Community & Economic
Development Department
www.adcogov.org

ADAMS COUNTY
COLORADO

4430 South Adams County Parkway
1st Floor, Suite W2000
Brighton, CO 80601-8204
PHONE 720.523.6800
FAX 720.523.6998

CONDITIONAL USE PERMIT

Application submittals must include all documents on this checklist as well as this page. Please use the reference guide (pgs. 3-4) included in this packet for more information on each submittal item.

All applications shall be submitted electronically to epermitcenter@adcogov.org. If the submittal is too large to email as an attachment, the application may be sent as an unlocked OneDrive link. Alternatively, the application may be delivered on a flash drive to the One-Stop Customer Service Center. All documents should be combined in a single PDF. Once a complete application has been received, fees will be invoiced and payable online at https://permits.adcogov.org/CitizenAccess/.

- [x] 1. Development Application Form (pg. 5)
- [ ] 2. Application Fees (see pg. 2)
- [x] 3. Written Explanation of the Project
- [x] 4. Site Plan Showing Proposed Development
- [x] 5. Proof of Ownership (warranty deed or title policy)
- [x] 6. Proof of Water and Sewer Services
- [x] 7. Proof of Utilities (e.g. electric, gas)
- [x] 8. Legal Description
- [x] 9. Certificate of Taxes Paid
- [ ] 10. Certificate of Notice to Mineral Estate Owners/and Lessees(pg. 7)
- [ ] 11. Certificate of Surface Development (pg. 8-10)

Supplemental Items (if applicable) *Contact County staff for supplemental forms

- [x] 1. Traffic Impact Study
- [ ] 2. Neighborhood Meeting Summary
- [ ] 3. Solid waste transfer station*
- [ ] 4. Solid waste composting facility*
- [ ] 5. Scrap tire recycling facility*
- [ ] 6. Inert fill*

Application Fees	Amount	Due
Conditional Use Permit	$1,000 ($300 per additional residential request/ $500 per additional non-residential)	After complete application received
Tri-County Health	$360 (TCHD Level 3)	After complete application received

Conditional Use-Guide to Development Application Submittal

The submittal documents for all Land Use/Development Applications are listed below. Detailed explanations of the submittal documents are also provided.

All development application submittals shall comprise of one (1) electronic copy (emailed or delivered on a USB). **Application submittals that do not conform to these guidelines shall not be accepted.**

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3. Written Explanation:

- A clear and concise, yet thorough, description of the proposal. Please include, if applicable, timeframe, purpose of project, and improvements that will be made to the site.

4. Site Plan:

- A detailed drawing of existing and proposed improvements.
- Including:
  - Streets, roads, and intersections
  - Driveways, access points, and parking areas
  - Existing and proposed structures, wells, and septic systems,
  - Easements, utility lines, and no build or hazardous areas
  - Scale, north arrow, and date of preparation
- An Improvement Location Certificate or Survey may be required during the official review

5. Proof of Ownership:

- A deed may be found in the Office of the Clerk and Recorder.
- A title commitment is prepared by a professional title company.

6. Proof of Water:

- A written statement from the appropriate water district indicating that they will provide service to the property **OR** a copy of a current bill from the service provider.
- Well permit(s) information can be obtained from the Colorado State Division of Water Resources at (303) 866-3587.

Proof of Sewer:

- A written statement from the appropriate sanitation district indicating that they will provide service to the property **OR** a copy of a current bill from the service provider.
- A written statement from Tri-County Health indicating the viability of obtaining Onsite Wastewater Treatment Systems.

7. Proof of Utilities (Gas, Electric, etc):

- A written statement from the appropriate utility provider indicating that they will provide service to the property.
- Copy of a current bill from the service provider.

8. Legal Description:

- Geographical description used to locate and identify a property.
- Visit http://gisapp.adcogov.org/quicksearch/ to find the legal description for your property.

9. Proof of Taxes Paid:

- All taxes on the subject property must be paid in full. Please contact the Adams County Treasurer's Office.
- Or http://adcogov.org/index.aspx?NID=812

10. Certificate of Notice to Mineral Estate Owners/ Certificate of Surface Development:

- The State of Colorado requires notification to mineral rights owners of applications for surface development (i.e. zoning, plats, etc.)
- Mineral or Surface right owners may be found in the title commitment for the subject property

- You may also search the Office of the Clerk and Recorder for any recorded deeds, easements, or other documents

SUPPLEMENTAL:

1. **Preliminary Traffic Impact Study:**
   - This shall include, but not limited to:
     - Trip generation estimates from the development,
     - Current traffic counts,
     - Projected future traffic counts to include background traffic projections and future traffic projections from the development.
     - A description of the traffic impacts that the development will have on the surrounding area.

   Final Traffic Study:
   - Shall have all of the information contained in a Preliminary Traffic Impact Study and it shall also include recommendations on how to mitigate the traffic impacts that are caused by the development. (See chapter 8 for full description of requirements).

2. **Neighborhood Meeting Summary:**
   - Please refer to Section 2-01-02 of the Adams County Development Standards and Regulations for the specific requirements regarding time, location, and notice
   - A written summary shall be prepared including the materials submittal presented at the meeting, any issues identified at the meeting, and how those issues have been addressed

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DEVELOPMENT APPLICATION FORM

Application Type:

☐ Conceptual Review	☐ Preliminary PUD	☐ Temporary Use
☐ Subdivision, Preliminary	☐ Final PUD	☐ Variance
☐ Subdivision, Final	☐ Rezone	☒ Conditional Use
☐ Plat Correction/ Vacation	☐ Special Use	☐ Other: _____

PROJECT NAME: 5280 Beach

APPLICANT

Name(s): Sovereign One LLC Phone #: 303-961-4847

Address: 8578 West 84th Circle

City, State, Zip: Arvada, CO, 80005

2nd Phone #: Email: mike.patton@thelabrp.com

OWNER

Name(s): Sovereign One LLC Phone #: 303-961-4847

Address: 8578 West 84th Circle

City, State, Zip: Arvada, CO, 80005

2nd Phone #: Email: mike.patton@thelabrp.com

TECHNICAL REPRESENTATIVE (Consultant, Engineer, Surveyor, Architect, etc.)

Name: Michael Groselle Phone #: 720-815-7937

Address: 71 S Fenton St

City, State, Zip: Lakewood, CO, 80226

2nd Phone #: Email: Mike@mod-eng.com

DESCRIPTION OF SITE

Address:	Parcel #: 0181732301001
City, State, Zip:	Adams County, Colorado
Area (acres or square feet):	7.25 Acres
Tax Assessor Parcel Number	0181732301001
Existing Zoning:	A-1
Existing Land Use:	Pasture
Proposed Land Use:	Outdoor Sand volleyball courts

Have you attended a Conceptual Review? YES [x] NO [ ]

If Yes, please list PRE#: [ ]

I hereby certify that I am making this application as owner of the above described property or acting under the authority of the owner (attached authorization, if not owner). I am familiar with all pertinent requirements, procedures, and fees of the County. I understand that the Application Review Fee is non-refundable. All statements made on this form and additional application materials are true to the best of my knowledge and belief.

Name: Mike Patton Date: 01/13/2022

Owner's Printed Name

Name:

Owner's Signature

APPLICANT'S CERTIFICATION CONCERNING QUALIFYING SURFACE DEVELOPMENT, PURSUANT TO C.R.S. §24-65.5-103.3 (1)(b)

I/We, _____
_____, (the "Applicant") by signing below, hereby declare and certify as follows:

Concerning the property located at:

Physical Address: _____

Legal Description: _____

_____

Parcel #(s): _____

With respect to qualifying surface developments, that (PLEASE CHECK ONE):

_____ No mineral estate owner has entered an appearance or filed an objection to the proposed application for development within thirty days after the initial public hearing on the application; or

_____ The Applicant and any mineral estate owners who have filed an objection to the proposed application for development or have otherwise filed an entry of appearance in the initial public hearing regarding such application no later than thirty days following the initial public hearing on the application have executed a surface use agreement related to the property included in the application for development, the provisions of which have been incorporated into the application for development or are evidenced by a memorandum or otherwise recorded in the records of the clerk and recorder of the county in which the property is located so as to provide notice to transferees of the Applicant, who shall be bound by such surface use agreements; or

_____ The application for development provides:

(i) Access to mineral operations, surface facilities, flowlines, and pipelines in support of such operations existing when the final public hearing on the application for development is held by means of public roads sufficient to withstand trucks and drilling equipment or thirty-foot-wide access easements;

(ii) An oil and gas operations area and existing well site locations in accordance with section 24-65.5-103.5 of the Colorado Revised Statutes; and

(iii) That the deposit for incremental drilling costs described in section 24-65.5-103.7 of the Colorado Revised Statutes has been made.

Date: _____ Applicant: _____

After Recording Return To:

By: _____

Print Name: _____

Address: _____

_____

STATE OF COLORADO)
)
COUNTY OF ADAMS)

Subscribed and sworn to before me this _____day of _____, 20___, by _____.

Witness my hand and official seal.

My Commission expires: _____ _____
Notary Public

Name and Address of Person Preparing Legal Description:

A recorded copy of this Certification shall be submitted to the Adams County Community and Economic Development Department within thirty days after the initial public hearing on all applicable land use applications.

APPLICANT'S CERTIFICATION CONCERNING QUALIFYING SURFACE DEVELOPMENT, PURSUANT TO C.R.S. §24-65.5-103.3 (1)(b)

I, _____ (the "Applicant") by signing below, hereby declare and certify as follows concerning the property located at:

Physical Address:

Legal Description:_____

Parcel # (s): _____

With respect to qualifying surface developments:

Access to existing and proposed mineral operations, surface facilities, flowlines, and pipelines in support of such existing and proposed operations for oil and gas exploration and production, including provisions for public roads sufficient to withstand trucks and drilling equipment or thirty-foot-wide access easements, were provided for in a "_____" area as recorded in Reception # _____ on _____.

Date: _____ Applicant: _____
By: _____
_____
Address: _____

STATE OF COLORADO)
)
COUNTY OF ADAMS)

Subscribed and sworn to before me this _____day of _____, 20___, by _____.

Witness my hand and official seal.

My Commission expires: _____ _____
Notary Public

After Recording Return To: *Name and Address of Person Preparing Legal Description:*

A recorded copy of this Certification shall be submitted to the Adams County Community and Economic Development Department with all applicable land use applications.

April 26, 2020

Adams County Community
& Economic Development Department
4430 S. Adms County Parkway
Suite W2000
Brighton, CO 80601

Dear Adams County Community & Economic Development Department,

Modern Engineering Solutions, LLC (MES) is working with Mike Patton (Client) to develop a sand volleyball sports facility located at parcel number 0181732301001 in Adams County. This facility will be the new location for a training academy designed to provide Colorado's youth and professional athletes a place to train and play. We would like to propose our project plan with Adams County to obtain written approval to begin construction.

The current property is about 7.25 acres of undeveloped land. The primary use of this site is for 10 outdoor sand volleyball courts. The proposed parking lot will be designed to accommodate the 10 courts. Utilities are not anticipated to be installed with this development. We would also like for all visitors to access the property through the existing 60' Right of Way near Colfax Avenue called Imboden Road.

We are excited about the possibility to bring youth and adult sports into the Adams County community. If you have any questions or concerns please do not hesitate to contact me at the information listed below.

Thank you for your time and consideration.

Sincerely,

Michael Groselle

Michael Groselle, P.E.
CEO of Modern Engineering Solutions, LLC
Email: Mike@mod-eng.com

Cell: 720-815-7937

CONSTRUCTION PLANS

FOR

5280 BEACH

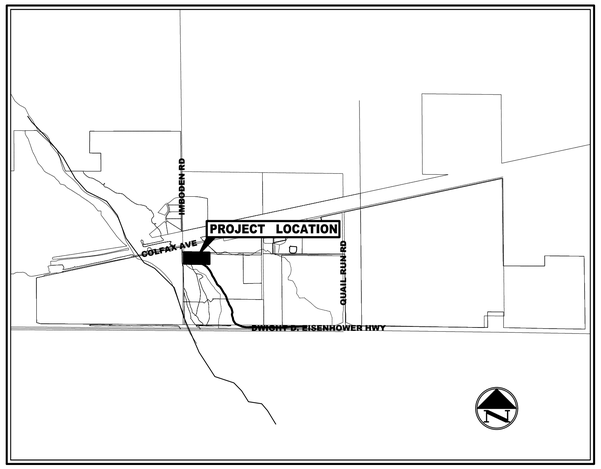
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1

CITY OF WATKINS, ADAMS COUNTY, COLORADO

OWNER/DEVELOPER
5280 BEACH
1970 IMBODEN ROAD
WATKINS, CO 80137
PHONE: (303) 961-4847
CONTACT: MIKE PATTON
EMAIL: MIKE.PATTON@THELABRP.COM

ENGINEER
MODERN ENGINEERING SOLUTIONS, LLC
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305
CONTACT: MICHAEL GROSELLE
EMAIL: MIKE@MOD-ENG.COM

SURVEYOR
GILLIANS LAND CONSULTANTS
PO BOX 746358
ARVADA, CO 80006-6358
PHONE: (303) 972-6640
CONTACT: ROBERT HARRIS
EMAIL: RHASSIS@GILLIANSLC.COM



LOCATION MAP
SCALE: N.T.S.

MODERN ENGINEERING SOLUTIONS

COLORADO 811
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

JANUARY 2022

SHEET INDEX

SHEET NO.	SHEET TITLE
C0.0	COVER SHEET
C1.0	GENERAL NOTES
TS	TOPOGRAPHIC SURVEY
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	FIRE SAFETY PLAN
C5.0	EROSION CONTROL NOTES
C5.1	EROSION CONTROL PLAN - PHASE I
C5.2	EROSION CONTROL PLAN - PHASE II
C5.3	EROSION CONTROL PLAN - PHASE III
C5.4	EROSION CONTROL DETAILS-I
C5.5	EROSION CONTROL DETAILS-II
C5.6	EROSION CONTROL DETAILS-III
C6.0	EXISTING DRAINAGE AREA MAP
C6.1	PROPOSED DRAINAGE AREA MAP
C7.0	N-S ROAD PLAN & PROFILE
C7.1	E-W ROAD PLAN & PROFILE
C7.2	N-S ROAD SECTIONS
C7.3	E-W ROAD SECTIONS
C7.4	E-W ROAD SECTIONS
C7.5	E - W ROAD SECTIONS
C8.0	COLFAX DRIVEWAY
C9.0	DETENTION POND PLAN
C9.1	DETENTION POND SECTIONS
C9.2	OUTLET ORIFICE DETAILS

PRELIMINARY
-FOR REVIEW ONLY-

THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE. THEY ARE PREPARED BY, OR UNDER THE SUPERVISION OF:

MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

PLEASE RECYCLE
5280 BEACH
5280 BEACH
Xrefs: \JOb-218-X-ESALdwg
Layout: 18x24ANSIDarkHalf 22" x 36"
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\JOb-218 Adam County Volleyball Courts\JOb-218-C-COVER.DWG
JOb-218-C-ESP 1/13/2022 2:40 PM

PLEASE RECYCLE

GENERAL NOTES FOR PAVING IMPROVEMENTS

1. THE TERM MUNICIPALITY REFERS TO THE ADAMS COUNTY.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY AND SHALL BE IN ACCORDANCE WITH THE MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION. ALL WORK NOT COVERED IN THE CONTRACT DOCUMENTS AND MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION SHALL BE GOVERNED BY ADAMS COUNTY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. EXISTING UTILITY LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. EXISTING UTILITIES SHOWN HAVE BEEN BASED ON AVAILABLE RECORD DRAWINGS AND SURFACE APPURTENANCE FIELD TIES ONLY. SOME UTILITY LINES AND SURFACE LOCATIONS MAY NOT BE SHOWN. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATIONS AND PROTECTION OF EXISTING UTILITIES WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL ALSO ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING UTILITIES WHETHER SHOWN OR NOT, DAMAGED BY THE CONTRACTOR'S ACTIVITIES. DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATIONS OF EXISTING UTILITIES SHALL NOT BE BASIS FOR ADDITIONAL COMPENSATIONS TO THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE REESTABLISHED AT CONTRACTORS EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO: A.) PREVENT ANY DAMAGES TO PRIVATE PROPERTY AND PROPERTY OWNER'S POLES, FENCES, SHRUBS, ETC. B.) PROTECT ALL UNDERGROUND UTILITIES. C.) NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH COLORADO LAW. D.) FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE VICINITY OF CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNIDENTIFIED POTENTIAL CONFLICTS THAT MAY EXIST BETWEEN THE EXISTING UTILITIES AND CONSTRUCTION PLANS.
6. ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS, INCLUDING EXISTING PRIVATE AND PUBLIC LANDSCAPE IRRIGATION SYSTEMS, SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENT WERE IN PRIOR TO THE DAMAGES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE ADJUSTMENT OF SPRINKLER HEADS TO FINAL GRADE AND RELOCATION IF NECESSARY.
7. THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. THE PONDING OF WATER IN STREETS, DRIVES, TRENCHES, ETC, WILL NOT BE ALLOWED. THE CONTRACTOR SHALL MAINTAIN EXISTING DRIVEWAYS ACCESS AT ALL TIME.
8. THE CONTRACTOR SHALL MAINTAIN EXISTING SANITARY SEWER AND WATER SERVICES AT ALL TIMES DURING CONSTRUCTION.
9. AREAS OF THE SITE THAT WILL UNDERLIE FILL SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN UNCOMPACTED THICKNESS. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT FROM -3% TO +1% OF OPTIMUM OR PER GEOTECH RECOMMENDATION. FIELD DENSITY TESTS PER MUNICIPAL REQUIREMENTS.
10. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATION FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEM, REGISTERED IN THE STATE OF COLORADO. THE CONTRACTOR SHALL SUBMIT COMPLETED TRENCH SAFETY PLANS TO THE MUNICIPALITY PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATION. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONSTRUCTION SAFETY AND HEALTH REGULATIONS".
11. WORK MAY NOT BE BACKFILLED OR COVERED UNTIL IT HAS BEEN INSPECTED BY THE MUNICIPALITY.
12. ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.
13. ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE CONCRETE PAVEMENT.
14. CONTRACTOR SHALL COORDINATE THE PROTECTION OF EXISTING FRANCHISE UTILITIES AND APPURTENANCES INCLUDING EXISTING UTILITY POLES IN THE VICINITY OF CONSTRUCTION OPERATIONS WHETHER UTILITIES ARE SHOWN ON PLANS OR NOT. ANY DAMAGE INCURRED TO EXISTING FRANCHISE UTILITIES, APPURTENANCES, UTILITY POLES, LIGHT STANDARDS, ETC., BY CONSTRUCTION RELATED ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
15. THE CONTRACTOR SHALL LOCATE AND RECORD EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TEMPORARILY REMOVE AND CAP IRRIGATION SYSTEM AS NECESSARY FOR CONSTRUCTION AND SHALL REPLACE THE PORTION REMOVED WITH EQUIVALENT SYSTEMS. CONTRACTOR SHALL COORDINATE ANY IRRIGATION WORK WITH THE MUNICIPALITY AND PROPERTY OWNER'S REPRESENTATIVES.
16. THE CONTRACTOR MUST CEASE ALL CONSTRUCTION OPERATIONS IMMEDIATELY IF A SUSPECTED ARCHEOLOGICAL OBJECT/ARTIFACT IS UNCOVERED DURING CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY CONTACT THE COLORADO HISTORICAL COMMISSION AND THE MUNICIPALITY. PROJECT WORK WILL NOT COMMENCE UNTIL PROPER PERMITS ARE IN PLACE AND PROVIDED TO THE MUNICIPALITY.
17. ALL PAVING DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL HANDICAPPED ACCESSIBILITY REQUIREMENTS INCLUDING SIGNAGE, TEXTURES, COLORING, MARKINGS, AND SLOPES OF ADA/TAS 2012 ACCESSIBLE ROUTES & RAMPS, AND PARKING SPACES.
19. ALL PIPE LENGTHS MEASURED FROM STATION TO STATION BASED ON THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
20. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARISE.

GENERAL CONSTRUCTION NOTES

1. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT THE ADAMS COUNTY CONSTRUCTION INSPECTOR SUPERVISOR AT 720-523-6965.
2. ALL CONCRETE CURB, GUTTER AND WALK MUST BE POURED MONOLITHICALLY USING 4,500 PSI CONCRETE WITH FIBER MESH.
3. ALL MATERIAL SUBMITTALS MUST BE APPROVED, STAMPED AND SIGNED, BY THE ENGINEER OF RECORD, AND SUBMITTED TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR FOR APPROVAL PRIOR TO CONSTRUCTION/INSTALLATION.
4. THE CONTRACTOR IS REQUIRED TO SUBMIT COPIES OF ALL CONCRETE AND ASPHALT TICKETS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING, AND IS REQUIRED TO SUBMIT ALL TEST RESULTS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.
6. THE CONTRACTOR IS REQUIRED TO REMOVE A MINIMUM OF TWO (2) FEET OF EXISTING ASPHALT FOR ALL CURB AND GUTTER REPLACEMENT.
7. ALL UTILITY CUTS IN EXISTING STREETS ARE REQUIRED TO BE BACKFILLED WITH FLOWFILL, AND PATCHED WITH A MINIMUM OF 9-INCH ASPHALT PATCH.
8. A COPY OF THE GEOTECHNICAL REPORT SPECIFYING THE PAVEMENT THICKNESS DESIGN MUST BE SUBMITTED FOR REVIEW.
9. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL UTILITIES. THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE LINEAL FOOTAGES AND THE NUMBER OF SERVICE CUTS REQUIRED FOR ALL UTILITIES.
10. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL CONCRETE AND ASPHALT FACILITIES. PRIOR TO THE ISSUANCE OF THESE PERMITS, THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE SQUARE YARDAGE/SQUARE FOOTAGES OF ALL CONCRETE AND ASPHALT BEING INSTALLED.
11. THE SIA MUST BE COMPLETED WITH APPROPRIATE COLLATERAL, ALONG WITH THE PROPOSED PLAT, PRIOR TO THE ISSUANCE OF ANY ROW ACCESS/CONSTRUCTION PERMIT.
12. NO C.O.'S WILL BE ISSUED FOR ANY BUILDING CONSTRUCTION UNTIL ALL ROW IMPROVEMENTS HAVE BEEN COMPLETED AND HAVE BEEN GRANTED PRELIMINARY ACCEPTANCE.
13. UPON COMPLETION OF ALL CONSTRUCTION, A DRAINAGE CERTIFICATION LETTER, AND APPROPRIATE AS-BUILT CONSTRUCTION DRAWINGS AND INFORMATION WILL BE REQUIRED. THIS LETTER WILL BE STAMPED AND SIGNED BY THE ORIGINAL DESIGN ENGINEER.

GENERAL NOTES FOR PAVING IMPROVEMENTS

10. THE SUB GRADE SHALL BE PROOF ROLLED AND OBSERVED BY THE CONSTRUCTION INSPECTOR PRIOR TO AND AFTER SUB-GRADE STABILIZATION.
11. INDIVIDUAL WATER AND SEWER SERVICES AND WATER VALVES SHALL BE MARKED IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
12. THE CONTRACTOR SHALL PROCEED WITH PAVING NO MORE THAN SEVENTY-TWO (72) HOURS AFTER DENSITY/MOISTURE TESTS HAVE BEEN TAKEN AND PASSED BY A REGISTERED TESTING FIRM. COPIES OF THE TEST RESULTS SHALL BE FURNISHED TO THE MUNICIPALITY. IN THE EVENT PAVING OPERATIONS HAVE NOT COMMENCED WITHIN THE SEVENTY-TWO (72) HOUR LIMIT, A RETEST SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.
13. MANHOLE RIM ELEVATIONS, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. SHALL BE ADJUSTED TO FINISHED GRADE BY THE PAVING CONTRACTOR AT THE TIME OF PAVING.
14. THE PAVING CONTRACTOR SHALL INSTALL A BLUE REFLECTOR IN THE STREET OR FIRE LANE CENTERLINE AT THE LOCATION OF EACH FIRE HYDRANT.
15. THE CONTRACTOR SHALL PREPARE ALL TRAFFIC CONTROL PLANS AND SUBMIT TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMITS FOR WORK WITHIN THE MUNICIPALITY. THE PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D AND AS MODIFIED BY THE CDOT SUPPLEMENT TO THE M.U.T.C.D. THE PLAN SHALL ADDRESS THE REQUIREMENTS FOR ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS, HOURS OF CONSTRUCTION, AND OTHER DEVICES AS NECESSARY FOR SAFE TRAFFIC CONTROL.
16. CONCRETE SEALANT TO BE PER THE MUNICIPALITIES STANDARDS.

PROJECT GENERAL NOTES

1. THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) MUST APPROVE ANY WORK TO BE DONE IN THE STATE HIGHWAY RIGHT-OF-WAY. AN APPLICATION AND APPROPRIATE PLANS MUST BE SUBMITTED TO THE MUNICIPALITY AND THE MUNICIPALITY WILL SUBMIT THE APPLICATION TO CDOT FOR REVIEW AND APPROVED BY THE MUNICIPALITY WHERE THE WORK WILL BE PERFORMED.
2. THE LOCATION OF UNDERGROUND FACILITIES INDICATED ON THE PLANS IS TAKEN FROM PUBLIC RECORDS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND FACILITIES. IF THE EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
3. WHERE EXISTING UTILITIES, SERVICE LINES OR IRRIGATION LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES, SERVICE LINES OR IRRIGATION LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS IN GRADES AND ALIGNMENTS.
4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONST. SAFETY AND HEALTH REGULATIONS." VOL. 29, SUBPART P. PG. 128-137, AND ANY AMENDMENTS THERETO. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A TRENCH SAFETY PLAN FOR THIS PROJECT.
5. THE CONTRACTOR SHALL RESTORE ALL AREAS, ONSITE AND OFFSITE, DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO: TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE SWALES, STAGING AREAS, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS. UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE DRAWINGS, RESTORATION SHALL INCLUDE HYDROMULCHING ALL DISTURBED AREAS WITH A SLOPE OF LESS THAN 20% (1:5) AND SODDING AREAS WITH A SLOPE OF 20% (1:5) OR GREATER. ESTABLISHMENT OF GRASS THROUGH PROPER WATERING IS LEFT UP TO THE CONTRACT'S MEANS AND METHODS, UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE/IRRIGATION DRAWINGS.
6. THE CONTRACTOR SHALL KEEP RECORDS FOR AS-BUILTS DRAWINGS AND SHALL SUBMIT MARK-UPS TO THE MUNICIPALITY INSPECTOR PRIOR TO SCHEDULING A FINAL WALK THROUGH INSPECTION.
7. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES FROM ALL CONTRACTORS, THE ENGINEER, AND THE MUNICIPALITY.
8. ALL CONSTRUCTION MUST ADHERE TO THE TREE PRESERVATION REQUIREMENTS OF THE MUNICIPALITY.
9. THE CONTRACTOR, AND HIS AGENTS, AND SUB-CONTRACTOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, ENGINEER AND THEIR AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTAL AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED, IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PREPARE, IMPLEMENT AND MAINTAIN THE SWPPP IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT TCEQ AND NPDES GENERAL PERMIT AS DESCRIBED IN THE FEDERAL REGISTER, PAGES 36489 THROUGH 36519.

