICES

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.

2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN A DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA.
   THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE:
   A. BLOCK & GRAVEL SEDIMENT FILTER - THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.
   B. GRAVEL SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES & UNPROTECTED AREAS.
   C. DROP INLET SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS.

3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION & SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES & HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.

4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE.

THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS

ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS,WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

☒ Concrete	☒ Fertilizers	☒ Wood
☒ Asphalt	☒ Petroleum Based Products	☒ Masonry Blocks
☒ Tar	☒ Cleaning Solvents	☒ Roofing Materials
☒ Detergents	☒ Paints	☒ Metal Studs
☐ _____	☐ _____	☐ _____

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES
THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS
ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS
FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS
ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS
CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.
* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.
* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.

  THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS.
  THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.
* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING
* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).
* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE PROPER SEDIMENT TRAPS PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

RESPONSIBLE FOR/DUTIES	GENERAL CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR
BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS					
SIGNATURE					

Connelly & Wicker Inc.
Planning • Engineering • Landscape Architecture
1560 NORTH ORANGE AVE., SUITE 210 WINTER PARK, FLORIDA 32789
(407) 261-3100 FAX: (407) 261-3099 www.cwleng.com
FLORIDA REGISTRY: 3650 L.A. NUMBER: LC26000311

No.	Date	Revision	By

SWPPP

MASS GRADING PLANS
FOR HILLSIDE GROVES
HOWEY IN THE HILLS
PREPARED FOR
LENNAR - ORLANDO
ORLANDO, FL

Apr 01, 2022
RYAN R. BLADA, P.E.
FL P.E.: #61017
Reg. Engineer

Project No.: 21-04-0008	
Designed: RRB	Drawn: RAH
Checked: RRB	O.C.: RCW
Date: APRIL 2021	
Scale: N/A	DATUM:

Sheet C950

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