GENERAL NOTES FOR WATER IMPROVEMENTS

1. ALL WATER LINES SHALL BE PVC PIPE CONFORMING TO A.W.W.A. STANDARD C-900 SDR-18 MINIMUM, WITH NSF SEAL, PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH MUNICIPAL AND/OR NCTCOG STD. SPECS., UNLESS OTHERWISE NOTED WITHIN THE CONSTRUCTION PLANS.

GENERAL NOTES FOR SANITARY SEWER IMPROVEMENTS

1. SANITARY SEWER PVC PIPE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
2. AFTER COMPLETION OF ALL SANITARY SEWER TESTING (I.E. MANDREL AND AIR) CONTRACTOR SHALL PERFORM A TELEVISION INSPECTION AND PROVIDE A VIDEOTAPE TO THE MUNICIPALITY. ALL MANHOLES SHALL BE VACUUM TESTED.
3. ONE JOINT OF 150-PSI PRESSURE RATED PIPE SHALL BE INSTALLED AND CENTERED UNDER ALL PROPOSED WATER PIPE CROSSINGS.
4. CONTRACTOR TO PLACE A 3/4" PLYWOOD FALSE BOTTOM IN ALL SANITARY SEWER MANHOLES BEFORE PAVING CONTRACTOR BEGINS WORK.
5. ANY CONNECTION TIE-IN TO AN EXISTING MANHOLE MUST BE CORED.
6. ALL CLEAN-OUTS TO BE PROVIDED PER MUNICIPAL REQUIREMENTS.

GENERAL NOTES FOR STORM DRAIN IMPROVEMENTS

1. ALL STORM SEWER AND CULVERT PIPE AND FITTINGS SHALL BE ASTM C76, CLASS III REINFORCED CONCRETE PIPE (RCP), INSTALLED WITH COMPRESSIVE TYPE JOINTS UNLESS NOTED OTHERWISE.
2. AFTER COMPLETION OF ALL STORM SEWER INSTALLATION, THE CONTRACTOR SHALL ENSURE THAT ALL DEBRIS AND SILTATION HAS BEEN REMOVED.
3. ALL PUBLIC CURB INLETS ARE TO BE CAST IN PLACE.

MISCELLANEOUS NOTES AND CONSTRUCTION ITEMS

1. ALL EXISTING MAILBOXES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE RELOCATED AND REPLACED WITH AN EQUIVALENT MAILBOX AT NO COST UNLESS SPECIFIED AS A BID ITEM.

PRELIMINARY
-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE — 125681
TYPE OR PRINT NAME — PE #
01-14-2022
DATE

NO.	DATE	REVISION
-	-	
-	-	
-	-	
-	-	

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

GENERAL NOTES

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C1.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-ALTA.dwg
20-218-X-SITE.dwg
20-218-X-SURVEY.dwg

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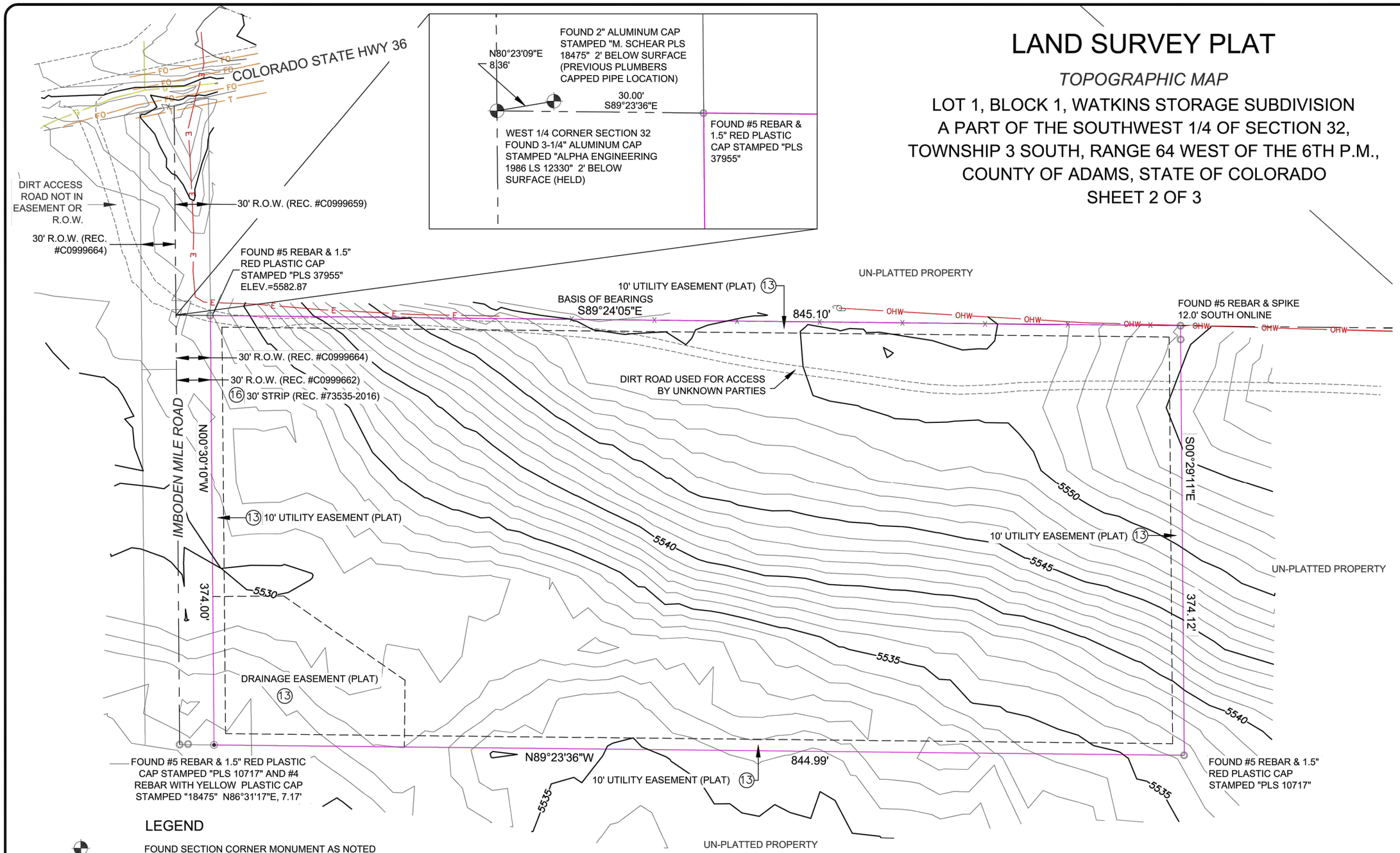
Last Saved: By: PV
Last Saved: 1/13/2022 8:49 PM
Plot Date/Time: 01/20/22 8:52 PM

LAND SURVEY PLAT

TOPOGRAPHIC MAP

LOT 1, BLOCK 1, WATKINS STORAGE SUBDIVISION
A PART OF THE SOUTHWEST 1/4 OF SECTION 32,
TOWNSHIP 3 SOUTH, RANGE 64 WEST OF THE 6TH P.M.,
COUNTY OF ADAMS, STATE OF COLORADO
SHEET 2 OF 3



LEGEND

- FOUND SECTION CORNER MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- SET #5 REBAR & 1.5" GREEN PLASTIC CAP STAMPED "PLS 37601"
- UTILITY POLE
- GUY WIRE
- CORRESPONDS WITH B-2 TITLE EXCEPTION NUMBER
- SUBJECT PROPERTY BOUNDARY
- X — FENCE
- E — UNDERGROUND ELECTRIC
- OHW — OVERHEAD WIRES
- FO — FIBER OPTIC LINE
- T — TELEPHONE LINE
- G — GAS LINE

COLORADO LICENSED
ROBERT EMERSON HARRIS
37601
6-29-2021
PROFESSIONAL LAND SURVEYOR

SCALE: 1" = 100 US SURVEY FEET

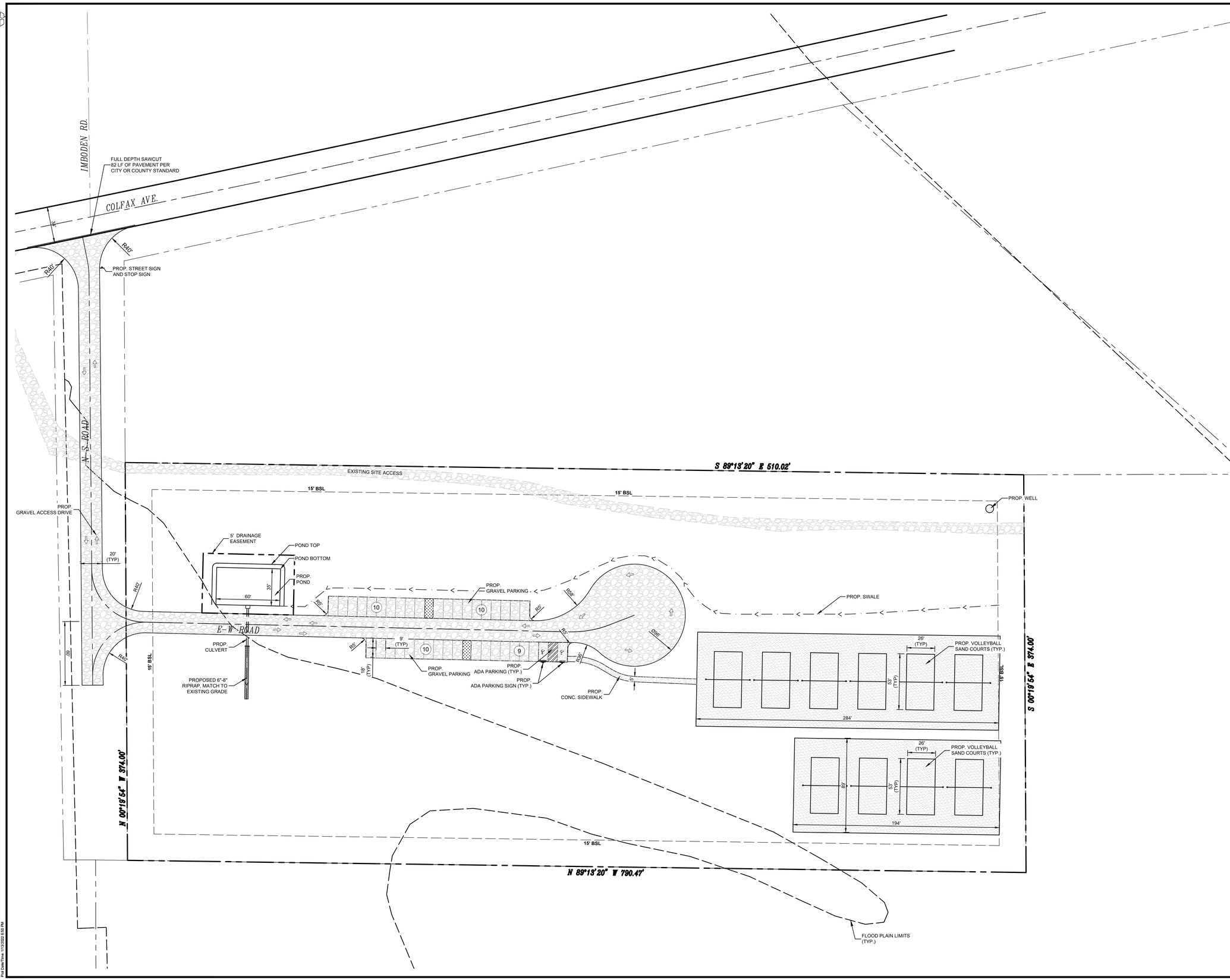
100' 0 50' 100'

Gillians
GILLIANS LAND CONSULTANTS
P.O. BOX 746358
ARVADA, CO 80006-6358
303-972-6640
www.gilliansl c.com
LAND SURVEYING
ALTA/NSPS SURVEYS
TOPOGRAPHIC MAPS
CONSULTING SERVICES

JOB NO.:	21144
DRAWN:	REH
CHECKED:	GP
DESIGNER:	JW
ISSUE DATE:	6-29-2021
SCALE:	1"=100'
FILE:	LSP

SHEET: 2 OF 3

PLEASE RECYCLE



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0 40 80 Feet

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

SITE PLAN

MES MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C2.0
REVIEWER: MG			

5280 BEACH

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Courts\20-218-C-DIM
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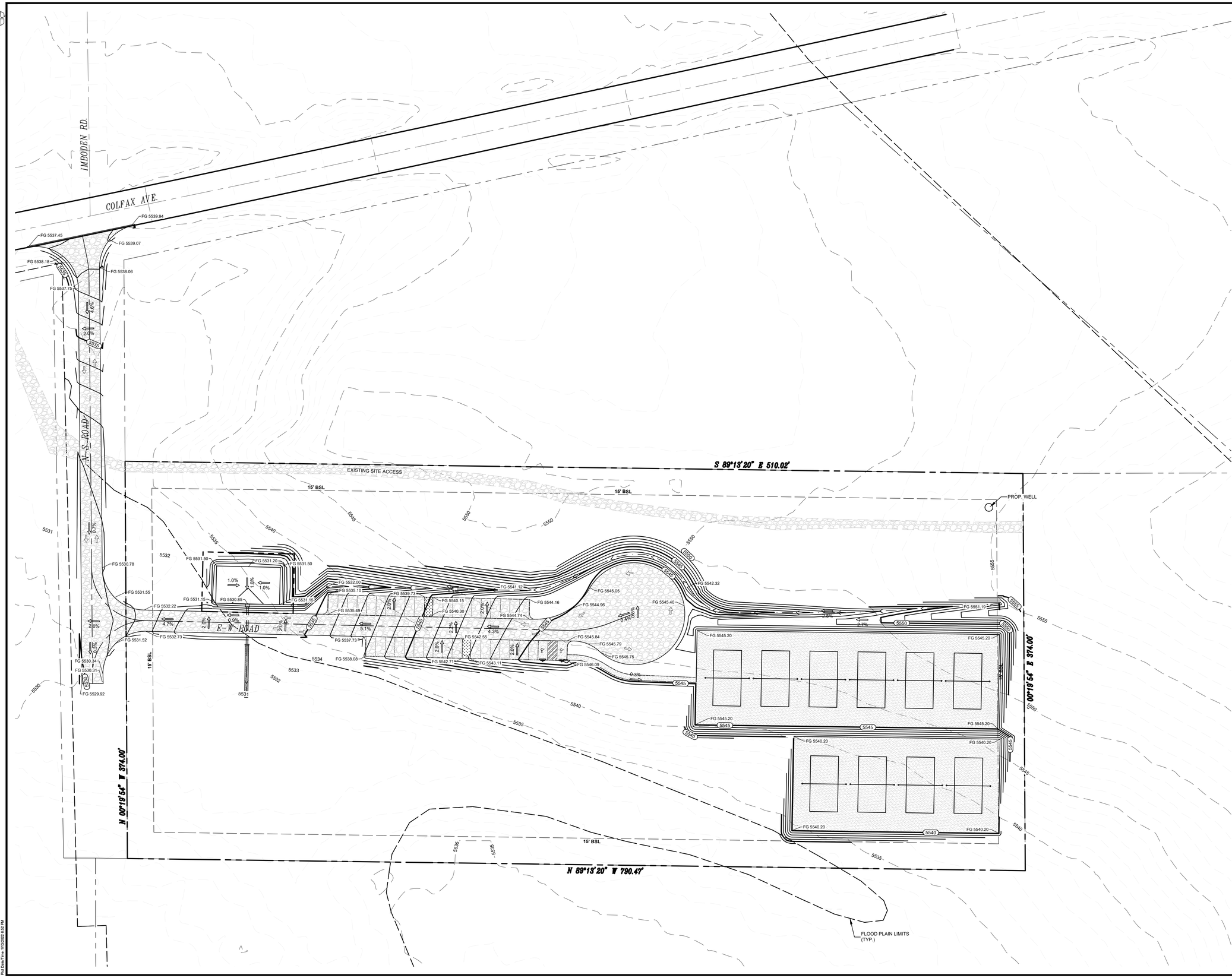

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Cut/Fill Summary

Name	Cut	Fill	Net
Flood Area Cut&Fill Analysis	151.61 Cu. Yd.	147.06 Cu. Yd.	4.55 Cu. Yd.<Cut>
Totals	151.61 Cu. Yd.	147.06 Cu. Yd.	4.55 Cu. Yd.<Cut>

Cut/Fill Summary

Name	Cut	Fill	Net
Total Cut&Fill	6322.63 Cu. Yd.	2883.32 Cu. Yd.	3439.31 Cu. Yd.<Cut>
Totals	6322.63 Cu. Yd.	2883.32 Cu. Yd.	3439.31 Cu. Yd.<Cut>

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF CITY OF WATKINS, ADAMS COUNTY, COLORADO

GRADING PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C3.0
REVIEWER: MG			

5280 BEACH

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-BOUNDARY.dwg
20-218-X-BASE.dwg
20-218-X-SITE.dwg
20-218-X-GRADE.dwg

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-GRADING
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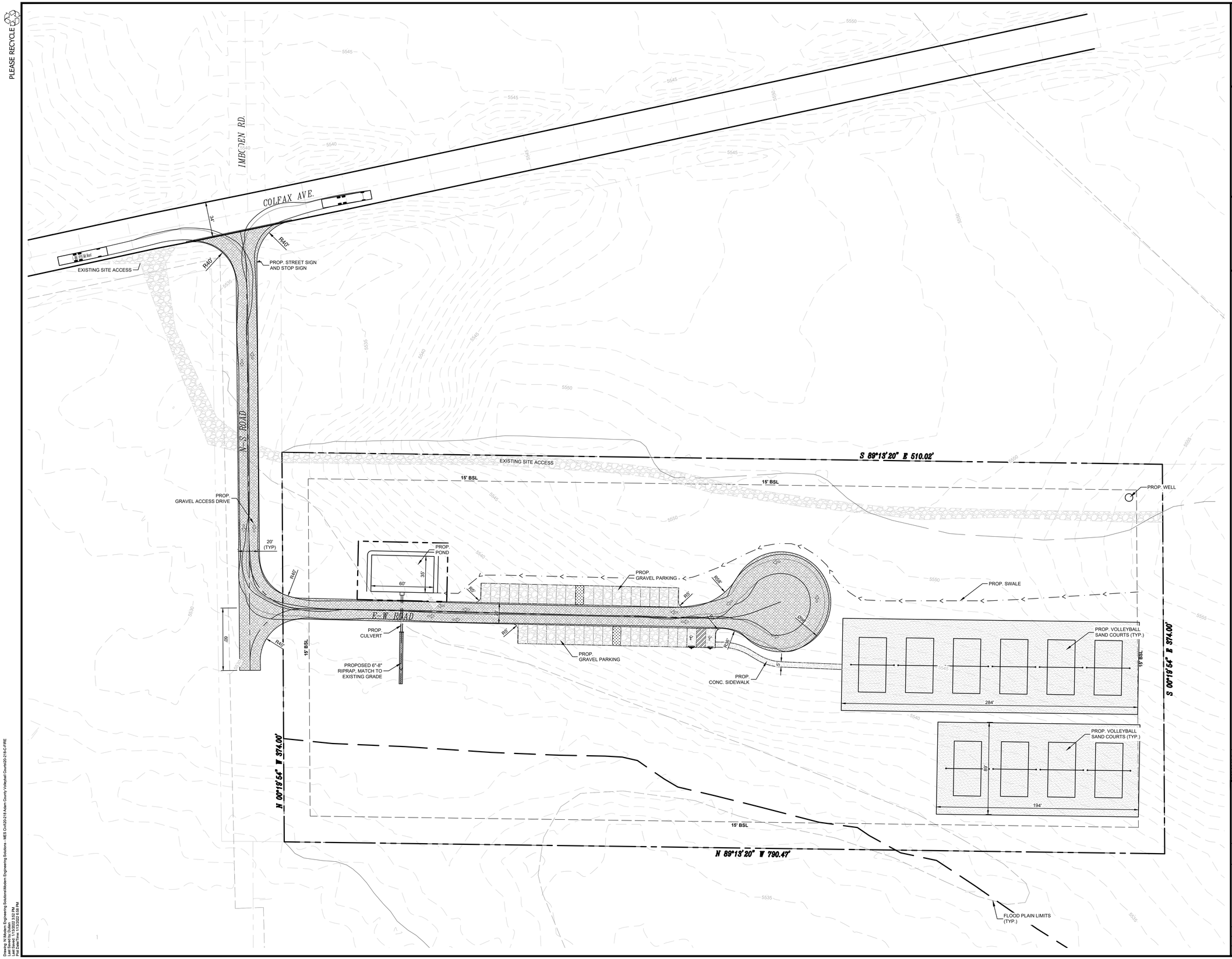

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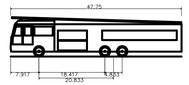

E-ONE HP95 Mid Mount

Overall Length	47.750ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.333ft
Track Width	8.333ft
Lock-to-lock time	6.00S
Max Wheel Angle	45.00°

LEGEND

FIRE LANE NO PARKING
FIRE ACCESS WAY EASEMENT

ACCESS DRIVE (PRIVATE)

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MICHAEL R. GROSELLE — TYPE OR PRINT NAME
125681 — PE #
01-14-2022 — DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

FIRE SAFETY PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C4.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
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20-218-X-SITE.dwg
20-218-X-DISTRICT.dwg

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Layout: C4.0
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Plot Date/Time: 1/13/2022 8:55 PM

PLEASE RECYCLE

EROSION CONTROL GENERAL NOTES:

1. ALL CONSTRUCTION PROJECTS, REGARDLESS OF THE SIZE, SHALL INSTALL, MAINTAIN AND REPAIR STORMWATER POLLUTION CONTROL MEASURES (CMS) TO EFFECTIVELY MINIMIZE EROSION, SEDIMENT TRANSPORT, AND THE RELEASE OF POLLUTANTS RELATED TO CONSTRUCTION ACTIVITY. CMS EXAMPLE INCLUDE: SEDIMENT CONTROL LOGS (SCL), SILT FENCE (SF), DIKES/SWALES, SEDIMENT TRAPS (ST), INLET PROTECTION (IP), OUTLET PROTECTION (OP), CHECK DAMS (CD), SEDIMENT BASINS (SB), TEMPORARY/PERMANENT SEEDING AND MULCHING (MU), SOIL ROUGHENING, MAINTAINING EXISTING VEGETATION AND PROTECTION OF TREES. CMS MUST BE SELECTED, DESIGNED, ADEQUATELY SIZED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING, HYDROLOGIC AND POLLUTION CONTROL PRACTICES. CMS/BMPS INSTALLATION AND MAINTENANCE DETAILS SHALL CONFORM TO URBAN DRAINAGE FLOOD CONTROL CRITERIA MANUAL VOLUME 3, OR THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) ITEM CODE BOOK. CMS MUST FILTER, SETTLE, CONTAIN OR STRAIN POLLUTANTS FROM STORMWATER FLOWS IN ORDER TO PREVENT BYPASS OF FLOWS WITHOUT TREATMENT. CMS MUST BE APPROPRIATE TO TREAT THE RUNOFF FROM THE AMOUNT OF DISTURBED AREA, THE EXPECTED FLOW RATE, DURATION, AND FLOW CONDITIONS (I.E., SHEET OR CONCENTRATED FLOW). CMS/BMPS SHALL BE SPECIFIED IN THE SWMP (IF APPLICABLE), AND THE LOCATIONS SHOWN ON THE EC PLAN.

2. PRIOR TO CONSTRUCTION, PROJECTS DISTURBING 1 OR MORE ACRES OF LAND, OR ANY PROJECT BELONGING TO A COMMON PLAN OF DEVELOPMENT DISTURB 1 OR MORE ACRES, MUST OBTAIN:
   - 2.1. A GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AND
   - 2.2. AN ADAMS COUNTY STORMWATER QUALITY PERMIT WITHIN THE UNINCORPORATED ADAMS COUNTY MS4 AREA.

3. PERMITTED PROJECTS SHALL DEVELOP A STORMWATER MANAGEMENT PLAN (SWMP), AKA EROSION AND SEDIMENT CONTROL PLAN (ESCP), IN COMPLIANCE WITH CDPHE MINIMUM REQUIREMENTS. THE APPROVED SWMP, INCLUDING EROSION CONTROL (EC) PLAN (SITE MAP), SHALL BE KEPT ON SITE AND UPDATED AT ALL TIMES. THE QUALIFIED STORMWATER MANAGER IS RESPONSIBLE FOR IMPLEMENTING THE SWMP AND CMS (AKA BMPS) DURING CONSTRUCTION.

4. PERMITTED PROJECTS SHALL PERFORM REGULAR STORMWATER INSPECTIONS EVERY 7 CALENDAR DAYS; OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION. INSPECTION FREQUENCY CAN BE REDUCED FOR POST-STORM EVENT INSPECTIONS AT TEMPORARILY IDLE SITES AND ALSO FOR STORMWATER INSPECTIONS AT COMPLETED SITES WAITING FOR FINAL STABILIZATION. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.

5. TRACKING OF DIRT ONTO PAVED PUBLIC OR PRIVATE PAVED ROADS IS NOT ALLOWED. THE USE OF DIRT RAMPS TO ENTER/EXIT FROM AN UNPAVED INTO A PAVED AREA IS PROHIBITED. VEHICLE TRACKING CONTROLS SHALL BE IMPLEMENTED, OTHERWISE ENTRANCE AREA MUST DRAIN THRU A CM TOWARDS THE PRIVATE SITE.

6. TRUCK LOADS OF FILL MATERIAL IMPORTED TO OR CUT MATERIAL EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORTATION ON PUBLIC ROW. HAUL ROUTES MUST BE PERMITTED BY THE COUNTY. NO MATERIAL SHALL BE TRANSPORTED TO ANOTHER SITE WITHOUT APPLICABLE PERMITS.

7. CONTROL MEASURES DESIGNED FOR CONCRETE WASHOUT WASTE MUST BE IMPLEMENTED. THIS INCLUDES WASHOUT WASTE DISCHARGED TO THE GROUND AND WASHOUT WASTE FROM CONCRETE TRUCKS AND MASONRY OPERATIONS.

8. TEMPORARY CMS/BMPS SHALL BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION.

9. DEWATERING OPERATIONS DISCHARGING OFF SITE INTO ANY WATERS CONVEYANCE SYSTEMS INCLUDING WETLANDS, IRRIGATION DITCHES, CANALS, RIVERS, STREAMS OR STORM SEWER SYSTEMS, REQUIRE A STATE CONSTRUCTION DEWATERING PERMIT.

10. PERMITTED PROJECTS SHALL KEEP THE CDPHE'S STORMWATER DISCHARGE PERMIT, STORMWATER MANAGEMENT PLAN (SWMP) AND INSPECTION LOGS AVAILABLE ON SITE THROUGHOUT THE DURATION OF THE PROJECT, AND FOR AN ADDITIONAL 3 YEARS AFTER PERMIT CLOSE OUT.

11. PERMITTED LANDOWNER AND/OR CONTRACTOR SHALL CLOSE THE STATE AND CITY/COUNTY PERMIT ONCE FINAL STABILIZATION IS REACHED. STORMWATER INSPECTIONS SHALL CONTINUE UNTIL INACTIVATION NOTICE IS FILED WITH CDPHE.

PERFORMANCE STANDARD NOTES:

1. STORMWATER RUNOFF FROM DISTURBED AREAS MUST FLOW TO AT LEAST ONE (1) CM TO MINIMIZE SEDIMENT IN THE DISCHARGE. DO NOT ALLOW SEDIMENT TO LEAVE THE SITE. THE BEST WAY TO PREVENT SEDIMENT OR POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM IS TO STABILIZE THE SITE AS QUICKLY AS POSSIBLE, PREVENTING EROSION AND STOPPING SEDIMENT RUN-OFF AT ITS SOURCE.

2. PHASE CONSTRUCTION TO MINIMIZE DISTURBED AREAS, INCLUDING DISTURBANCE OF STEEP SLOPES. (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION OF THE SITE).LIMIT SOIL EXPOSURE TO THE SHORTEST POSSIBLE PERIOD OF TIME. PROTECT NATURAL FEATURES AND EXISTING VEGETATION WHENEVER POSSIBLE. REMOVAL OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS. MAINTAIN PRE- EXISTING VEGETATION (OR EQUIVALENT CMS) FOR AREAS WITHIN 50 HORIZONTAL FT OF RECEIVING WATERS.

3. SOIL COMPACTION MUST BE MINIMIZED FOR AREAS WHERE INFILTRATION CMS WILL OCCUR OR WHERE FINAL STABILIZATION WILL BE ACHIEVED THROUGH VEGETATIVE COVER.

4. ALL SOIL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT THE LOSS OF MATERIAL DURING TRANSPORT.

5. DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES OR WIND SHALL BE CONTROLLED.

6. INSTALL CONSTRUCTION FENCE (ORANGE) TO PROTECT WETLANDS AND OTHER SENSITIVE AREAS AND TO PREVENT ACCESS, AND TO DELINEATE THE LIMITS OF CONSTRUCTION. DO NOT USE SILT FENCE TO PROTECT WETLANDS SINCE TRENCHING MAY IMPACT THESE AREAS.

7. CMS INTENDED TO CAPTURE OVERLAND, LOW VELOCITY SHEET FLOW AT A FAIRLY LEVEL GRADE SHALL ONLY BE INSTALLED ALONG CONTOURS.

8. INSTALL CMS, SUCH AS CHECK DAMS, PERPENDICULAR TO THE CONCENTRATED FLOWS TO REDUCE FLOW VELOCITY.

9. STORM DRAIN INLETS WITHIN AND ADJACENT TO THE CONSTRUCTION SITE MUST BE PROTECTED. ANY PONDING OF STORMWATER AROUND INLET PROTECTION MUST NOT CAUSE EXCESSIVE FLOODING OR DAMAGE ADJACENT AREAS OR STRUCTURES.

10. INSTALL VEHICLE TRACKING CONTROL (VTC) TO ENTER/EXIT UNPAVED AREA. DO NOT USE RECYCLED CRUSHED CONCRETE OR ASPHALT MILLINGS FOR VEHICLE TRACKING PADS.

11. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).

12. OUTLETS SYSTEMS (SUCH AS SKIMMER OR PERFORATED RISER PIPE) SHALL BE INSTALLED TO WITHDRAW WATER FROM OR NEAR THE SURFACE LEVEL WHEN DISCHARGING FROM BASINS. WATER CANNOT DRAIN FROM THE BOTTOM OF THE POND.

13. TEMPORARY STABILIZATION MUST BE IMPLEMENTED FOR EARTH DISTURBING ACTIVITIES ON ANY PORTION OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED (FOR MORE THAN 14 CALENDAR DAYS). TEMPORARY STABILIZATION METHODS EXAMPLES: TARPS, SOIL TACKIFIER, AND HYDROSEED. TEMPORARY STABILIZATION REQUIREMENT MAY EXCEED THE 14-DAY SCHEDULE WHEN EITHER THE FUNCTION OF THE SPECIFIC AREA REQUIRES IT TO REMAIN DISTURBED, OR, PHYSICAL CHARACTERISTICS OF THE TERRAIN AND CLIMATE PREVENT STABILIZATION AS LONG AS THE CONSTRAINTS AND ALTERNATIVE SCHEDULE IS DOCUMENTED ON THE SWMP, AND LOCATIONS ARE IDENTIFIED ON THE EC PLAN (SITE MAP).

14. RUNOFF FROM STOCKPILE AREA MUST BE CONTROLLED. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. INSTALL CMS/BMPS 5 FT AWAY FROM THE TOE OF THE STOCKPILE'S SLOPE.

15. WATER USE TO CLEAN CONCRETE TRUCKS SHALL BE DISCHARGED INTO A CONCRETE WASHOUT AREA (CWA). THE PREDEFINED CONTAINMENT AREA MUST BE IDENTIFIED WITH A SIGN, AND SHALL ALLOW THE LIQUIDS TO EVAPORATE OR DRY OUT. CWA DISCHARGES THAT MAY REACH GROUNDWATER MUST FLOW THROUGH SOIL THAT HAS BUFFERING CAPACITY PRIOR TO REACHING GROUNDWATER. THE CONCRETE WASHOUT LOCATION SHALL BE NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT AND WOULD RESULT IN BUFFERING CAPACITY NOT BEING ADEQUATE, SUCH AS NEAR NATURAL DRAINAGES, SPRINGS, OR WETLANDS. IN THIS CASE, A LINER UNDERNEATH IS NEEDED FOR AREAS WITH HIGH GROUNDWATER LEVELS. CWA SHALL NOT BE PLACED IN LOW AREAS, DITCHES OR ADJACENT TO STATE WATERS. PLACE CWA 50 FT AWAY FROM STATE WATERS.

16. WASTE, SUCH AS BUILDING MATERIALS, WORKERS TRASH AND CONSTRUCTION DEBRIS, MUST BE PROPERLY MANAGED TO PREVENT STORMWATER POLLUTION.

17. INSTALL STABILIZED STAGING AREA (SSA) TO STORE MATERIALS, CONSTRUCTION TRAILER, ETC.

18. IF CONDITIONS IN THE FIELD WARRANT ADDITIONAL CMS/BMPS TO THE ONES ORIGINALLY APPROVED ON THE SWMP OR EC PLAN (CIVIL DRAWING), THE LANDOWNER OR CONTRACTOR SHALL IMPLEMENT MEASURES DETERMINED NECESSARY, AS DIRECTED BY THE COUNTY.

19. PERMANENT CMS/BMPS FOR SLOPES, CHANNELS, DITCHES, OR DISTURBED LAND AREA SHALL BE PERFORMED IMMEDIATELY AFTER FINAL GRADING. CONSIDER THE USE EROSION CONTROL BLANKETS ON SLOPES 3:1 OR STEEPER AND AREAS WITH CONCENTRATED FLOWS SUCH AS SWALES, LONG CHANNELS AND ROADSIDE DITCHES.

20. THE DISCHARGE OF SANITARY WASTE INTO THE STORM SEWER SYSTEM IS PROHIBITED. PORTABLE TOILETS MUST BE PROVIDED, SECURED AND PLACED ON PERMEABLE SURFACES, AWAY FROM THE CURBSIDE, STORM INLETS AND/OR DRAINAGE WAYS.

21. REMOVE TEMPORARY CMS/BMPS ONCE FINAL STABILIZATION IS REACHED, UNLESS OTHERWISE AUTHORIZED.

22. FINAL STABILIZATION MUST BE IMPLEMENTED. FINAL STABILIZATION IS REACHED WHEN ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED, AND EITHER A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70% OF PRE DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT ALTERNATIVE METHOD HAS BEEN IMPLEMENTED.

23. PROVIDE SPILL PREVENTION AND CONTAINMENT MEASURES FOR CONSTRUCTION MATERIALS, WASTE AND FUEL STORAGE AREAS. BULK STORAGE (55 GALLONS OR GREATER) OF PETROLEUM PRODUCTS AND LIQUID CHEMICALS MUST HAVE SECONDARY CONTAINMENT, OR EQUIVALENT PROTECTION, IN ORDER TO CONTAIN SPILLS AND TO PREVENT SPILLED MATERIAL FROM ENTERING STATE WATERS.

24. REPORT SPILLS OR RELEASES OF CHEMICAL, OIL, PETROLEUM PRODUCT, SEWAGE, ETC., WHICH MAY REACH THE STORM SEWER OR ENTER STATE WATERS WITHIN 24 HOURS FROM TIME OF DISCOVERY. GUIDANCE AVAILABLE AT WWW.CDPHE.STATE.CO.US/EMP/SPILLSANDRELEASED.HTM. STATE OF COLORADO SPILL LINE: 1-877-518-5608. ADAMS COUNTY STORMWATER HOTLINE: 720-523-6400; PUBLIC WORKS 303 453 8787 AND THE TRI COUNTY HEALTH DEPARTMENT AT 303-220-9200.

MAINTENANCE STANDARD NOTES:

1. MAINTAIN AND REPAIR CMS ACCORDING TO APPROVED EROSION CONTROL PLAN (CIVIL DRAWING) TO ASSURE THEY CONTINUE PERFORMING AS ORIGINALLY INTENDED.

2. CMS/BMPS REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING BMP.

3. CMS SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN UNLESS OTHERWISE SPECIFIED.

4. SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CMS/BMPS DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, TO ACCURATELY REFLECT THE ACTUAL FIELD CONDITIONS. A NOTATION SHALL BE MADE IN THE SWMP, INCLUDING DATE OF CHANGES IN THE FIELD, IDENTIFICATION OF THE CMS REMOVED, MODIFIED OR ADDED, AND THE LOCATIONS OF THOSE CMS. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE.

5. MAINTAIN VEHICLE TRACKING CONTROL (VTC), IF SEDIMENT TRACKING OCCURS, CLEAN UP IMMEDIATELY. SWEEP BY HAND OR THE USE STREET SWEEPERS (WITH VACUUM SYSTEM). FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.

6. CWA MUST BE CLEANED ONCE WASTE ACCUMULATION REACHES ⅔ OF THE WET STORAGE CAPACITY OF THE STRUCTURE. LEGALLY DISPOSED OF CONCRETE WASTE. DO NOT BURY ON SITE.

7. CLEAN-UP SPILLS IMMEDIATELY AFTER DISCOVERY, OR CONTAIN UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. FOLLOW MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP, ALONG WITH PROPER DISPOSAL METHODS. RECORDS OF SPILLS, LEAKS, OR OVERFLOWS THAT RESULT IN DISCHARGE OF POLLUTANTS MUST BE DOCUMENTED AND MAINTAINED.

8. REMOVE SEDIMENT FROM STORM SEWER INFRASTRUCTURE (PONDS, STORM PIPES, OUTLETS, INLETS, ROADSIDE DITCHES, ETC.),AND RESTORE VOLUME CAPACITY UPON COMPLETION OF PROJECT OR PRIOR TO INITIAL ACCEPTANCE OF PUBLIC IMPROVEMENTS (IF APPLICABLE). DO NOT FLUSH SEDIMENT OFFSITE, CAPTURE ON-SITE AND DISPOSED OF AT AN APPROVED LOCATION. THESE NOTES ARE NOT INTENDED TO BE ALL-INCLUSIVE, BUT TO HIGHLIGHT THE BASIC STORMWATER POLLUTION PREVENTION REQUIREMENTS FOR CONSTRUCTION ACTIVITIES TO COMPLY WITH CDPS STORMWATER CONSTRUCTION PERMIT AND BE IN CONFORMANCE WITH COUNTY STANDARDS.

PRELIMINARY
-FOR REVIEW ONLY-

THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE. THEY ARE PREPARED BY, OR UNDER THE SUPERVISION OF:

MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
- -		
- -		
- -		
- -		

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL NOTES

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-ADE.dwg
20-218-X-SITE.dwg
20-218-X-SURVEY.dwg

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
Layout Tab: C5.0 (EROSION)
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Plot Date/Time: 01/13/2022 6:59 PM

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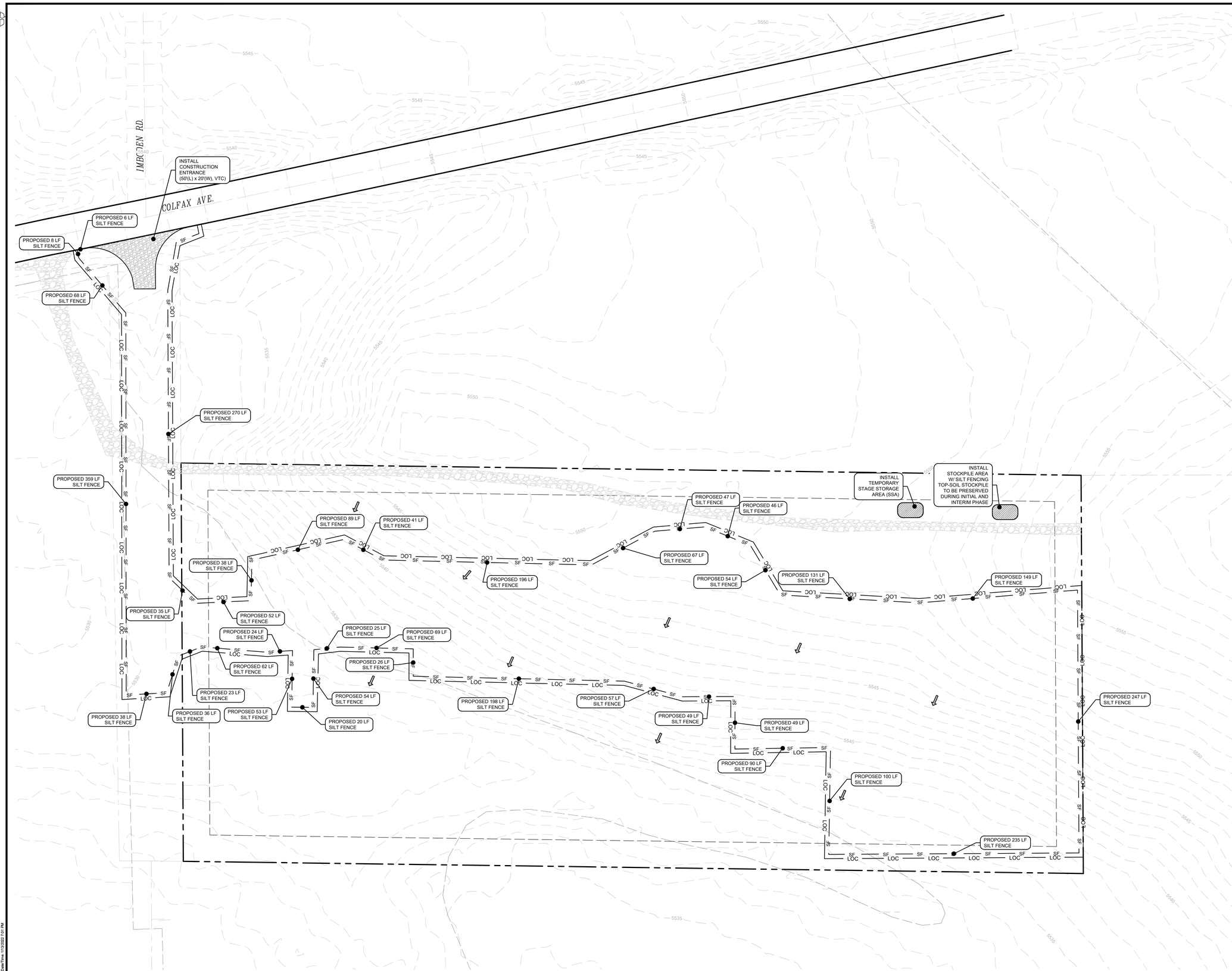

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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 5355 EXISTING CONTOUR
- 5350 PROPOSED CONTOUR
- SF PROPOSED SILT FENCE
- LOC PROPOSED LIMITS OF CONSTRUCTION
- TP PROPOSED TREE PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- VTC VEHICLE TRACKING CONTROL
- SF SILT FENCE

EROSION CONTROL GENERAL NOTES

1. THE EROSION CONTROL PLAN MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGE WAYS OR BORROW DITCHES AT THE RISK OF CONTRACTORS. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGES CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE.
2. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGE WAYS, AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT AND DEPOSITED AS A RESULT OF EROSION CONTROL MEASURE.
3. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ADAMS COUNTY STANDARD CONSTRUCTION DETAILS AND URBAN STORM DRAINAGE CRITERIA MANUAL.
4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

CONSTRUCTION SEQUENCING

1. CONTRACTOR TO OBTAIN ADAMS COUNTY BMP PERMIT.
2. CONTRACTOR TO INSTALL BMP PER EROSION CONTROL PLAN AND ANY ADDITIONAL BMP REQUESTED BY THE CITY INSPECTOR.
3. RECEIVE GRADING PERMIT FROM COUNTY TO START EARTHWORK.
4. INSTALL WATER AND SEWER UTILITIES WITH THE COORDINATION OF THE WATER & SEWER UTILITY DISTRICTS.
5. CONCRETE POURING OF DRIVEWAY AND SIDEWALKS.
6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

I HEARBY CERTIFY THAT THIS EROSION CONTROL DRAWING FOR THE 5280 BEACH WAS PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF ADAMS COUNTY STORM DRAINAGE DESIGN AND STORMWATER QUALITY REGULATIONS FOR THE OWNERS THEREOF.

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-		
-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE I

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.1
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-BASE.dwg
20-218-X-SITE.dwg
20-218-X-BOUNDARY.dwg
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
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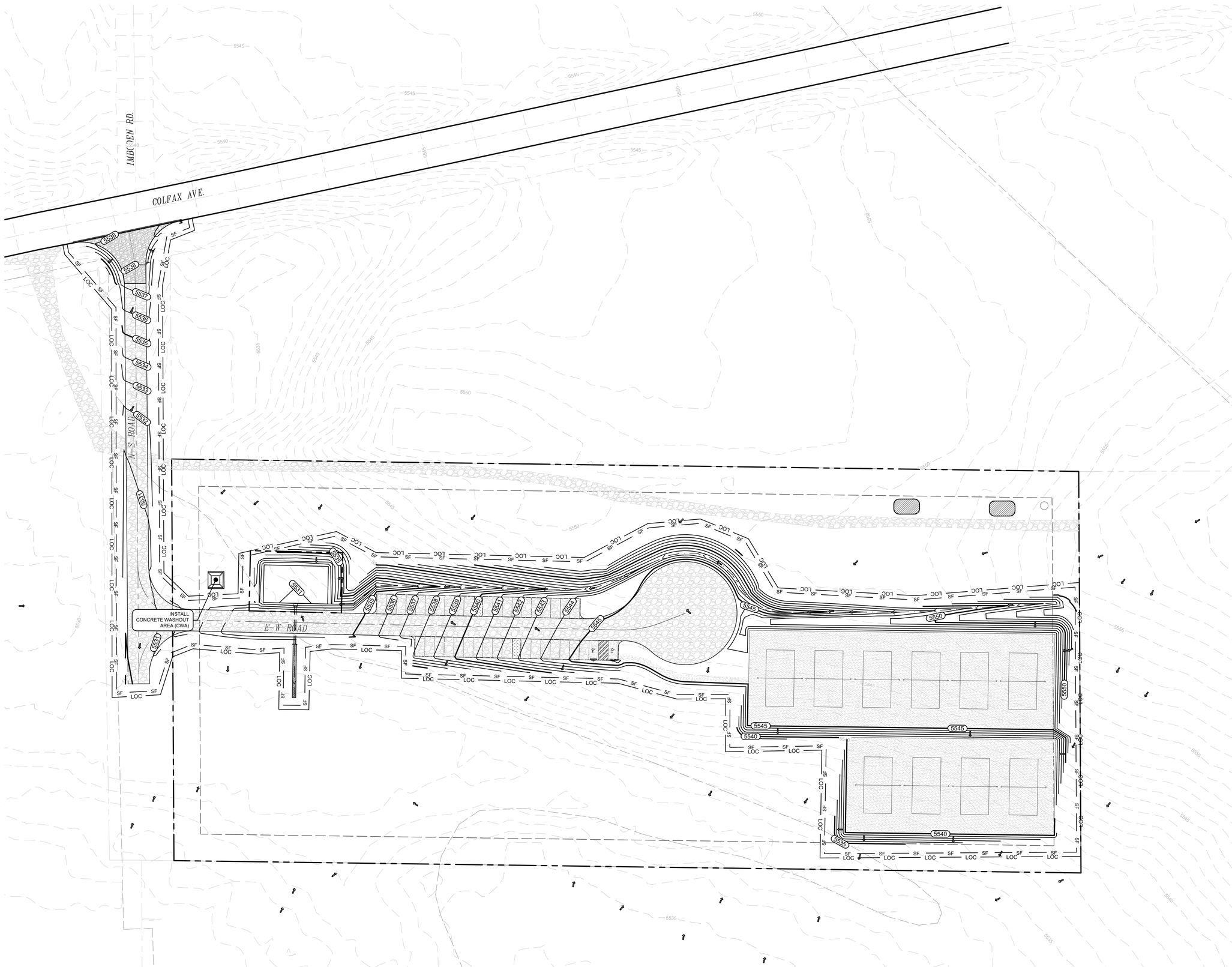

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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 5355 EXISTING CONTOUR
- 5355 PROPOSED CONTOUR
- SF PROPOSED SILT FENCE
- LOC PROPOSED LIMITS OF CONSTRUCTION
- TP PROPOSED TREE PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- VTC VEHICLE TRACKING CONTROL
- SF SILT FENCE

EROSION CONTROL GENERAL NOTES

1. THE EROSION CONTROL PLAN MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGE WAYS OR BORROW DITCHES AT THE RISK OF CONTRACTORS. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGES CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE.
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3. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ADAMS COUNTY STANDARD CONSTRUCTION DETAILS AND URBAN STORM DRAINAGE CRITERIA MANUAL.
4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

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3. RECEIVE GRADING PERMIT FROM COUNTY TO START EARTHWORK.
4. INSTALL WATER AND SEWER UTILITIES WITH THE COORDINATION OF THE WATER & SEWER UTILITY DISTRICTS.
5. CONCRETE POURING OF DRIVEWAY AND SIDEWALKS.
6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

I HEARBY CERTIFY THAT THIS EROSION CONTROL DRAWING FOR THE 5280 BEACH WAS PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF ADAMS COUNTY STORM DRAINAGE DESIGN AND STORMWATER QUALITY REGULATIONS FOR THE OWNERS THEREOF.

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE II

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.2
REVIEWER: MG			

5280 BEACH

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
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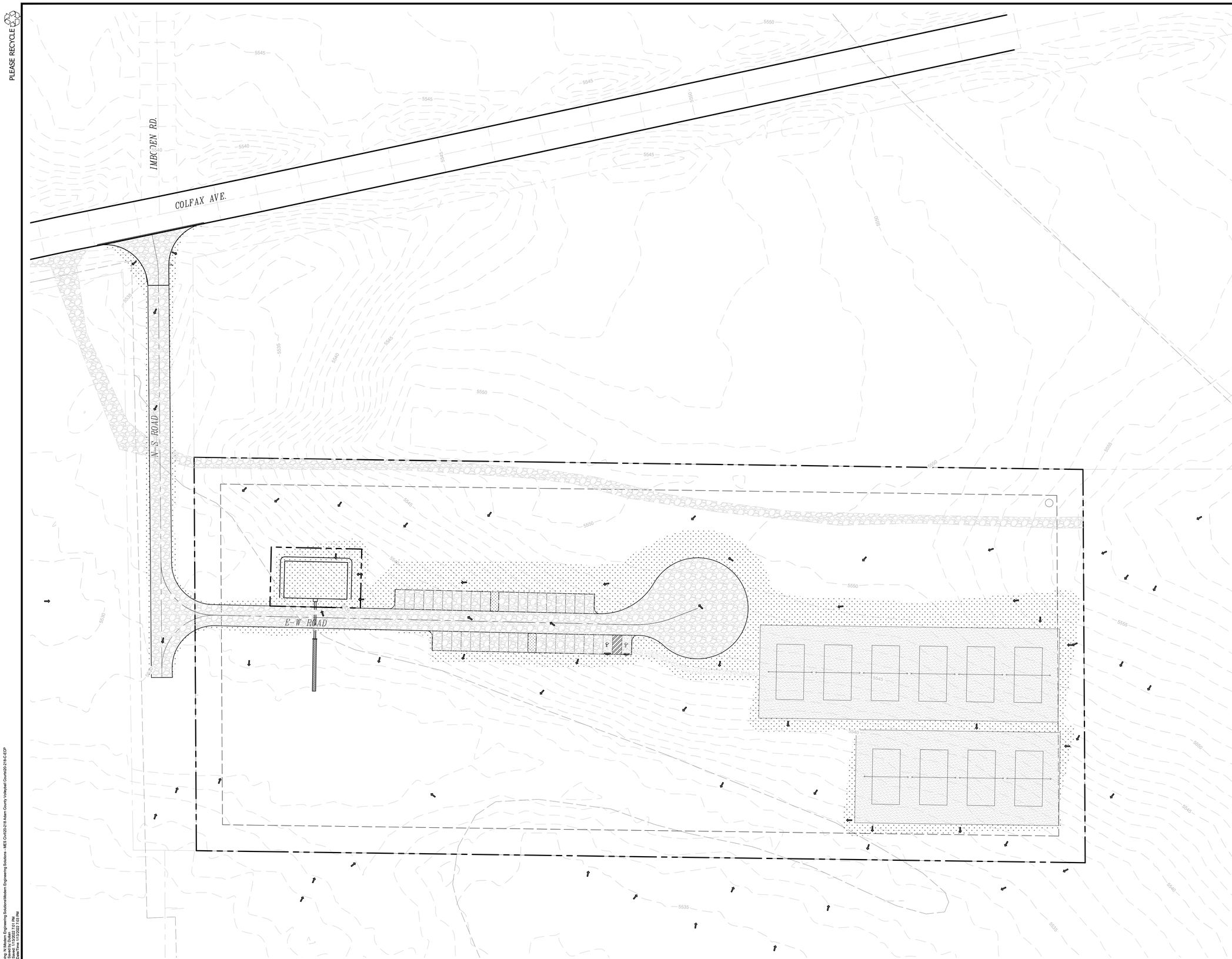

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LEGEND

	PROPERTY LINE
	EASEMENT LINE
5355	EXISTING CONTOUR
5350	PROPOSED CONTOUR
SF	PROPOSED SILT FENCE
LOC	PROPOSED LIMITS OF CONSTRUCTION
TP	PROPOSED TREE PROTECTION
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
VTC	VEHICLE TRACKING CONTROL
SF	SILT FENCE

EROSION CONTROL GENERAL NOTES

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3. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ADAMS COUNTY STANDARD CONSTRUCTION DETAILS AND URBAN STORM DRAINAGE CRITERIA MANUAL.
4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

CONSTRUCTION SEQUENCING

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6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE III

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.3
REVIEWER: MG			

PLEASE RECYCLE

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Last Saved by: PV
Plot Date/Time: 1/13/2022 7:03 PM
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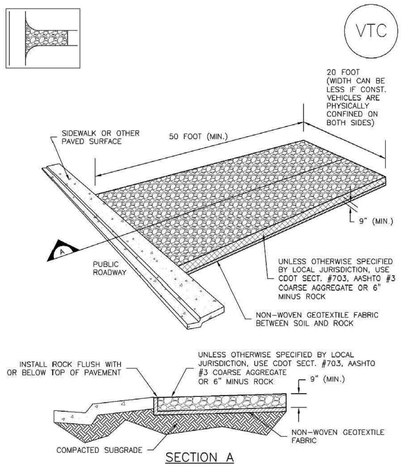
\20-218-X-SURVEY.dwg

5280 BEACH

Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

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4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

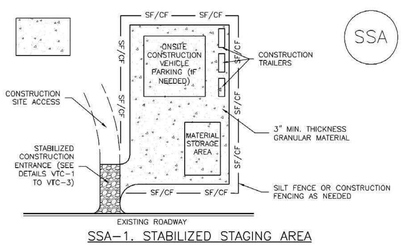
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL DETAILS-I

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.2
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE
Xrefs: 20-218_R-SEAL.dwg
20-218_R-BASE.dwg
20-218-X-SITE.dwg
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Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
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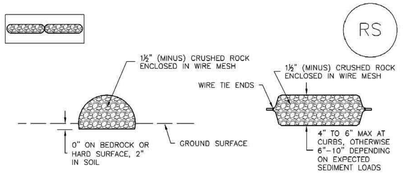
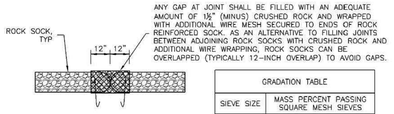


ROCK SOCK SECTION ROCK SOCK PLAN



ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION(S) OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS-1. ROCK SOCK PERIMETER CONTROL

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

Typical construction phasing BMPs include:

- Limit the amount of disturbed area at any given time on a site to the extent practical. For example, a 100-acre subdivision might be constructed in five phases of 20 acres each.
- If there is carryover of stockpiled material from one phase to the next, position carryover material in a location easily accessible for the pending phase that will not require disturbance of stabilized areas to access the stockpile. Particularly with regard to efforts to balance cut and fill at a site, careful planning for location of stockpiles is important.

Typical construction sequencing BMPs include:

- Sequence construction activities to minimize duration of soil disturbance and exposure. For example, when multiple utilities will occupy the same trench, schedule installation so that the trench does not have to be closed and opened multiple times.
- Schedule site stabilization activities (e.g., landscaping, seeding and mulching, installation of erosion control blankets) as soon as feasible following grading.
- Install initial erosion and sediment control practices before construction begins. Promptly install additional BMPs for inlet protection, stabilization, etc., as construction activities are completed.

Table CP-1 provides typical sequencing of construction activities and associated BMPs.

Maintenance and Removal

When the construction schedule is altered, erosion and sediment control measures in the SWMP and construction drawings should be appropriately adjusted to reflect actual "on the ground" conditions at the construction site. Be aware that changes in construction schedules can have significant implications for site stabilization, particularly with regard to establishment of vegetative cover.

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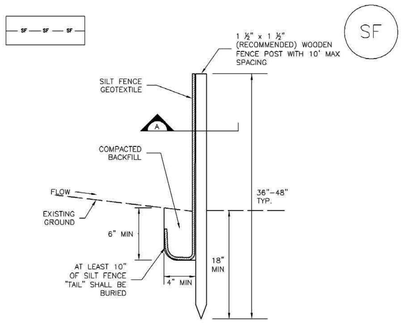
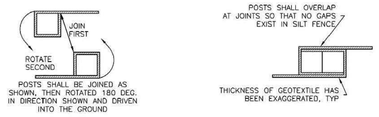


SILT FENCE



SECTION A

SF–1. SILT FENCE

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J–HOOK." THE "J–HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

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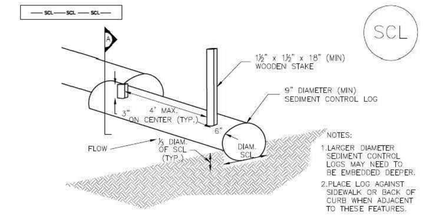
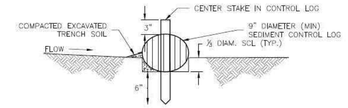
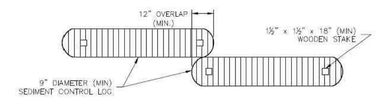


TRENCHED SEDIMENT CONTROL LOG



SECTION A
TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL–1. TRENCHED SEDIMENT CONTROL LOG

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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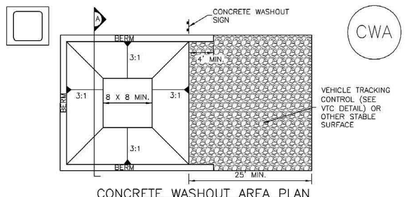
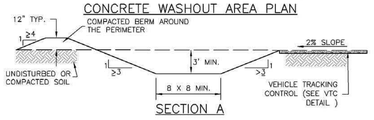


CONCRETE WASHOUT AREA PLAN



SECTION A

CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

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3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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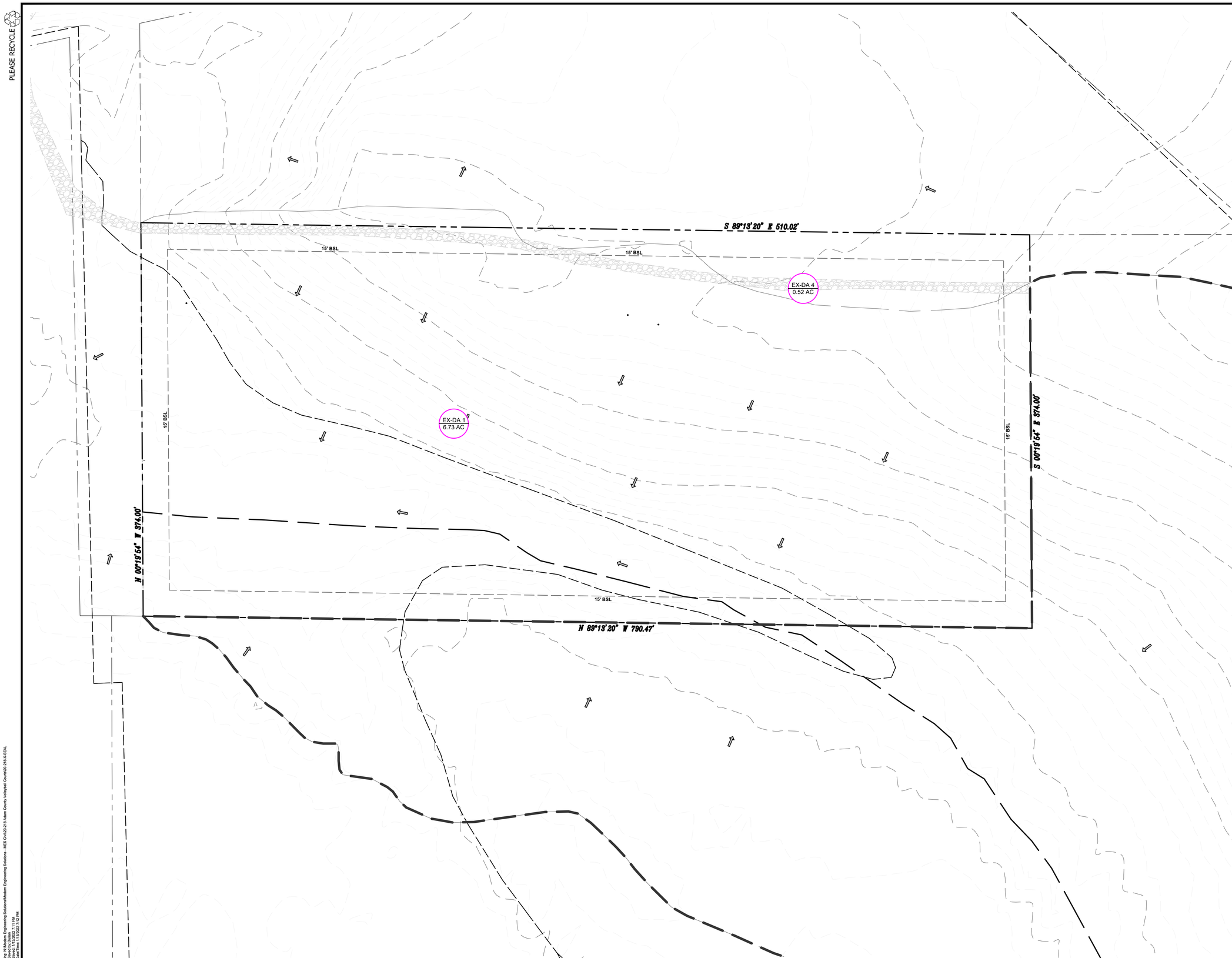

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NOTES

1) REFER TO GENERAL NOTES SHEET FOR CITY STANDARD GENERAL NOTES, UTILITY NOTES AND CONSTRUCTION DESIGN NOTES.
2) THE ADAMS COUNTY STORM DRAINAGE CRITERIA MANUAL WAS FOR DESIGN STORM FREQUENCY, RUNOFF COEFFICIENTS AND RAINFALL INTENSITIES.

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

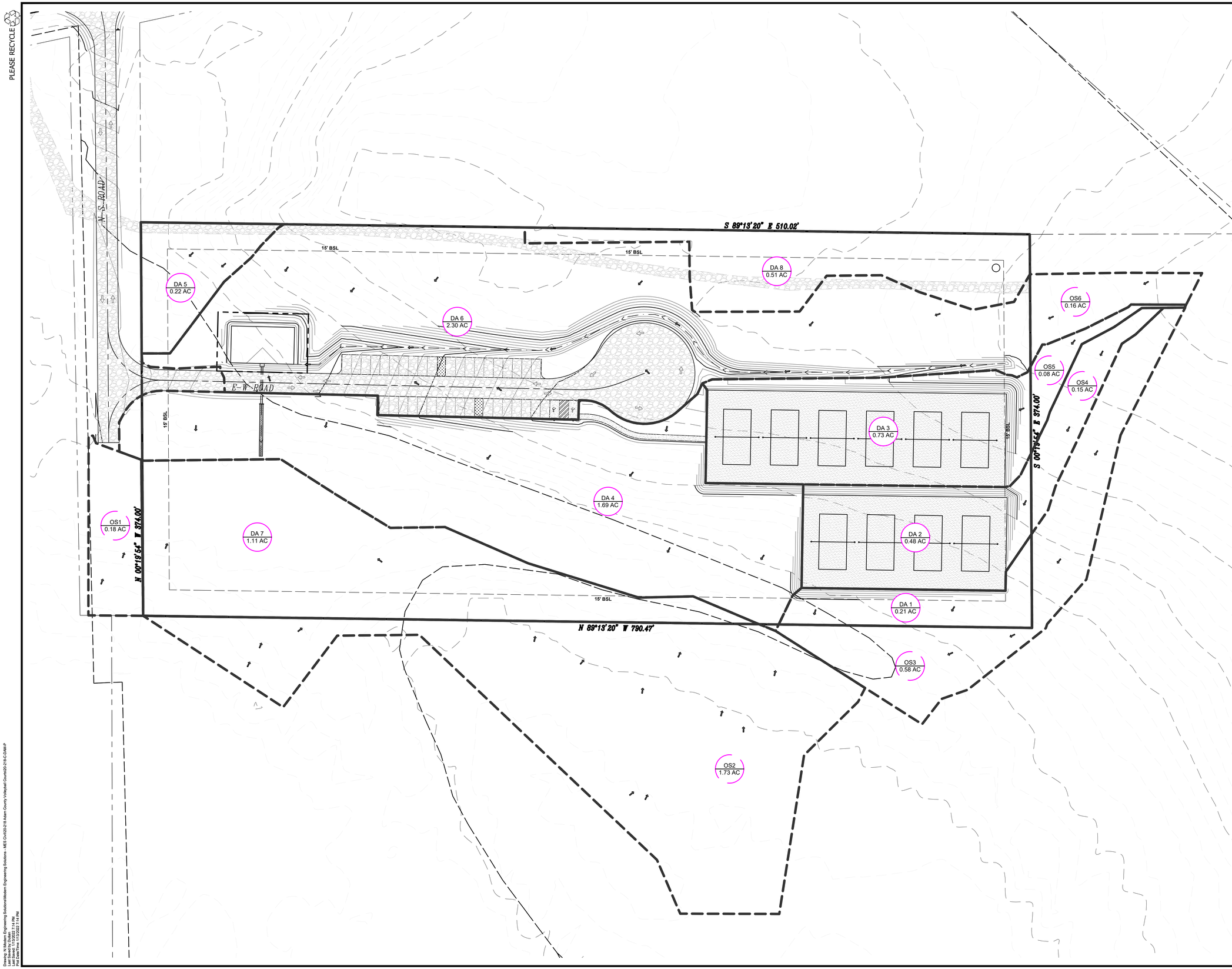
EXISTING DRAINAGE AREA MAP

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C6.0
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
Xrefs: \20-218-X-SURVEY.dwg
\20-218-X-SITE.dwg
\20-218-X-SURVEY.dwg
\20-218-X-SITE.dwg
\20-218-X-SEAL.dwg
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-X-SEAL
Layout: C6.0 EXISTING DRAINAGE
Last Saved: 1/13/2022 7:11 PM
Plot Date/Time: 1/13/2022 7:12 PM
5280 BEACH

PLEASE RECYCLE



0 40 80 Feet

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

PROPOSED DRAINAGE AREA MAP

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C6.1
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SURVEY.dwg
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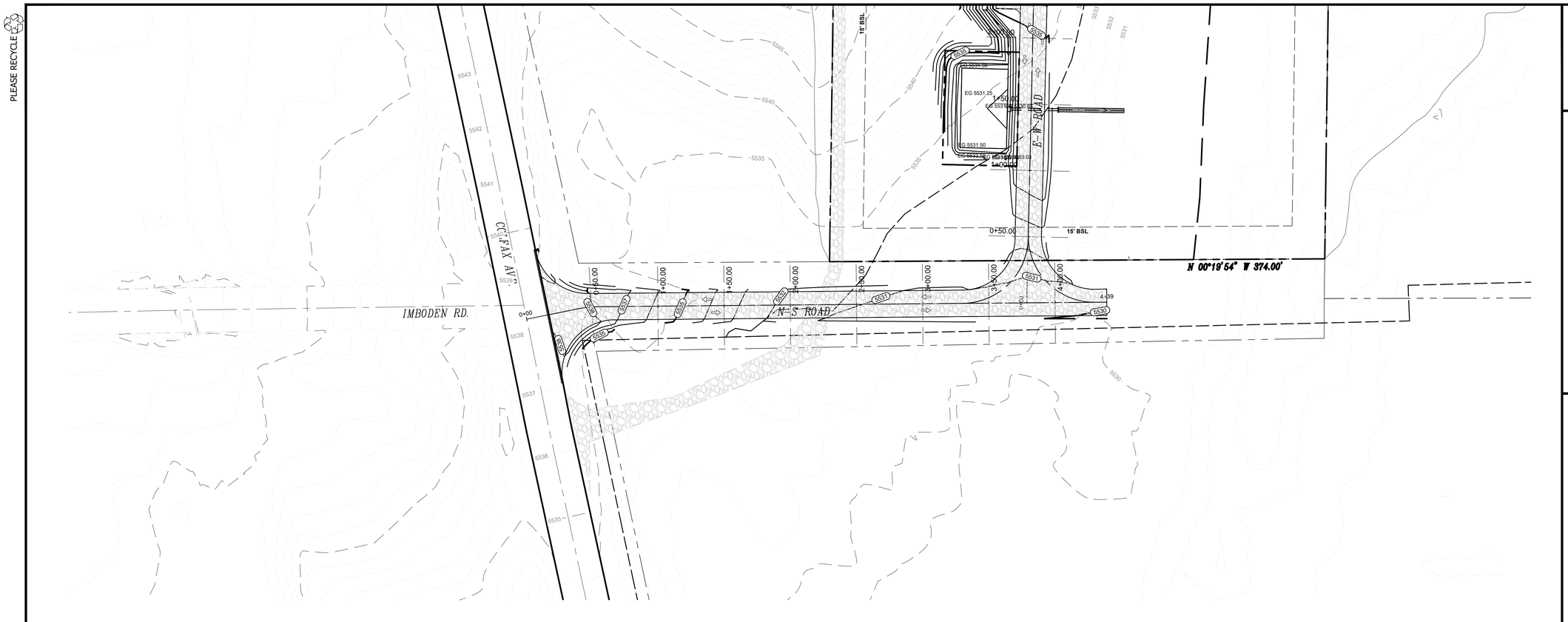

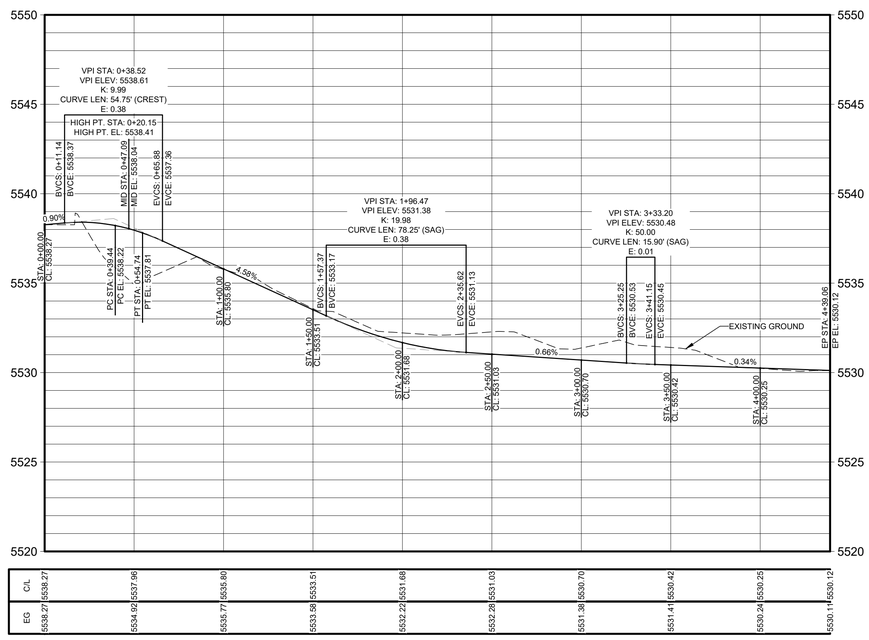

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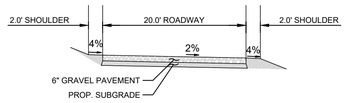
EG	5538.27	5534.92	5535.77	5533.58	5532.22	5532.28	5531.38	5531.41	5530.24	5530.11

1) REFER TO GENERAL NOTES FOR GENERAL NOTES, PAVING NOTES, AND CITY GENERAL NOTES.
2) ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED ON PLANS.
3) REFER TO LANDSCAPE PLANS FOR HARDSCAPE IMPROVEMENTS AND IRRIGATION SLEEVES CROSSING PAVED AREAS.
4) ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED ON PLANS.
5) TP = TOP OF PAVEMENT (CONCRETE OR ASPHALT)
6) OS = OFFSET FROM ROAD CENTERLINE
7) REFER TO SHEET C9.0 - C9.1 FOR STANDARD PUBLIC DETAILS.



TYPICAL ROADWAY SECTION

PRELIMINARY
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01-14-2022
DATE

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

N-S ROAD PLAN & PROFILE

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-BASE.dwg
20-218-X-PROPERTY.dwg
20-218-X-SITE.dwg
20-218-X-CONTOUR.dwg
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Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-STREET PP
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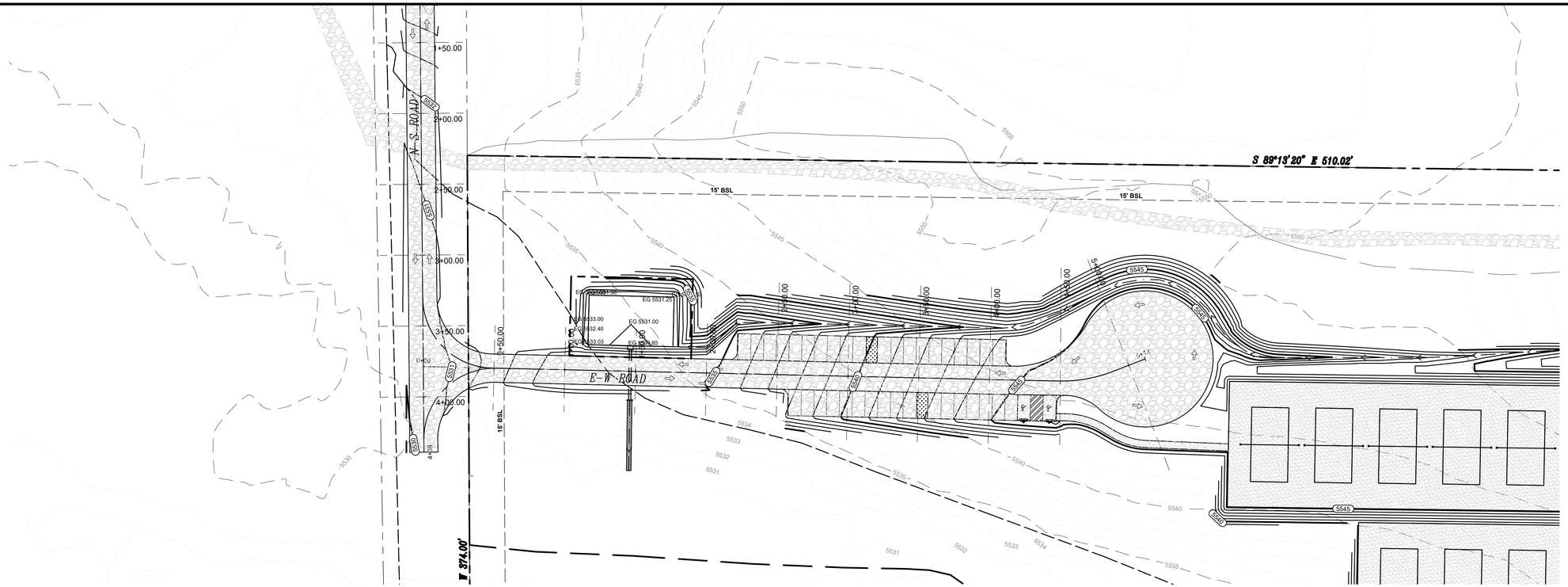
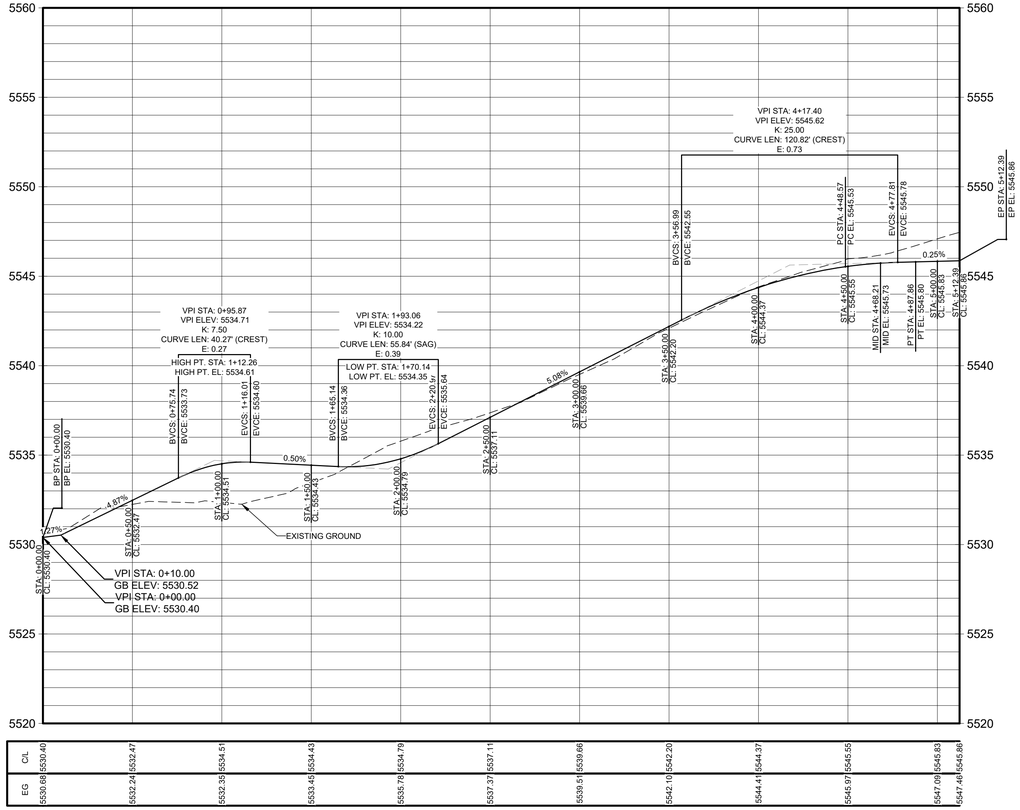
PLEASE RECYCLE





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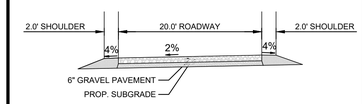
7) REFER TO SHEET C9.0 - C9.1 FOR STANDARD PUBLIC DETAILS.



TYPICAL ROADWAY SECTION

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E-W ROAD PLAN & PROFILE

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.1
REVIEWER: MG			

5280 BEACH

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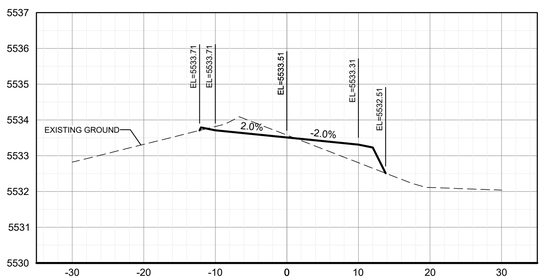

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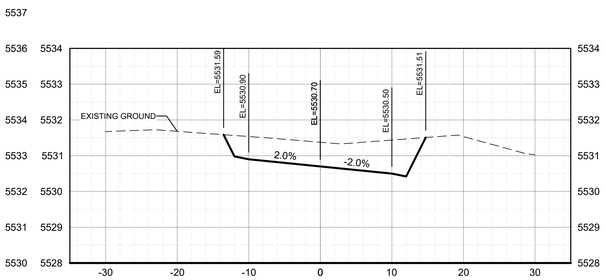

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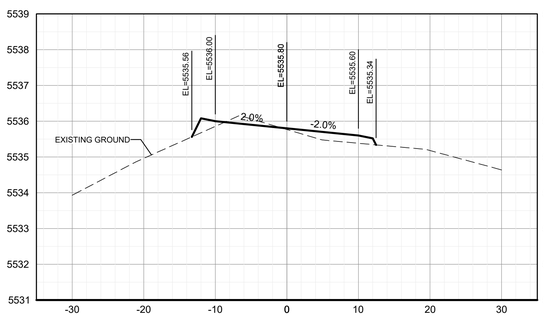

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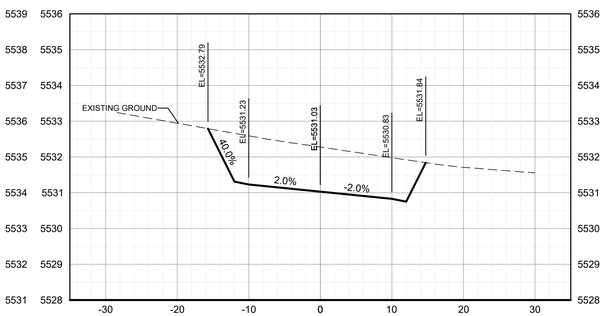

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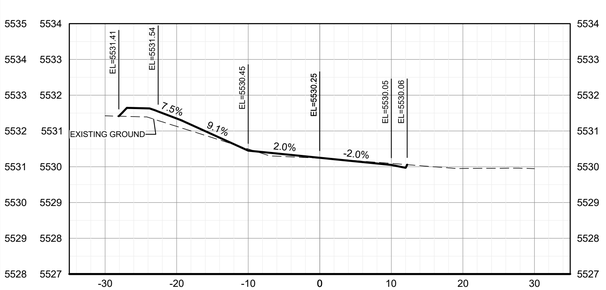

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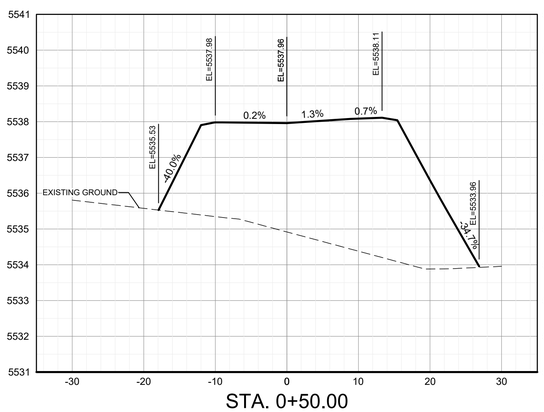

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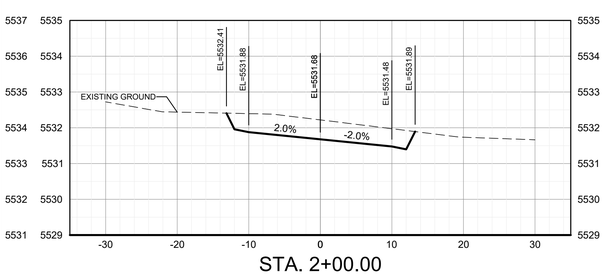

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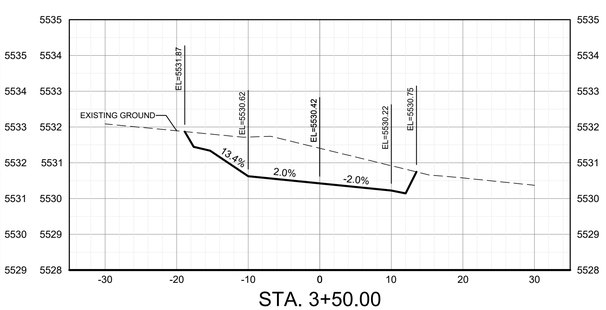

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01-14-2022
DATE

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

N-S ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.2
REVIEWER: MG			

PLEASE RECYCLE

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20-218-X-BASE-PROP.dwg
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20-218-X-UTIL.dwg
20-218-X-SEAL.dwg
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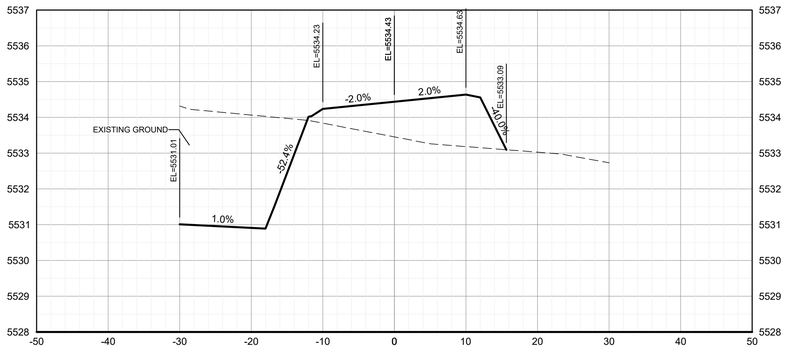
5280 BEACH



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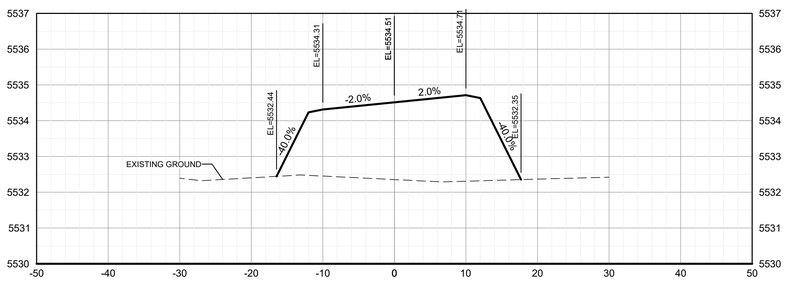

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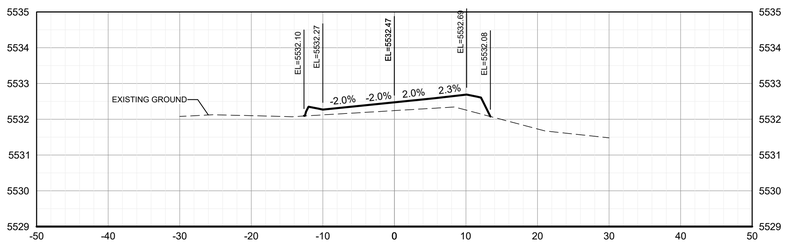

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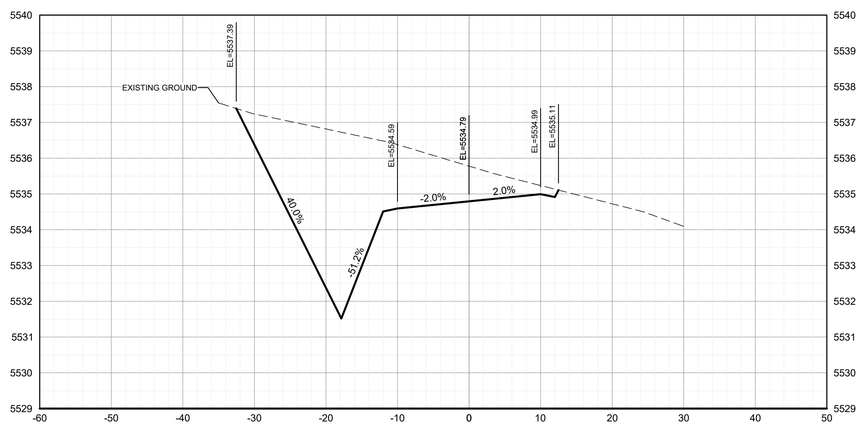

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01-14-2022
DATE

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E-W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.3
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
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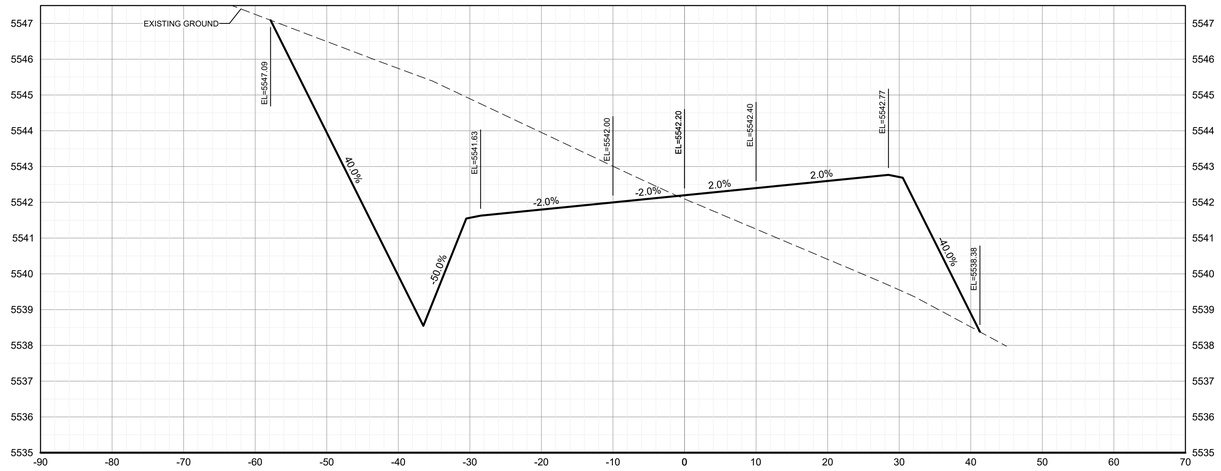
5280 BEACH



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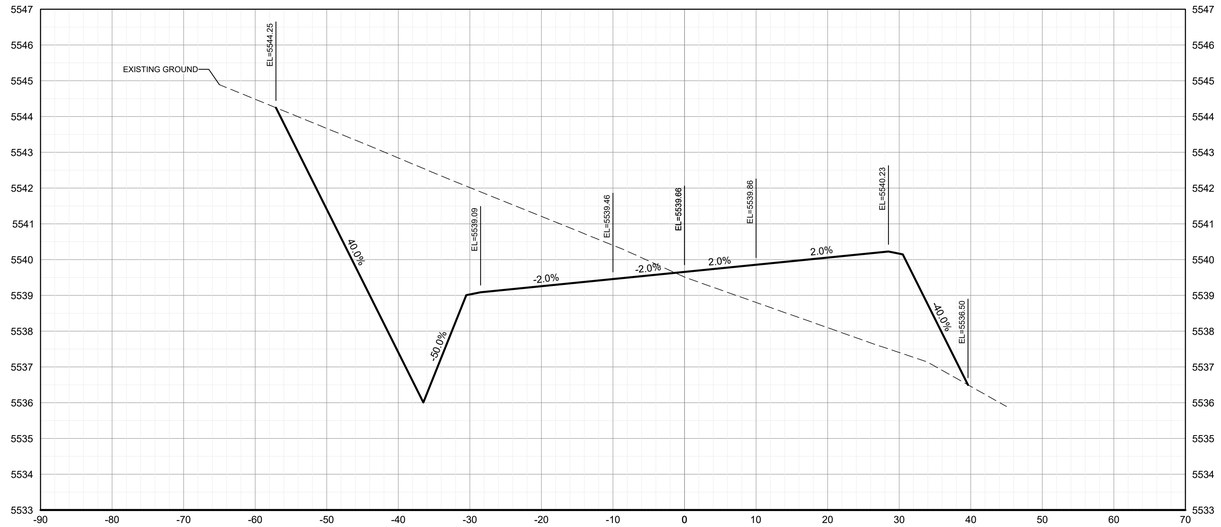

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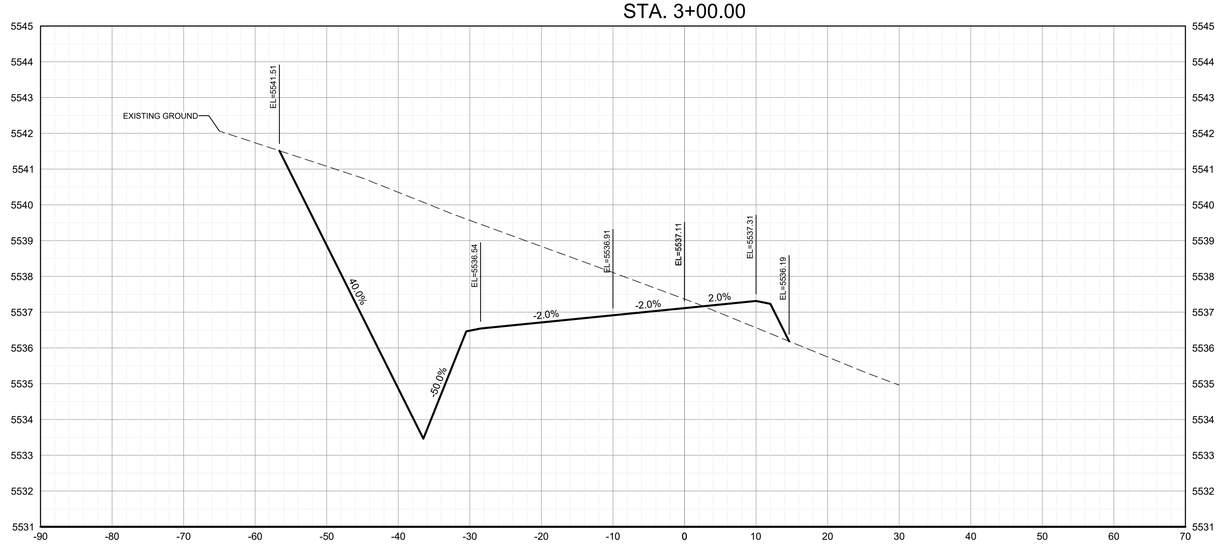

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TYPE OR PRINT NAME: PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E-W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.4
REVIEWER: MG			

PLEASE RECYCLE

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Courts\20-218-C-STREET.PP
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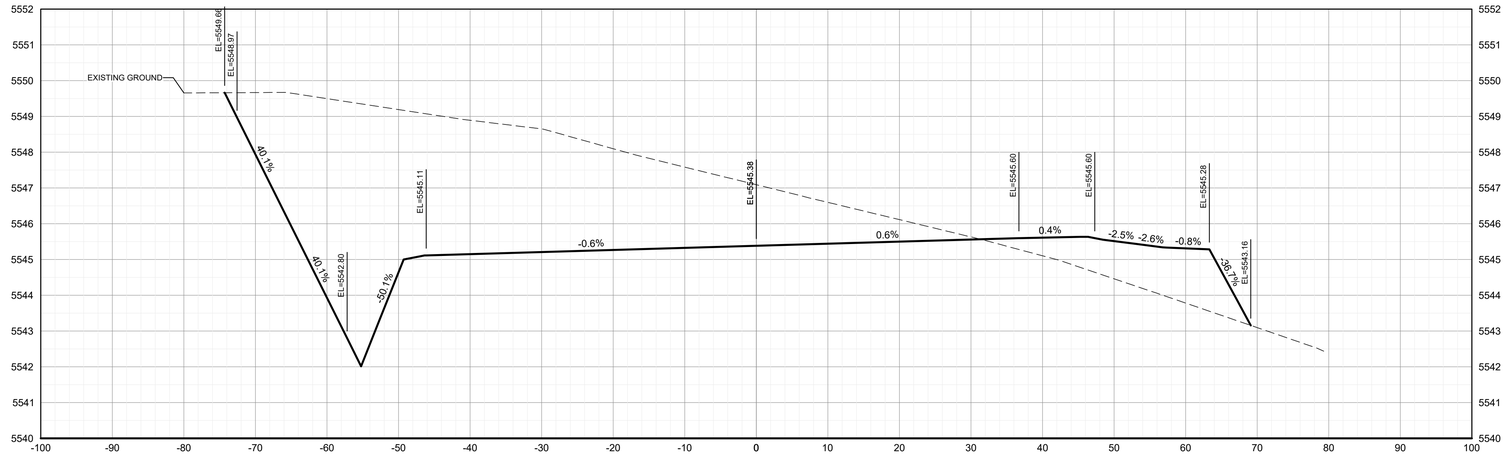
5280 BEACH



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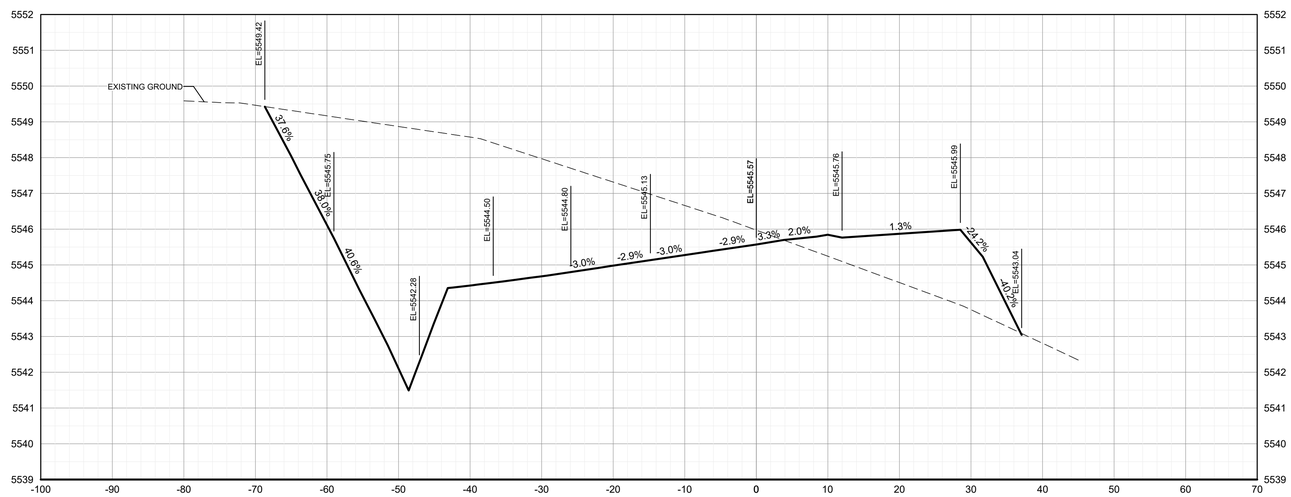

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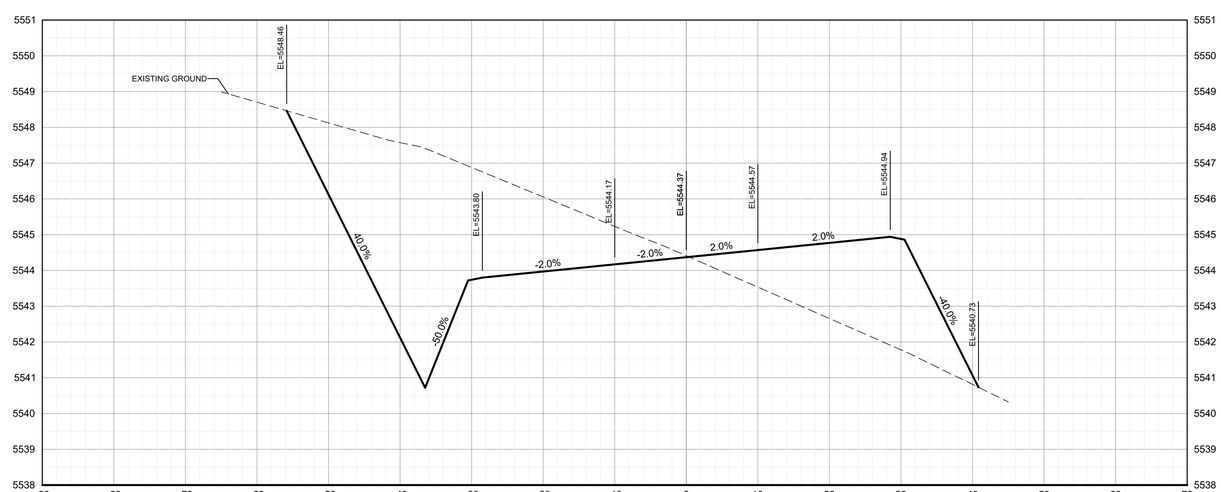

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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E - W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.5
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE

Xrefs: 20-218-X-BASE.dwg
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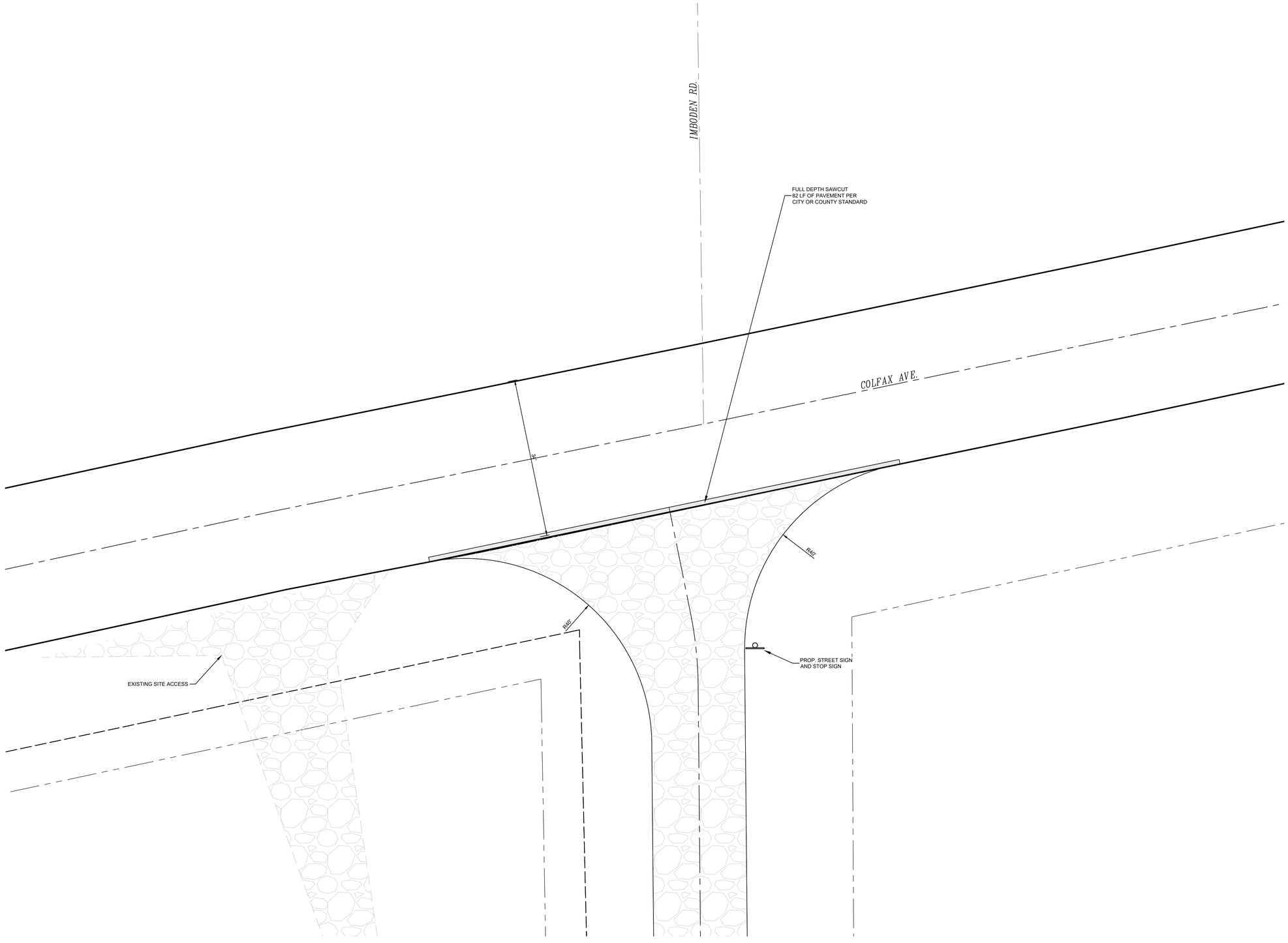

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01-14-2022
DATE

NO.	DATE	REVISION
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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

COLFAX DRIVEWAY

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C8.0
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE

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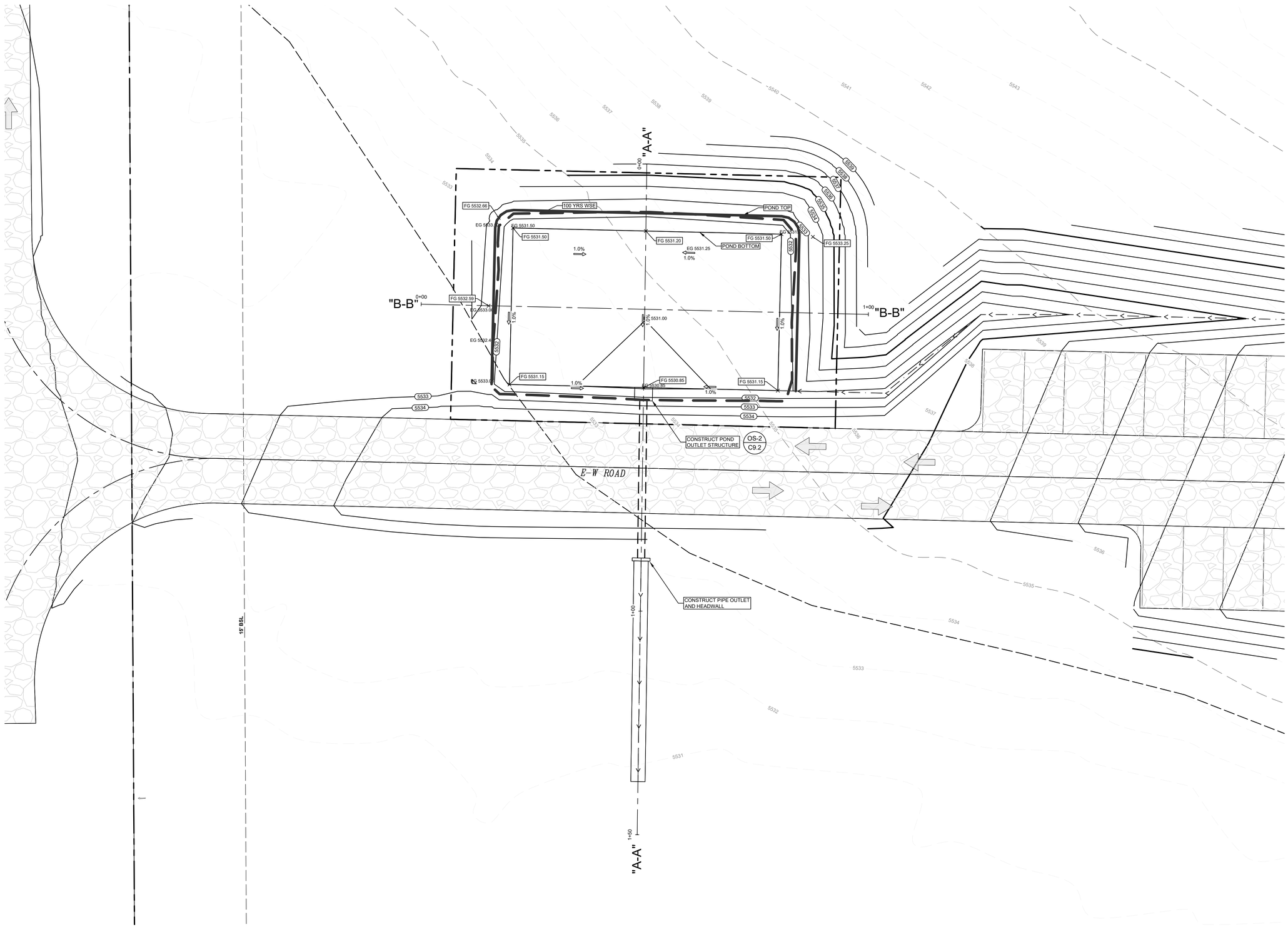

0 40 80 Feet

GRADING NOTES

1. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
2. ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
3. LIMITS OF CONSTRUCTION AREA SHOWN ON THE EROSION CONTROL PLAN.

PRELIMINARY
-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-		
-		
-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

DETENTION POND PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.0
REVIEWER: MG			

PLEASE RECYCLE

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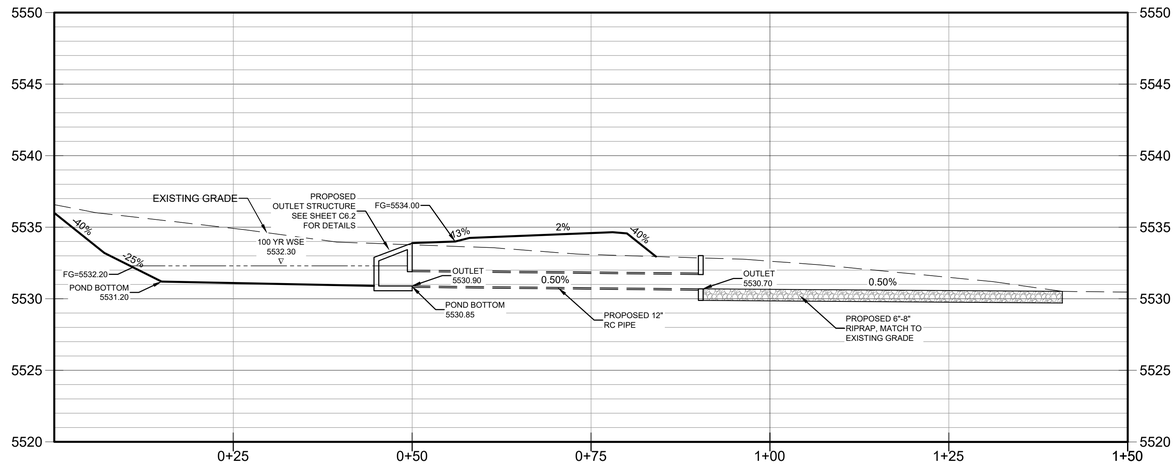
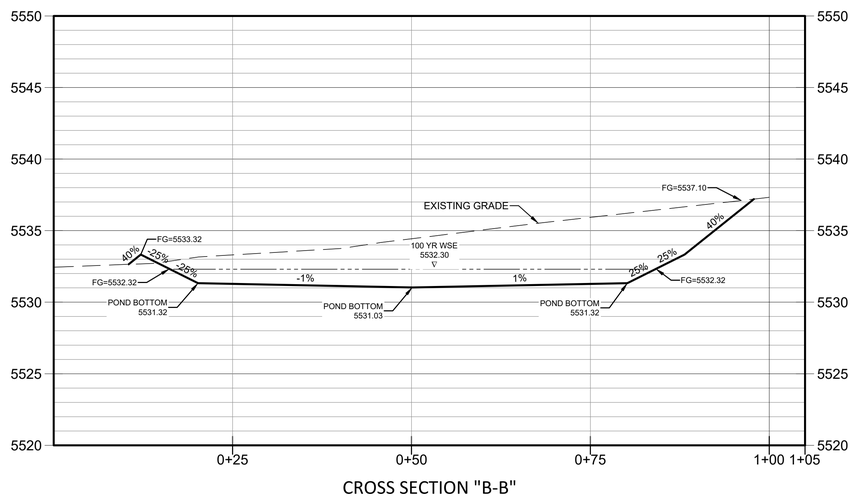
5280 BEACH



CROSS SECTION "A-A"
H:1"=10'
V:1"=5'

V:1"=5'



CROSS SECTION "B-B"
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V:1"=5'

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-FOR REVIEW ONLY-

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DATE

NO.	DATE	REVISION
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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

DETENTION POND SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.1
REVIEWER: MG			

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5280 BEACH
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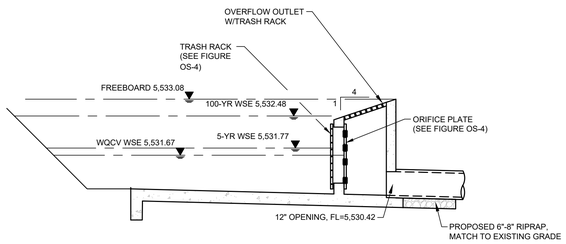
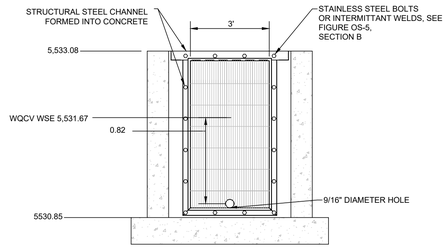


FIGURE 0S-2 TYPICAL OUTLET STRUCTURE



ELEVATION

ORIFICE PLATE NOTES:

1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER. SEE BELOW FOR PLATE THICKNESS.

WQCV TRASH RACKS:

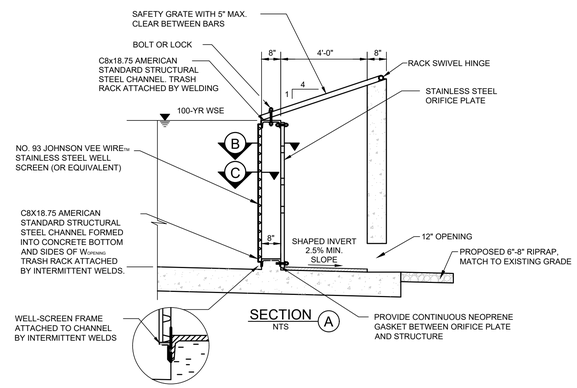
1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO (R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

OVERFLOW SAFETY GRATES:

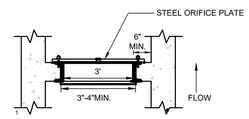
1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

FIGURE OS-4 ORIFICE PLATE AND TRASH RACK DETAILS AND NOTES

NTS



SECTION A
NTS



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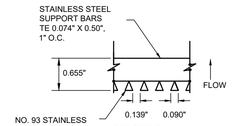

SECTION C
NTS

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA)
= 0.60

FIGURE OS-5 TYPICAL OUTLET STRUCTURE WITH WELL SCREEN TRASH RACK

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-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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-		

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

OUTLET ORIFICE DETAILS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.2
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
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Plot Date/Time: 01/14/2022 8:40 PM
5280 BEACH

LEVEL 3 STORM DRAINAGE REPORT

FOR

5280 Beach

Lot 1, Block 1, Watkins Storage Subdivision

Adams County, CO

Owner: Mike Patton, 303-961-4847

5519 W 56th Ave Unit A, Arvada, CO 80002

Point of Contact and Engineer:

Michael Groselle, P.E. (214)-734-2305

71 S Fenton St. Lakewood, CO 80226

Prepared By

Modern Engineering Solutions

January 22

Table of Contents

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Appendix 2
A. Introduction 3
B. Historic Drainage 4
C. Design Criteria 4
D. Drainage Plan 5
E. Conclusions 5

Appendix

Appendix A – Engineer and Developer Certifications 7
Appendix B – FIRMETTE Map 8
Appendix C – Calculations 9
Appendix D – Construction Drawings 10
Appendix E – Soil Map 11

A. **Introduction**

1. Project Location

The proposed development is described as:

Lot 1, Block 1, Watkins Storage Subdivision located in the Southwest ¼ of Section 32, Township 3 South, Range 64 West of the 6th P.M., County of Adams, State of Colorado.

E Colfax Ave is located north of the property linked by an access road that starts near the corner of E Colfax Ave and Imboden Road.

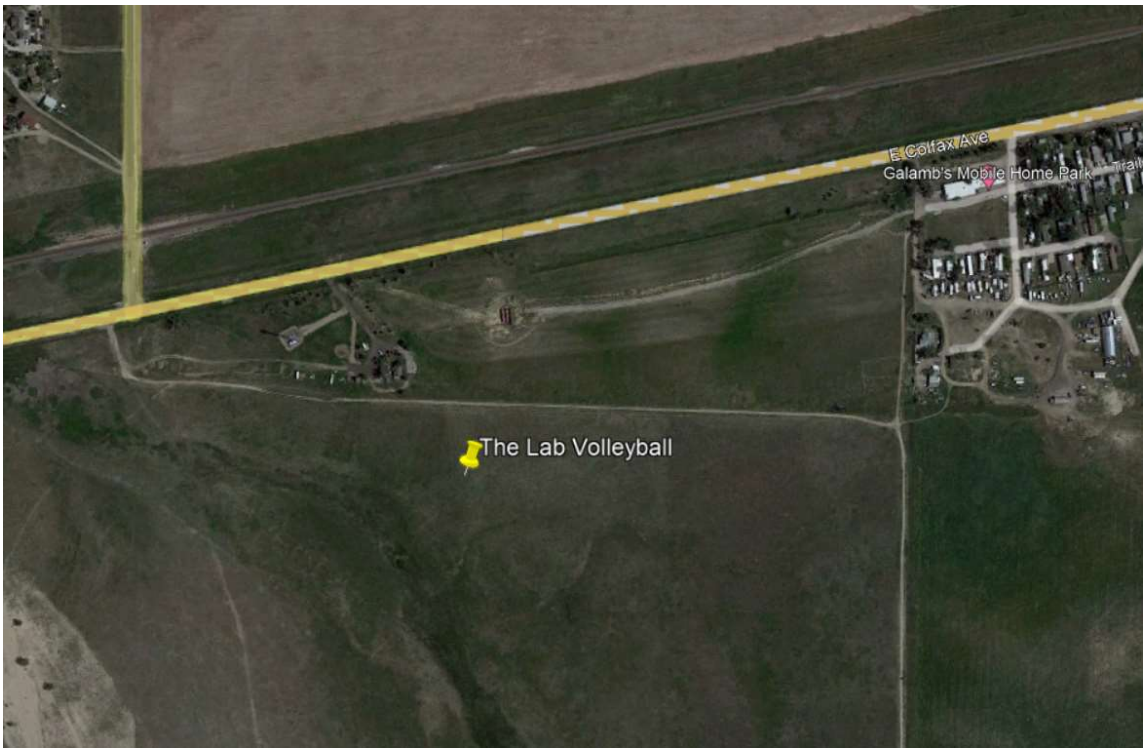


Figure 1: Vicinity Map

2. Pre-development conditions

The property is presently undeveloped and covered with grass. An ephemeral stream enters the site from the south and exits to the west. Soils at site are primarily composed of Bt – Blakeland-Truckton Association, EgA – Ellicott-Glenberg Complex, and TtB – Truckton loam sand, all of which belong to hydrologic soil group C according to the Web Soil Survey – NCRS. All adjacent streets are unpaved without sidewalks.

3. Proposed Development

The proposed development is a volleyball facility with 10 courts, a driveway, and a parking lot. The driveway and parking lot will be covered with semi-impervious material while the

court's surface will be fully pervious. A portion of the area will be allotted for the Extended Detention Basin (EDB) to manage both water quality and peak flow attenuation.

A composite imperviousness of 10.51 percent was calculated for Basin 3 was used for the water quality pond calculations.

B. **Historic Drainage**

1. Overall Basin Description
   a. On-Site basins

The site is divided into two (2) drainage basins. EX-DA-01 is part of the larger basin that drains to the ephemeral stream while the smaller EX-DA-04 drains northwards

   b. Off-site basins

Currently, an off-site basin drains on to the project site, which contributes to the ephemeral stream that crosses the property.

   c. FEMA classification

According to FIRMette 08001C0952J with effective date of September 28, 2018, the property is generally in an area of minimal flood hazard (Zone X). However, the western portion belongs to Special Flood Hazard Area (Zone AE) with Base Flood Elevation (BFE) of approximately 5534.8 feet.

2. Outfalls Downstream from Property

From the proposed detention area water is conveyed through a culvert outlet that leads to the ephemeral stream south of the EDB.

For a detailed map of outfall locations refer to Appendix G.

C. **Design Criteria**

1. Hydrologic Criteria

The rainfall intensity is obtained from Table 9.3 in the Adams County Storm Drainage Design and Stormwater Quality Regulations. The 100-year one-hour point rainfall (P1) is 2.71 inches. The Colorado Urban Hydrograph Procedure (CUHP) spreadsheet Version 2.0.1 was used to determine the peak flows and hydrographs for both existing and proposed drainage basins.

The required detention and water quality volumes was calculated per Mile High Flood District (MHFD) Detention Basin Design Workbook.

The detention pond has been sized for the water quality capture volume, 5-year storm event, and 100-year storm event. It will have a full Water Quality Capture Volume (WQCV) and Excess Urban Runoff Volume (EURV) with an additional 1 foot of freeboard from the

100-year pond level. The channels on the proposed site are designed using the 5-year and 100-year storms.

D. **Drainage Plan**

1. General Concept

Attached to this report are the preliminary design drawings for the development. Four (4) off-site basins drain on to the proposed property. The proposed drainage area map shows the flow patterns. Basin OS 1 drains to the ephemeral stream while Basins OS 2 and OS 4 enters the site from the east and north respectively, to drain to PR-DA-03, which ultimately flows to the EDB. Basin OS 3 joins PR-DA-02, which drains to the ephemeral stream. PR-DA-04 will exit the site to the north.

No adjacent properties will be affected by development of this project. The goal is to add detention to maintain existing off-site flow patterns.

The EDB will be owned by the developer and shall keep all drainage easements and the pond cleared. The proposed detention and channel along the center of the site will help capture run-off sediment. The proposed detention pond volume and calculations are attached in the appendix of this report. A 0.75 square foot sign stating “WARNING Unauthorized modification of this structure is a code violation and subject to penalties as provided by law” will be placed near the outlet structure in a visible location.

2. Specific Details

The detention area is specified on the drainage area map and site plan. The outfall is labeled on the site plan. The attached summary table shows how much volume the pond has at each given elevation. The detention area will have an outlet box with an orifice the outfalls into a 12” reinforced concrete pipe with outlet located along the right bank of the ephemeral stream.

In an emergency that the pond is not draining through its orifices, flow will bypass enter into the spillway of the outlet structure. After water goes over the spillway, it will drain into the ephemeral steam.

Temporary BMP will be placed around the site to control drainage during construction. A detailed erosion control plan is attached to the appendix of this report.

E. **Conclusions**

The goal of the drainage design on this property is to meet all required regulations. The proposed driveway, parking, and volleyball court elevations are well above the 100-year WSE as presented in the FIRMette. The storm detention pond has an overflow route at an elevation well below the lowest proposed building finished floor elevation. There will be no impact on the neighboring property as existing flow conditions will be matched. The proposed detention areas will provide both water quality requirements and flow peak

attenuation requirements. The proposed development will have no adverse effect on the flow of water upstream and downstream.

Appendix A – Engineer and Developer Certifications

ENGINEER CERTIFICATION OF DRAINAGE REPORT

This statement must be included and signed in all preliminary and final drainage reports by the engineer who prepared or supervised the design.

" I hereby certify that this report (plan) for the Preliminary Drainage design of Duplexes at W 52nd **was prepared by me or under my direct supervision in accordance with the provisions of Adams County Storm Drainage Design and Technical Criteria for the owners thereof. I understand that Adams County does not and will not assume liability for drainage facilities designed by others."**

2022-01-12

date

Michael Groselle

Registered Professional Engineer
State of Colorado No. 52071
(Affix Seal)

DEVELOPER CERTIFICATION OF DRAINAGE FACILITIES

This statement must be included and signed in all final drainage reports prepared by the engineer.

RedT Homes **hereby certifies that the drainage facilities for** Duplexes at W 52nd **shall be constructed according to the design presented in this report. I understand that Adams County does not and will not assume liability for the drainage facilities designed and/ or certified by my engineer. I understand that Adams County reviews drainage plans pursuant to Colorado Revised Statues Title 30, Article 28; but cannot, on behalf of** Duplexes at W 52nd **guarantee that final drainage design review will absolve** RedT Homes **and/ or their successors and/ or assigns the future liability for improper design. I further understand that approval of the Final Plat and/ or Final Development Plan does not imply approval of my engineer's drainage design."**

2022-01-12

date

5280 Beach

Name of Developer (please print)

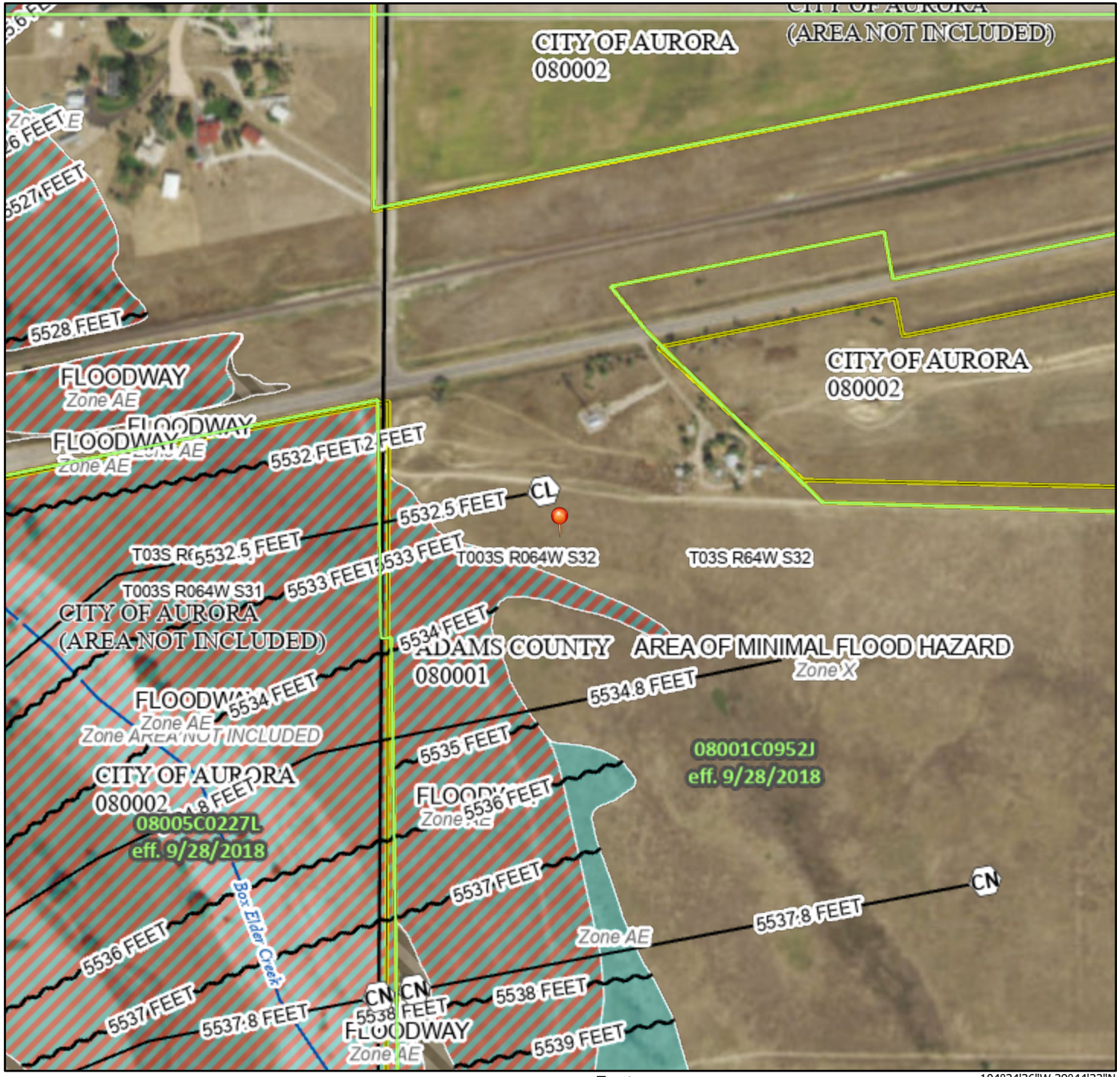
Authorized Signature

Appendix B – FIRMETTE Map

National Flood Hazard Layer FIRMette

FEMA

104°35'13"W 39°45'N



104°34'36"W 39°44'33"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/22/2021 at 3:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

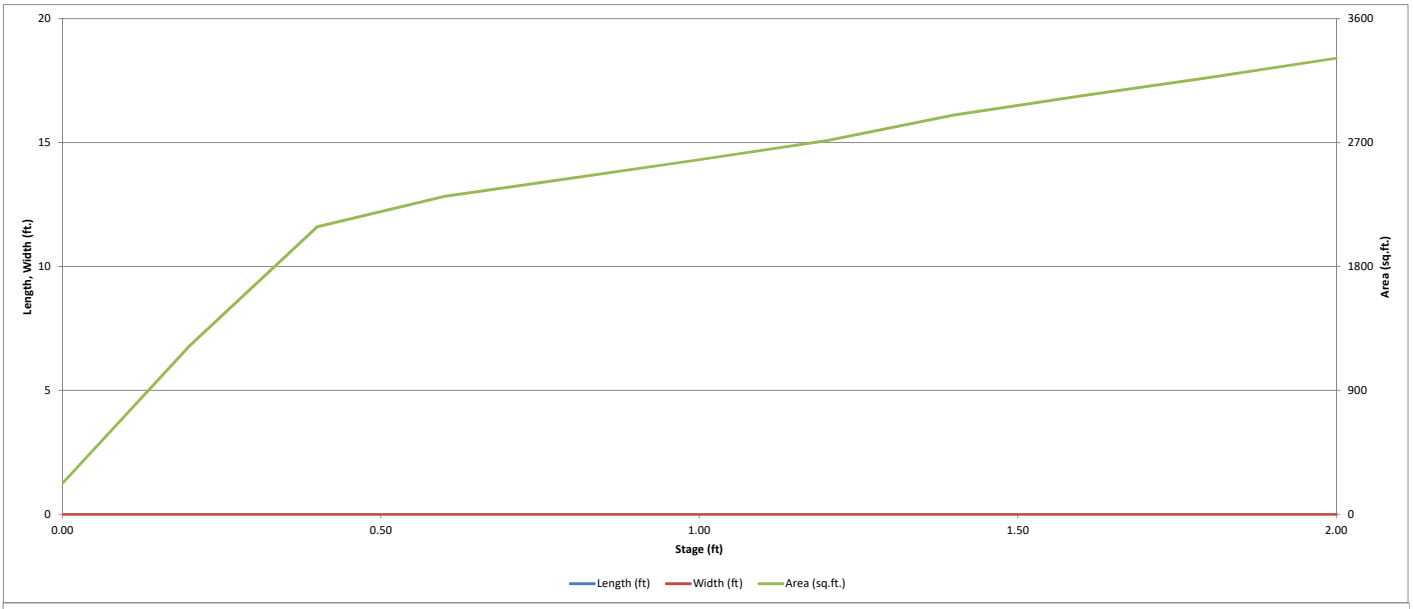
Appendix C – Calculations

Summary of CUHP Input Parameters (Version 2.0.1)

								Depression Storage		Horton's Infiltration Parameters			DCIA Level and Fractions			
Catchment Name/ID	SWMM Node/ID	Raingage Name/ID	Area (sq.mi.)	Dist. to Centroid (miles)	Length (miles)	Slope (ft./ft.)	Percent Imperv.	Pervious (inches)	Imperv. (inches)	Initial Rate (in./hr.)	Final Rate (in.hr.)	Decay Coeff. (1/sec.)	DCIA Level	Dir. Con'ct Imperv. Fraction	Receiv. Perv. Fraction	Percent Eff. Imperv.
EX-DA-01		E COLFAX AVE	0.279	0.624	1.165	0.012	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00
EX-DA-04		E COLFAX AVE	0.001	0.010	0.028	0.032	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00
PR-DA-01		E COLFAX AVE	0.274	0.624	1.165	0.012	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.01
PR-DA-02		E COLFAX AVE	0.001	0.010	0.035	0.086	4.6	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.05	3.56
PR-DA-03		E COLFAX AVE	0.004	0.068	0.196	0.031	10.5	0.35	0.10	5.00	1.00	0.0007	0.00	0.21	0.10	8.50
PR-DA-04		E COLFAX AVE	0.001	0.010	0.028	0.032	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00

Summary of CUHP Input Parameters (Version 2.0.1)

								Depression Storage		Horton's Infiltration Parameters			DCIA Level and Fractions			
Catchment Name/ID	SWMM Node/ID	Raingage Name/ID	Area (sq.mi.)	Dist. to Centroid (miles)	Length (miles)	Slope (ft./ft.)	Percent Imperv.	Pervious (inches)	Imperv. (inches)	Initial Rate (in./hr.)	Final Rate (in.hr.)	Decay Coeff. (1/sec.)	DCIA Level	Dir. Con'ct Imperv. Fraction	Receiv. Perv. Fraction	Percent Eff. Imperv.
EX-DA-01		E COLFAX AVE	0.279	0.624	1.165	0.012	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00
EX-DA-04		E COLFAX AVE	0.001	0.010	0.028	0.032	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00
PR-DA-01		E COLFAX AVE	0.274	0.624	1.165	0.012	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.01
PR-DA-02		E COLFAX AVE	0.001	0.010	0.035	0.086	4.6	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.05	3.56
PR-DA-03		E COLFAX AVE	0.004	0.068	0.196	0.031	10.5	0.35	0.10	5.00	1.00	0.0007	0.00	0.21	0.10	8.50
PR-DA-04		E COLFAX AVE	0.001	0.010	0.028	0.032	0.0	0.35	0.10	5.00	1.00	0.0007	0.00	0.00	0.00	0.00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1800
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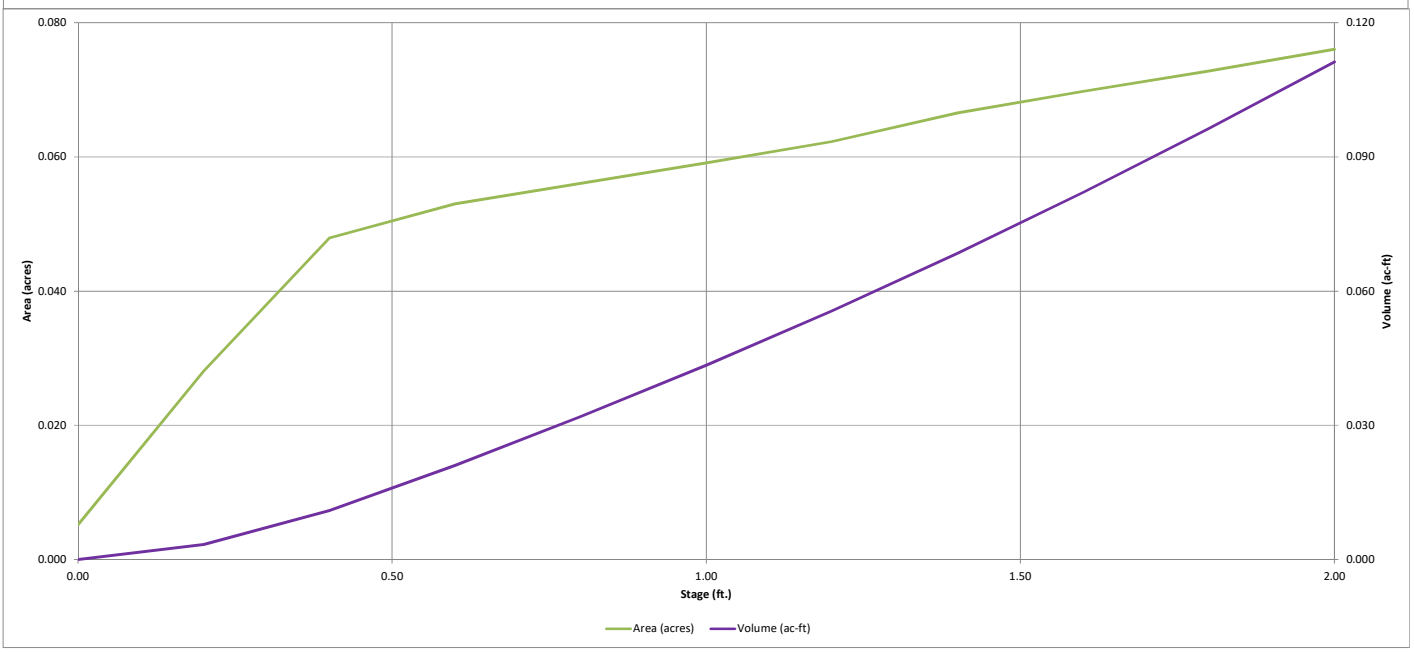
Area (sq.ft.)
Stage (ft)
Length (ft)
Width (ft)
Area (sq.ft.)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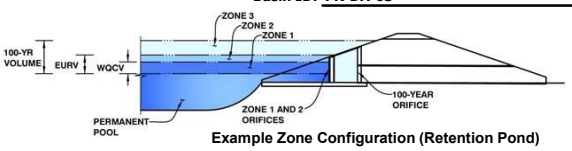
0.00
0.50
1.00
1.50
2.00
Area (acres)
Volume (ac-ft)
Stage (ft.)
Area (acres)
Volume (ac-ft)

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.04 (February 2021)

Project: **Volleyball Courts at Adams County**

Basin ID: **PR-DA-03**



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	0.47	0.014	Orifice Plate
Zone 2 (EURV)	0.57	0.005	Orifice Plate
Zone 3 (100-year)	1.28	0.041	Weir&Pipe (Circular)
Total (all zones)		0.060	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth =	N/A	ft (distance below the filtration media surface)
Underdrain Orifice Diameter =	N/A	inches

Calculated Parameters for Underdrain

Underdrain Orifice Area =	N/A	ft^2
Underdrain Orifice Centroid =	N/A	feet

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Invert of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Orifice Plate =	0.57	ft (relative to basin bottom at Stage = 0 ft)
Orifice Plate: Orifice Vertical Spacing =	9.00	inches
Orifice Plate: Orifice Area per Row =	N/A	inches

Calculated Parameters for Plate

WQ Orifice Area per Row =	N/A	ft^2
Elliptical Half-Width =	N/A	feet
Elliptical Slot Centroid =	N/A	feet
Elliptical Slot Area =	N/A	ft^2

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00							
Orifice Area (sq. inches)	0.25							

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)								
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

	Not Selected	Not Selected	
Invert of Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)
Vertical Orifice Diameter =	N/A	N/A	inches

Calculated Parameters for Vertical Orifice

	Not Selected	Not Selected	
Vertical Orifice Area =	N/A	N/A	ft^2
Vertical Orifice Centroid =	N/A	N/A	feet

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir (and No Outlet Pipe)

	Zone 3 Weir	Not Selected	
Overflow Weir Front Edge Height, Ho =	0.57	N/A	ft (relative to basin bottom at Stage = 0 ft)
Overflow Weir Front Edge Length =	1.00	N/A	feet
Overflow Weir Grate Slope =	4.00	N/A	H:V
Horiz. Length of Weir Sides =	5.00	N/A	feet
Overflow Grate Type =	Type C Grate	N/A	
Debris Clogging % =	0%	N/A	%

Calculated Parameters for Overflow Weir

	Zone 3 Weir	Not Selected	
Height of Grate Upper Edge, H_t =	1.82	N/A	feet
Overflow Weir Slope Length =	5.15	N/A	feet
Grate Open Area / 100-yr Orifice Area =	13.42	N/A	
Overflow Grate Open Area w/o Debris =	3.59	N/A	ft^2
Overflow Grate Open Area w/ Debris =	3.59	N/A	ft^2

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

	Zone 3 Circular	Not Selected	
Depth to Invert of Outlet Pipe =	0.00	N/A	ft (distance below basin bottom at Stage = 0 ft)
Circular Orifice Diameter =	7.00	N/A	inches

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

	Zone 3 Circular	Not Selected	
Outlet Orifice Area =	0.27	N/A	ft^2
Outlet Orifice Centroid =	0.29	N/A	feet
Half-Central Angle of Restrictor Plate on Pipe =	N/A	N/A	radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage=	1.40	ft (relative to basin bottom at Stage = 0 ft)
Spillway Crest Length =	4.00	feet
Spillway End Slopes =	4.00	H:V
Freeboard above Max Water Surface =	1.00	feet

Calculated Parameters for Spillway

Spillway Design Flow Depth=	0.19	feet
Stage at Top of Freeboard =	2.59	feet
Basin Area at Top of Freeboard =	0.08	acres
Basin Volume at Top of Freeboard =	0.11	acre-ft

Routed Hydrograph Results

The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	0.85	1.13	1.39	1.80	2.15	2.53	3.55
CUHP Runoff Volume (acre-ft) =	0.014	0.019	0.004	0.008	0.013	0.030	0.075	0.137	0.316
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.004	0.008	0.013	0.030	0.075	0.137	0.316
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.0	0.0	0.0	0.1	0.5	1.0	2.4
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.00	0.00	0.01	0.03	0.20	0.41	0.99
Peak Inflow Q (cfs) =	N/A	N/A	0.0	0.1	0.1	0.3	0.7	1.2	2.7
Peak Outflow Q (cfs) =	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.9	2.2
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	0.6	0.3	0.7	0.8	0.9	0.9
Structure Controlling Flow =	Plate	Overflow Weir 1	Plate	Plate	Plate	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Spillway
Max Velocity through Grate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	0.0	0.1	0.3	0.4
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	39	48	17	26	38	54	49	43	29
Time to Drain 99% of Inflow Volume (hours) =	**41**	51	18	28	40	57	55	52	46
Maximum Ponding Depth (ft) =	0.47	0.57	0.18	0.29	0.41	0.65	0.82	0.96	1.55
Area at Maximum Ponding Depth (acres) =	0.05	0.05	0.03	0.04	0.05	0.05	0.06	0.06	0.07
Maximum Volume Stored (acre-ft) =	0.014	0.019	0.003	0.006	0.011	0.023	0.032	0.041	0.078

Appendix D – Construction Drawings

CONSTRUCTION PLANS

FOR

5280 BEACH

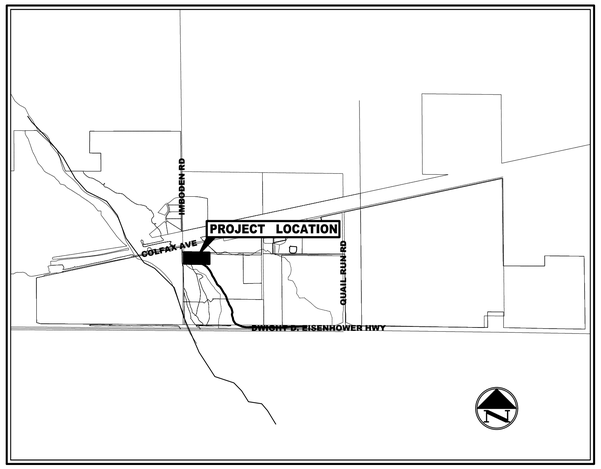
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1

CITY OF WATKINS, ADAMS COUNTY, COLORADO

OWNER/DEVELOPER
5280 BEACH
1970 IMBODEN ROAD
WATKINS, CO 80137
PHONE: (303) 961-4847
CONTACT: MIKE PATTON
EMAIL: MIKE.PATTON@THELABRP.COM

ENGINEER
MODERN ENGINEERING SOLUTIONS, LLC
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305
CONTACT: MICHAEL GROSELLE
EMAIL: MIKE@MOD-ENG.COM

SURVEYOR
GILLIANS LAND CONSULTANTS
PO BOX 746358
ARVADA, CO 80006-6358
PHONE: (303) 972-6640
CONTACT: ROBERT HARRIS
EMAIL: RHASSIS@GILLIANSLC.COM



LOCATION MAP
SCALE: N.T.S.

MODERN ENGINEERING SOLUTIONS

COLORADO 811
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

JANUARY 2022

SHEET INDEX

SHEET NO.	SHEET TITLE
C0.0	COVER SHEET
C1.0	GENERAL NOTES
TS	TOPOGRAPHIC SURVEY
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	FIRE SAFETY PLAN
C5.0	EROSION CONTROL NOTES
C5.1	EROSION CONTROL PLAN - PHASE I
C5.2	EROSION CONTROL PLAN - PHASE II
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C5.4	EROSION CONTROL DETAILS-I
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C8.0	COLFAX DRIVEWAY
C9.0	DETENTION POND PLAN
C9.1	DETENTION POND SECTIONS
C9.2	OUTLET ORIFICE DETAILS

PRELIMINARY
-FOR REVIEW ONLY-

THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE. THEY ARE PREPARED BY, OR UNDER THE SUPERVISION OF:

MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

PLEASE RECYCLE
5280 BEACH
5280 BEACH
Xrefs: \JOb-218-X-ESALdwg
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Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\JOb-218 Adam County Volleyball Courts\JOb-218-C-COVER.DWG
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PLEASE RECYCLE

GENERAL NOTES FOR PAVING IMPROVEMENTS

1. THE TERM MUNICIPALITY REFERS TO THE ADAMS COUNTY.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY AND SHALL BE IN ACCORDANCE WITH THE MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION. ALL WORK NOT COVERED IN THE CONTRACT DOCUMENTS AND MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION SHALL BE GOVERNED BY ADAMS COUNTY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. EXISTING UTILITY LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. EXISTING UTILITIES SHOWN HAVE BEEN BASED ON AVAILABLE RECORD DRAWINGS AND SURFACE APPURTENANCE FIELD TIES ONLY. SOME UTILITY LINES AND SURFACE LOCATIONS MAY NOT BE SHOWN. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATIONS AND PROTECTION OF EXISTING UTILITIES WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL ALSO ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING UTILITIES WHETHER SHOWN OR NOT, DAMAGED BY THE CONTRACTOR'S ACTIVITIES. DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATIONS OF EXISTING UTILITIES SHALL NOT BE BASIS FOR ADDITIONAL COMPENSATIONS TO THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE REESTABLISHED AT CONTRACTORS EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO: A.) PREVENT ANY DAMAGES TO PRIVATE PROPERTY AND PROPERTY OWNER'S POLES, FENCES, SHRUBS, ETC. B.) PROTECT ALL UNDERGROUND UTILITIES. C.) NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH COLORADO LAW. D.) FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE VICINITY OF CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNIDENTIFIED POTENTIAL CONFLICTS THAT MAY EXIST BETWEEN THE EXISTING UTILITIES AND CONSTRUCTION PLANS.
6. ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS, INCLUDING EXISTING PRIVATE AND PUBLIC LANDSCAPE IRRIGATION SYSTEMS, SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENT WERE IN PRIOR TO THE DAMAGES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE ADJUSTMENT OF SPRINKLER HEADS TO FINAL GRADE AND RELOCATION IF NECESSARY.
7. THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. THE PONDING OF WATER IN STREETS, DRIVES, TRENCHES, ETC, WILL NOT BE ALLOWED. THE CONTRACTOR SHALL MAINTAIN EXISTING DRIVEWAYS ACCESS AT ALL TIME.
8. THE CONTRACTOR SHALL MAINTAIN EXISTING SANITARY SEWER AND WATER SERVICES AT ALL TIMES DURING CONSTRUCTION.
9. AREAS OF THE SITE THAT WILL UNDERLIE FILL SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN UNCOMPACTED THICKNESS. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT FROM -3% TO +1% OF OPTIMUM OR PER GEOTECH RECOMMENDATION. FIELD DENSITY TESTS PER MUNICIPAL REQUIREMENTS.
10. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATION FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEM, REGISTERED IN THE STATE OF COLORADO. THE CONTRACTOR SHALL SUBMIT COMPLETED TRENCH SAFETY PLANS TO THE MUNICIPALITY PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATION. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONSTRUCTION SAFETY AND HEALTH REGULATIONS".
11. WORK MAY NOT BE BACKFILLED OR COVERED UNTIL IT HAS BEEN INSPECTED BY THE MUNICIPALITY.
12. ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.
13. ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE CONCRETE PAVEMENT.
14. CONTRACTOR SHALL COORDINATE THE PROTECTION OF EXISTING FRANCHISE UTILITIES AND APPURTENANCES INCLUDING EXISTING UTILITY POLES IN THE VICINITY OF CONSTRUCTION OPERATIONS WHETHER UTILITIES ARE SHOWN ON PLANS OR NOT. ANY DAMAGE INCURRED TO EXISTING FRANCHISE UTILITIES, APPURTENANCES, UTILITY POLES, LIGHT STANDARDS, ETC., BY CONSTRUCTION RELATED ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
15. THE CONTRACTOR SHALL LOCATE AND RECORD EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TEMPORARILY REMOVE AND CAP IRRIGATION SYSTEM AS NECESSARY FOR CONSTRUCTION AND SHALL REPLACE THE PORTION REMOVED WITH EQUIVALENT SYSTEMS. CONTRACTOR SHALL COORDINATE ANY IRRIGATION WORK WITH THE MUNICIPALITY AND PROPERTY OWNER'S REPRESENTATIVES.
16. THE CONTRACTOR MUST CEASE ALL CONSTRUCTION OPERATIONS IMMEDIATELY IF A SUSPECTED ARCHEOLOGICAL OBJECT/ARTIFACT IS UNCOVERED DURING CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY CONTACT THE COLORADO HISTORICAL COMMISSION AND THE MUNICIPALITY. PROJECT WORK WILL NOT COMMENCE UNTIL PROPER PERMITS ARE IN PLACE AND PROVIDED TO THE MUNICIPALITY.
17. ALL PAVING DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL HANDICAPPED ACCESSIBILITY REQUIREMENTS INCLUDING SIGNAGE, TEXTURES, COLORING, MARKINGS, AND SLOPES OF ADA/TAS 2012 ACCESSIBLE ROUTES & RAMPS, AND PARKING SPACES.
19. ALL PIPE LENGTHS MEASURED FROM STATION TO STATION BASED ON THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
20. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARISE.

GENERAL CONSTRUCTION NOTES

1. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT THE ADAMS COUNTY CONSTRUCTION INSPECTOR SUPERVISOR AT 720-523-6965.
2. ALL CONCRETE CURB, GUTTER AND WALK MUST BE POURED MONOLITHICALLY USING 4,500 PSI CONCRETE WITH FIBER MESH.
3. ALL MATERIAL SUBMITTALS MUST BE APPROVED, STAMPED AND SIGNED, BY THE ENGINEER OF RECORD, AND SUBMITTED TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR FOR APPROVAL PRIOR TO CONSTRUCTION/INSTALLATION.
4. THE CONTRACTOR IS REQUIRED TO SUBMIT COPIES OF ALL CONCRETE AND ASPHALT TICKETS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING, AND IS REQUIRED TO SUBMIT ALL TEST RESULTS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.
6. THE CONTRACTOR IS REQUIRED TO REMOVE A MINIMUM OF TWO (2) FEET OF EXISTING ASPHALT FOR ALL CURB AND GUTTER REPLACEMENT.
7. ALL UTILITY CUTS IN EXISTING STREETS ARE REQUIRED TO BE BACKFILLED WITH FLOWFILL, AND PATCHED WITH A MINIMUM OF 9-INCH ASPHALT PATCH.
8. A COPY OF THE GEOTECHNICAL REPORT SPECIFYING THE PAVEMENT THICKNESS DESIGN MUST BE SUBMITTED FOR REVIEW.
9. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL UTILITIES. THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE LINEAL FOOTAGES AND THE NUMBER OF SERVICE CUTS REQUIRED FOR ALL UTILITIES.
10. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL CONCRETE AND ASPHALT FACILITIES. PRIOR TO THE ISSUANCE OF THESE PERMITS, THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE SQUARE YARDAGE/SQUARE FOOTAGES OF ALL CONCRETE AND ASPHALT BEING INSTALLED.
11. THE SIA MUST BE COMPLETED WITH APPROPRIATE COLLATERAL, ALONG WITH THE PROPOSED PLAT, PRIOR TO THE ISSUANCE OF ANY ROW ACCESS/CONSTRUCTION PERMIT.
12. NO C.O.'S WILL BE ISSUED FOR ANY BUILDING CONSTRUCTION UNTIL ALL ROW IMPROVEMENTS HAVE BEEN COMPLETED AND HAVE BEEN GRANTED PRELIMINARY ACCEPTANCE.
13. UPON COMPLETION OF ALL CONSTRUCTION, A DRAINAGE CERTIFICATION LETTER, AND APPROPRIATE AS-BUILT CONSTRUCTION DRAWINGS AND INFORMATION WILL BE REQUIRED. THIS LETTER WILL BE STAMPED AND SIGNED BY THE ORIGINAL DESIGN ENGINEER.

GENERAL NOTES FOR PAVING IMPROVEMENTS

10. THE SUB GRADE SHALL BE PROOF ROLLED AND OBSERVED BY THE CONSTRUCTION INSPECTOR PRIOR TO AND AFTER SUB-GRADE STABILIZATION.
11. INDIVIDUAL WATER AND SEWER SERVICES AND WATER VALVES SHALL BE MARKED IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
12. THE CONTRACTOR SHALL PROCEED WITH PAVING NO MORE THAN SEVENTY-TWO (72) HOURS AFTER DENSITY/MOISTURE TESTS HAVE BEEN TAKEN AND PASSED BY A REGISTERED TESTING FIRM. COPIES OF THE TEST RESULTS SHALL BE FURNISHED TO THE MUNICIPALITY. IN THE EVENT PAVING OPERATIONS HAVE NOT COMMENCED WITHIN THE SEVENTY-TWO (72) HOUR LIMIT, A RETEST SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.
13. MANHOLE RIM ELEVATIONS, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. SHALL BE ADJUSTED TO FINISHED GRADE BY THE PAVING CONTRACTOR AT THE TIME OF PAVING.
14. THE PAVING CONTRACTOR SHALL INSTALL A BLUE REFLECTOR IN THE STREET OR FIRE LANE CENTERLINE AT THE LOCATION OF EACH FIRE HYDRANT.
15. THE CONTRACTOR SHALL PREPARE ALL TRAFFIC CONTROL PLANS AND SUBMIT TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMITS FOR WORK WITHIN THE MUNICIPALITY. THE PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D AND AS MODIFIED BY THE CDOT SUPPLEMENT TO THE M.U.T.C.D. THE PLAN SHALL ADDRESS THE REQUIREMENTS FOR ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS, HOURS OF CONSTRUCTION, AND OTHER DEVICES AS NECESSARY FOR SAFE TRAFFIC CONTROL.
16. CONCRETE SEALANT TO BE PER THE MUNICIPALITIES STANDARDS.

PROJECT GENERAL NOTES

1. THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) MUST APPROVE ANY WORK TO BE DONE IN THE STATE HIGHWAY RIGHT-OF-WAY. AN APPLICATION AND APPROPRIATE PLANS MUST BE SUBMITTED TO THE MUNICIPALITY AND THE MUNICIPALITY WILL SUBMIT THE APPLICATION TO CDOT FOR REVIEW AND APPROVED BY THE MUNICIPALITY WHERE THE WORK WILL BE PERFORMED.
2. THE LOCATION OF UNDERGROUND FACILITIES INDICATED ON THE PLANS IS TAKEN FROM PUBLIC RECORDS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND FACILITIES. IF THE EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
3. WHERE EXISTING UTILITIES, SERVICE LINES OR IRRIGATION LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES, SERVICE LINES OR IRRIGATION LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS IN GRADES AND ALIGNMENTS.
4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONST. SAFETY AND HEALTH REGULATIONS." VOL. 29, SUBPART P. PG. 128-137, AND ANY AMENDMENTS THERETO. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A TRENCH SAFETY PLAN FOR THIS PROJECT.
5. THE CONTRACTOR SHALL RESTORE ALL AREAS, ONSITE AND OFFSITE, DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO: TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE SWALES, STAGING AREAS, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS. UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE DRAWINGS, RESTORATION SHALL INCLUDE HYDROMULCHING ALL DISTURBED AREAS WITH A SLOPE OF LESS THAN 20% (1:5) AND SODDING AREAS WITH A SLOPE OF 20% (1:5) OR GREATER. ESTABLISHMENT OF GRASS THROUGH PROPER WATERING IS LEFT UP TO THE CONTRACT'S MEANS AND METHODS, UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE/IRRIGATION DRAWINGS.
6. THE CONTRACTOR SHALL KEEP RECORDS FOR AS-BUILTS DRAWINGS AND SHALL SUBMIT MARK-UPS TO THE MUNICIPALITY INSPECTOR PRIOR TO SCHEDULING A FINAL WALK THROUGH INSPECTION.
7. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES FROM ALL CONTRACTORS, THE ENGINEER, AND THE MUNICIPALITY.
8. ALL CONSTRUCTION MUST ADHERE TO THE TREE PRESERVATION REQUIREMENTS OF THE MUNICIPALITY.
9. THE CONTRACTOR, AND HIS AGENTS, AND SUB-CONTRACTOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, ENGINEER AND THEIR AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTAL AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED, IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PREPARE, IMPLEMENT AND MAINTAIN THE SWPPP IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT TCEQ AND NPDES GENERAL PERMIT AS DESCRIBED IN THE FEDERAL REGISTER, PAGES 36489 THROUGH 36519.

GENERAL NOTES FOR WATER IMPROVEMENTS

1. ALL WATER LINES SHALL BE PVC PIPE CONFORMING TO A.W.W.A. STANDARD C-900 SDR-18 MINIMUM, WITH NSF SEAL, PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH MUNICIPAL AND/OR NCTCOG STD. SPECS., UNLESS OTHERWISE NOTED WITHIN THE CONSTRUCTION PLANS.

GENERAL NOTES FOR SANITARY SEWER IMPROVEMENTS

1. SANITARY SEWER PVC PIPE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
2. AFTER COMPLETION OF ALL SANITARY SEWER TESTING (I.E. MANDREL AND AIR) CONTRACTOR SHALL PERFORM A TELEVISION INSPECTION AND PROVIDE A VIDEOTAPE TO THE MUNICIPALITY. ALL MANHOLES SHALL BE VACUUM TESTED.
3. ONE JOINT OF 150-PSI PRESSURE RATED PIPE SHALL BE INSTALLED AND CENTERED UNDER ALL PROPOSED WATER PIPE CROSSINGS.
4. CONTRACTOR TO PLACE A 3/4" PLYWOOD FALSE BOTTOM IN ALL SANITARY SEWER MANHOLES BEFORE PAVING CONTRACTOR BEGINS WORK.
5. ANY CONNECTION TIE-IN TO AN EXISTING MANHOLE MUST BE CORED.
6. ALL CLEAN-OUTS TO BE PROVIDED PER MUNICIPAL REQUIREMENTS.

GENERAL NOTES FOR STORM DRAIN IMPROVEMENTS

1. ALL STORM SEWER AND CULVERT PIPE AND FITTINGS SHALL BE ASTM C76, CLASS III REINFORCED CONCRETE PIPE (RCP), INSTALLED WITH COMPRESSIVE TYPE JOINTS UNLESS NOTED OTHERWISE.
2. AFTER COMPLETION OF ALL STORM SEWER INSTALLATION, THE CONTRACTOR SHALL ENSURE THAT ALL DEBRIS AND SILTATION HAS BEEN REMOVED.
3. ALL PUBLIC CURB INLETS ARE TO BE CAST IN PLACE.

MISCELLANEOUS NOTES AND CONSTRUCTION ITEMS

1. ALL EXISTING MAILBOXES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE RELOCATED AND REPLACED WITH AN EQUIVALENT MAILBOX AT NO COST UNLESS SPECIFIED AS A BID ITEM.

PRELIMINARY
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MICHAEL R. GROSELLE — 125681
TYPE OR PRINT NAME — PE #
01-14-2022
DATE

NO.	DATE	REVISION
-	-	
-	-	
-	-	
-	-	

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

GENERAL NOTES

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C1.0
REVIEWER: MG			

5280 BEACH

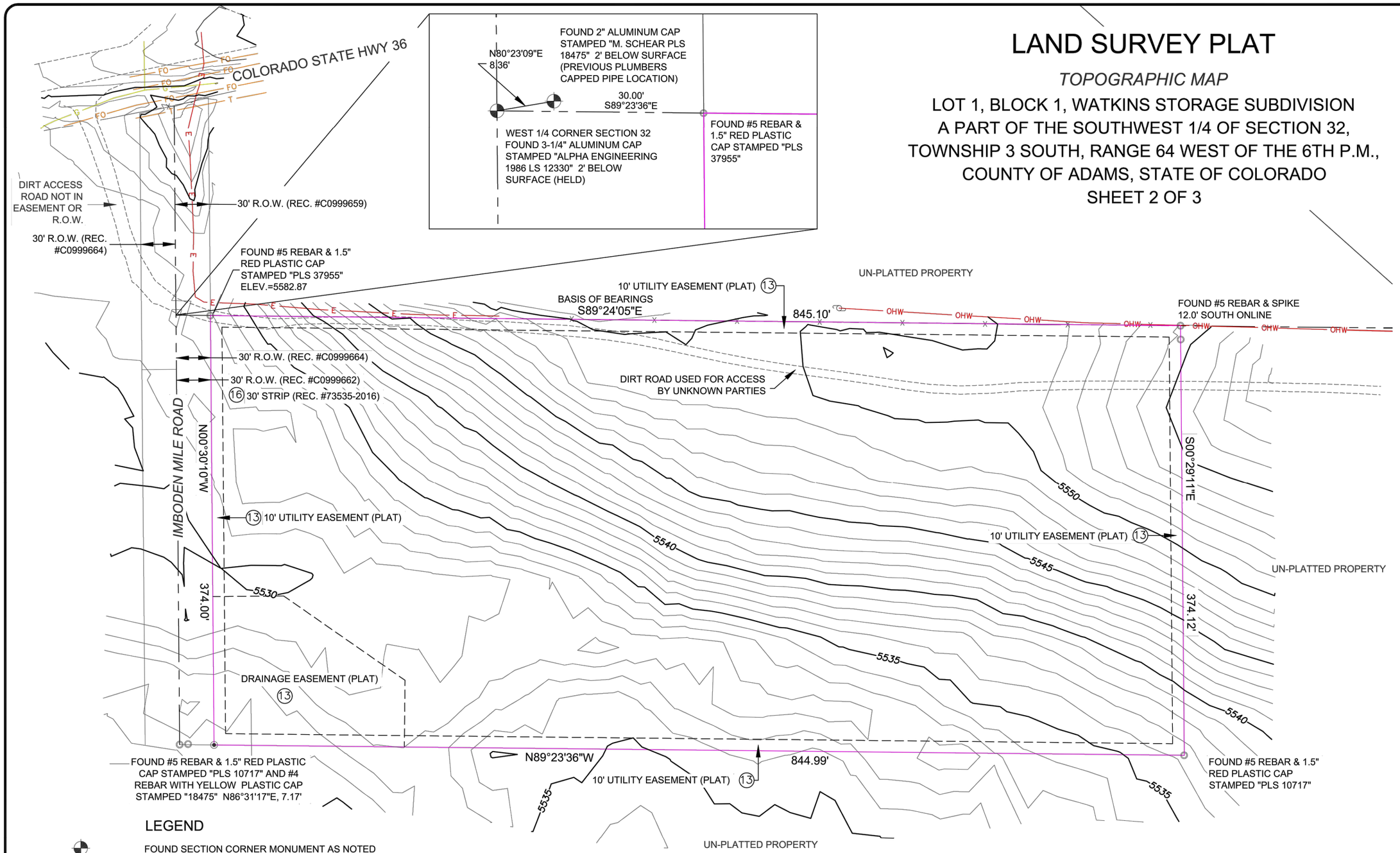
Xrefs: 20-218-X-SEAL.dwg
20-218-X-ALTA.dwg
20-218-X-SITE.dwg
20-218-X-SURVEY.dwg

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-X-SEAL.
Last Saved: By: PV
Last Saved: 1/13/2022 8:49 PM
Plot Date/Time: 01/20/22 8:52 PM

LAND SURVEY PLAT

TOPOGRAPHIC MAP

LOT 1, BLOCK 1, WATKINS STORAGE SUBDIVISION
A PART OF THE SOUTHWEST 1/4 OF SECTION 32,
TOWNSHIP 3 SOUTH, RANGE 64 WEST OF THE 6TH P.M.,
COUNTY OF ADAMS, STATE OF COLORADO
SHEET 2 OF 3



LEGEND

- FOUND SECTION CORNER MONUMENT AS NOTED
- FOUND MONUMENT AS NOTED
- SET #5 REBAR & 1.5" GREEN PLASTIC CAP STAMPED "PLS 37601"
- UTILITY POLE
- GUY WIRE
- CORRESPONDS WITH B-2 TITLE EXCEPTION NUMBER
- SUBJECT PROPERTY BOUNDARY
- X — FENCE
- E — UNDERGROUND ELECTRIC
- OHW — OVERHEAD WIRES
- FO — FIBER OPTIC LINE
- T — TELEPHONE LINE
- G — GAS LINE

COLORADO LICENSED
ROBERT EMERSON HARRIS
37601
6-29-2021
PROFESSIONAL LAND SURVEYOR

SCALE: 1" = 100 US SURVEY FEET

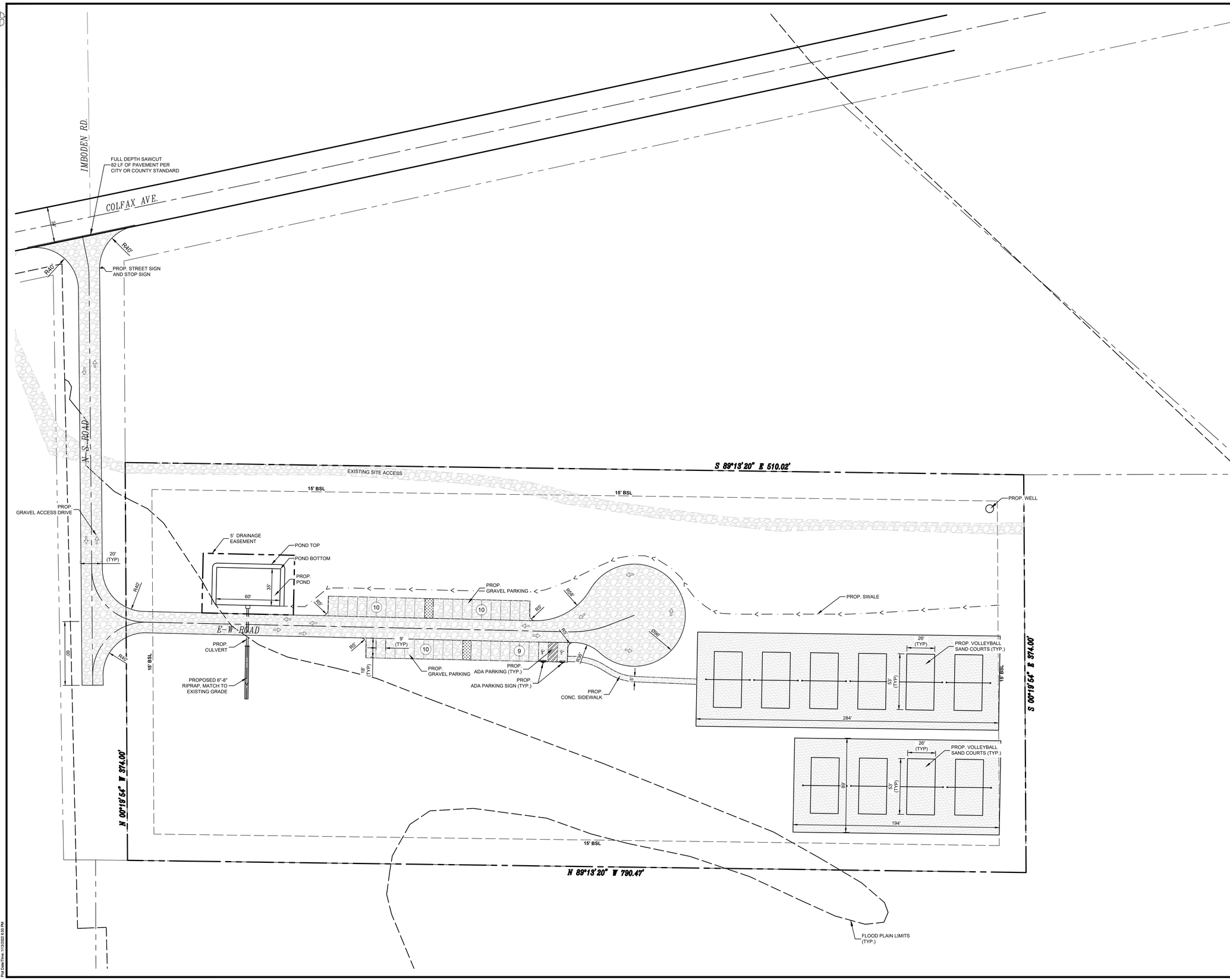
100' 0 50' 100'

Gillians
GILLIANS LAND CONSULTANTS
P.O. BOX 746358
ARVADA, CO 80006-6358
303-972-6640
www.gilliansl c.com
LAND SURVEYING
ALTA/NSPS SURVEYS
TOPOGRAPHIC MAPS
CONSULTING SERVICES

JOB NO.:	21144
DRAWN:	REH
CHECKED:	GP
DESIGNER:	JW
ISSUE DATE:	6-29-2021
SCALE:	1"=100'
FILE:	LSP

SHEET: 2 OF 3

PLEASE RECYCLE



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0 40 80 Feet

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01-14-2022
DATE

NO.	DATE	REVISION
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-		
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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

SITE PLAN

MES MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C2.0
REVIEWER: MG			

5280 BEACH

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Courts\20-218-C-DIM
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Plot Date/Time: 1/13/2022 8:50 PM

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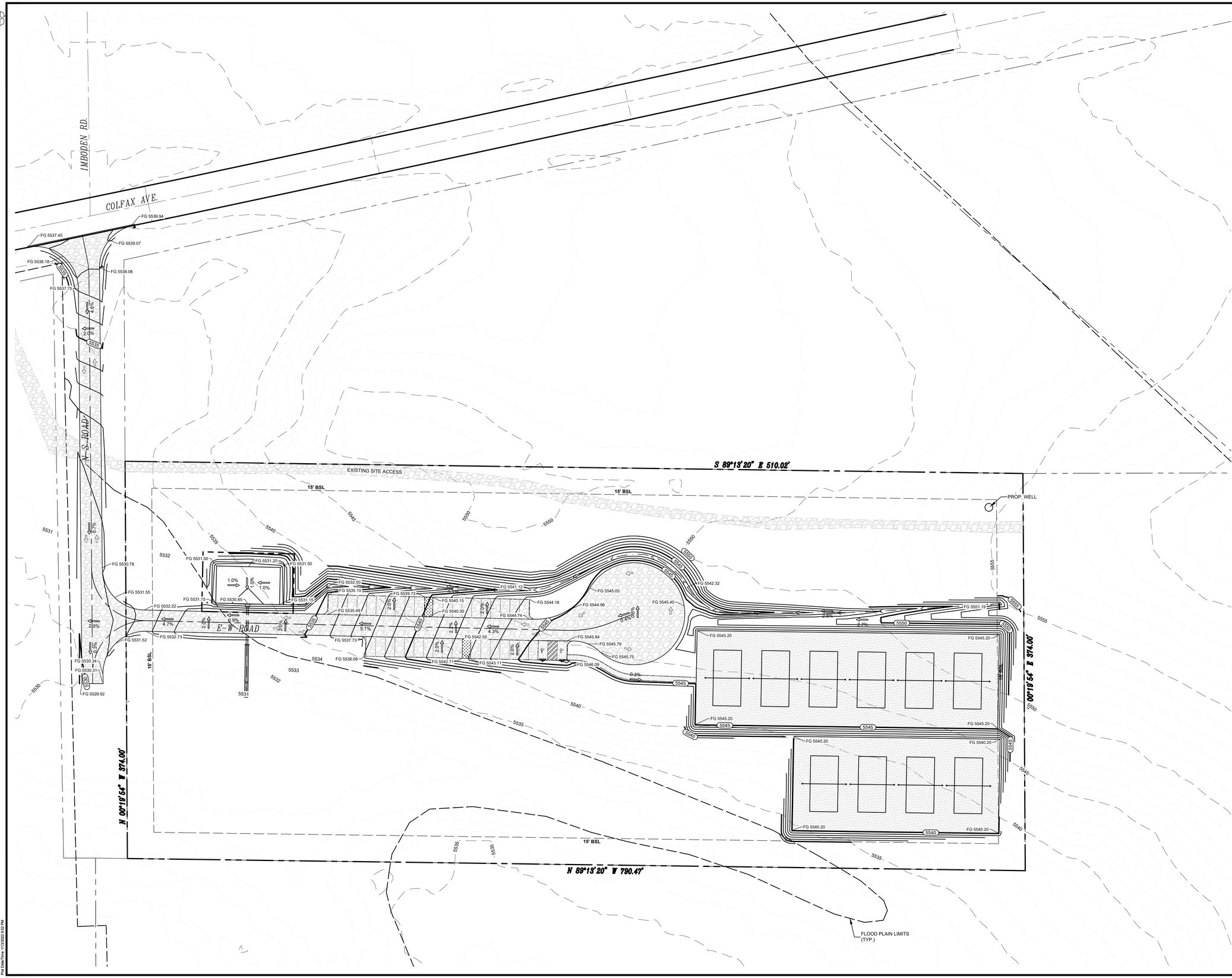

0 40 80 Feet

Cut/Fill Summary

Name	Cut	Fill	Net
Flood Area Cut&Fill Analysis	151.61 Cu. Yd.	147.06 Cu. Yd.	4.55 Cu. Yd.<Cut>
Totals	151.61 Cu. Yd.	147.06 Cu. Yd.	4.55 Cu. Yd.<Cut>

Cut/Fill Summary

Name	Cut	Fill	Net
Total Cut&Fill	6322.63 Cu. Yd.	2883.32 Cu. Yd.	3439.31 Cu. Yd.<Cut>
Totals	6322.63 Cu. Yd.	2883.32 Cu. Yd.	3439.31 Cu. Yd.<Cut>

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01-14-2022
DATE

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF CITY OF WATKINS, ADAMS COUNTY, COLORADO

GRADING PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C3.0
REVIEWER: MG			

5280 BEACH

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-BOUNDARY.dwg
20-218-X-BASE.dwg
20-218-X-SITE.dwg
20-218-X-GRADE.dwg

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-GRADING
Layout: C3.0 GRADING PLAN
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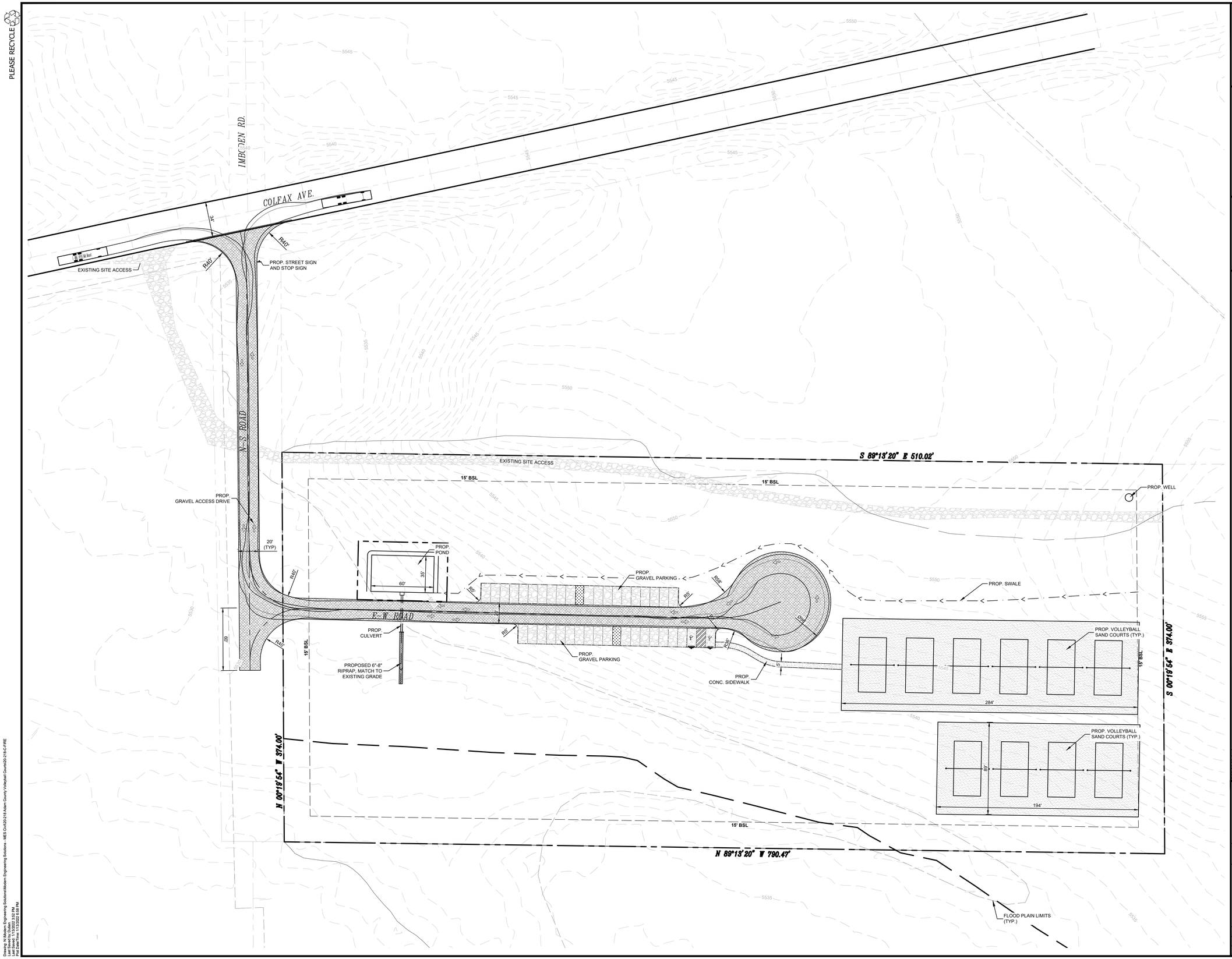

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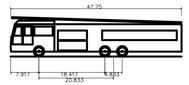

E-ONE HP95 Mid Mount

Overall Length	47.750ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.333ft
Track Width	8.333ft
Lock-to-lock time	6.00S
Max Wheel Angle	45.00°

LEGEND

FIRE LANE NO PARKING
FIRE ACCESS WAY EASEMENT

ACCESS DRIVE (PRIVATE)

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MICHAEL R. GROSELLE — TYPE OR PRINT NAME
125681 — PE #
01-14-2022 — DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

FIRE SAFETY PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C4.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-ADA.dwg
20-218-X-SITE.dwg
20-218-X-DISTRICT.dwg

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Layout: C4.0
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EROSION CONTROL GENERAL NOTES:

1. ALL CONSTRUCTION PROJECTS, REGARDLESS OF THE SIZE, SHALL INSTALL, MAINTAIN AND REPAIR STORMWATER POLLUTION CONTROL MEASURES (CMS) TO EFFECTIVELY MINIMIZE EROSION, SEDIMENT TRANSPORT, AND THE RELEASE OF POLLUTANTS RELATED TO CONSTRUCTION ACTIVITY. CMS EXAMPLE INCLUDE: SEDIMENT CONTROL LOGS (SCL), SILT FENCE (SF), DIKES/SWALES, SEDIMENT TRAPS (ST), INLET PROTECTION (IP), OUTLET PROTECTION (OP), CHECK DAMS (CD), SEDIMENT BASINS (SB), TEMPORARY/PERMANENT SEEDING AND MULCHING (MU), SOIL ROUGHENING, MAINTAINING EXISTING VEGETATION AND PROTECTION OF TREES. CMS MUST BE SELECTED, DESIGNED, ADEQUATELY SIZED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING, HYDROLOGIC AND POLLUTION CONTROL PRACTICES. CMS/BMPS INSTALLATION AND MAINTENANCE DETAILS SHALL CONFORM TO URBAN DRAINAGE FLOOD CONTROL CRITERIA MANUAL VOLUME 3, OR THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) ITEM CODE BOOK. CMS MUST FILTER, SETTLE, CONTAIN OR STRAIN POLLUTANTS FROM STORMWATER FLOWS IN ORDER TO PREVENT BYPASS OF FLOWS WITHOUT TREATMENT. CMS MUST BE APPROPRIATE TO TREAT THE RUNOFF FROM THE AMOUNT OF DISTURBED AREA, THE EXPECTED FLOW RATE, DURATION, AND FLOW CONDITIONS (I.E., SHEET OR CONCENTRATED FLOW). CMS/BMPS SHALL BE SPECIFIED IN THE SWMP (IF APPLICABLE), AND THE LOCATIONS SHOWN ON THE EC PLAN.

2. PRIOR TO CONSTRUCTION, PROJECTS DISTURBING 1 OR MORE ACRES OF LAND, OR ANY PROJECT BELONGING TO A COMMON PLAN OF DEVELOPMENT DISTURB 1 OR MORE ACRES, MUST OBTAIN:
   - 2.1. A GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AND
   - 2.2. AN ADAMS COUNTY STORMWATER QUALITY PERMIT WITHIN THE UNINCORPORATED ADAMS COUNTY MS4 AREA.

3. PERMITTED PROJECTS SHALL DEVELOP A STORMWATER MANAGEMENT PLAN (SWMP), AKA EROSION AND SEDIMENT CONTROL PLAN (ESCP), IN COMPLIANCE WITH CDPHE MINIMUM REQUIREMENTS. THE APPROVED SWMP, INCLUDING EROSION CONTROL (EC) PLAN (SITE MAP), SHALL BE KEPT ON SITE AND UPDATED AT ALL TIMES. THE QUALIFIED STORMWATER MANAGER IS RESPONSIBLE FOR IMPLEMENTING THE SWMP AND CMS (AKA BMPS) DURING CONSTRUCTION.

4. PERMITTED PROJECTS SHALL PERFORM REGULAR STORMWATER INSPECTIONS EVERY 7 CALENDAR DAYS; OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION. INSPECTION FREQUENCY CAN BE REDUCED FOR POST-STORM EVENT INSPECTIONS AT TEMPORARILY IDLE SITES AND ALSO FOR STORMWATER INSPECTIONS AT COMPLETED SITES WAITING FOR FINAL STABILIZATION. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.

5. TRACKING OF DIRT ONTO PAVED PUBLIC OR PRIVATE PAVED ROADS IS NOT ALLOWED. THE USE OF DIRT RAMPS TO ENTER/EXIT FROM AN UNPAVED INTO A PAVED AREA IS PROHIBITED. VEHICLE TRACKING CONTROLS SHALL BE IMPLEMENTED, OTHERWISE ENTRANCE AREA MUST DRAIN THRU A CM TOWARDS THE PRIVATE SITE.

6. TRUCK LOADS OF FILL MATERIAL IMPORTED TO OR CUT MATERIAL EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORTATION ON PUBLIC ROW. HAUL ROUTES MUST BE PERMITTED BY THE COUNTY. NO MATERIAL SHALL BE TRANSPORTED TO ANOTHER SITE WITHOUT APPLICABLE PERMITS.

7. CONTROL MEASURES DESIGNED FOR CONCRETE WASHOUT WASTE MUST BE IMPLEMENTED. THIS INCLUDES WASHOUT WASTE DISCHARGED TO THE GROUND AND WASHOUT WASTE FROM CONCRETE TRUCKS AND MASONRY OPERATIONS.

8. TEMPORARY CMS/BMPS SHALL BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION.

9. DEWATERING OPERATIONS DISCHARGING OFF SITE INTO ANY WATERS CONVEYANCE SYSTEMS INCLUDING WETLANDS, IRRIGATION DITCHES, CANALS, RIVERS, STREAMS OR STORM SEWER SYSTEMS, REQUIRE A STATE CONSTRUCTION DEWATERING PERMIT.

10. PERMITTED PROJECTS SHALL KEEP THE CDPHE'S STORMWATER DISCHARGE PERMIT, STORMWATER MANAGEMENT PLAN (SWMP) AND INSPECTION LOGS AVAILABLE ON SITE THROUGHOUT THE DURATION OF THE PROJECT, AND FOR AN ADDITIONAL 3 YEARS AFTER PERMIT CLOSE OUT.

11. PERMITTED LANDOWNER AND/OR CONTRACTOR SHALL CLOSE THE STATE AND CITY/COUNTY PERMIT ONCE FINAL STABILIZATION IS REACHED. STORMWATER INSPECTIONS SHALL CONTINUE UNTIL INACTIVATION NOTICE IS FILED WITH CDPHE.

PERFORMANCE STANDARD NOTES:

1. STORMWATER RUNOFF FROM DISTURBED AREAS MUST FLOW TO AT LEAST ONE (1) CM TO MINIMIZE SEDIMENT IN THE DISCHARGE. DO NOT ALLOW SEDIMENT TO LEAVE THE SITE. THE BEST WAY TO PREVENT SEDIMENT OR POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM IS TO STABILIZE THE SITE AS QUICKLY AS POSSIBLE, PREVENTING EROSION AND STOPPING SEDIMENT RUN-OFF AT ITS SOURCE.

2. PHASE CONSTRUCTION TO MINIMIZE DISTURBED AREAS, INCLUDING DISTURBANCE OF STEEP SLOPES. (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION OF THE SITE).LIMIT SOIL EXPOSURE TO THE SHORTEST POSSIBLE PERIOD OF TIME. PROTECT NATURAL FEATURES AND EXISTING VEGETATION WHENEVER POSSIBLE. REMOVAL OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS. MAINTAIN PRE- EXISTING VEGETATION (OR EQUIVALENT CMS) FOR AREAS WITHIN 50 HORIZONTAL FT OF RECEIVING WATERS.

3. SOIL COMPACTION MUST BE MINIMIZED FOR AREAS WHERE INFILTRATION CMS WILL OCCUR OR WHERE FINAL STABILIZATION WILL BE ACHIEVED THROUGH VEGETATIVE COVER.

4. ALL SOIL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT THE LOSS OF MATERIAL DURING TRANSPORT.

5. DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES OR WIND SHALL BE CONTROLLED.

6. INSTALL CONSTRUCTION FENCE (ORANGE) TO PROTECT WETLANDS AND OTHER SENSITIVE AREAS AND TO PREVENT ACCESS, AND TO DELINEATE THE LIMITS OF CONSTRUCTION. DO NOT USE SILT FENCE TO PROTECT WETLANDS SINCE TRENCHING MAY IMPACT THESE AREAS.

7. CMS INTENDED TO CAPTURE OVERLAND, LOW VELOCITY SHEET FLOW AT A FAIRLY LEVEL GRADE SHALL ONLY BE INSTALLED ALONG CONTOURS.

8. INSTALL CMS, SUCH AS CHECK DAMS, PERPENDICULAR TO THE CONCENTRATED FLOWS TO REDUCE FLOW VELOCITY.

9. STORM DRAIN INLETS WITHIN AND ADJACENT TO THE CONSTRUCTION SITE MUST BE PROTECTED. ANY PONDING OF STORMWATER AROUND INLET PROTECTION MUST NOT CAUSE EXCESSIVE FLOODING OR DAMAGE ADJACENT AREAS OR STRUCTURES.

10. INSTALL VEHICLE TRACKING CONTROL (VTC) TO ENTER/EXIT UNPAVED AREA. DO NOT USE RECYCLED CRUSHED CONCRETE OR ASPHALT MILLINGS FOR VEHICLE TRACKING PADS.

11. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).

12. OUTLETS SYSTEMS (SUCH AS SKIMMER OR PERFORATED RISER PIPE) SHALL BE INSTALLED TO WITHDRAW WATER FROM OR NEAR THE SURFACE LEVEL WHEN DISCHARGING FROM BASINS. WATER CANNOT DRAIN FROM THE BOTTOM OF THE POND.

13. TEMPORARY STABILIZATION MUST BE IMPLEMENTED FOR EARTH DISTURBING ACTIVITIES ON ANY PORTION OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED (FOR MORE THAN 14 CALENDAR DAYS). TEMPORARY STABILIZATION METHODS EXAMPLES: TARPS, SOIL TACKIFIER, AND HYDROSEED. TEMPORARY STABILIZATION REQUIREMENT MAY EXCEED THE 14-DAY SCHEDULE WHEN EITHER THE FUNCTION OF THE SPECIFIC AREA REQUIRES IT TO REMAIN DISTURBED, OR, PHYSICAL CHARACTERISTICS OF THE TERRAIN AND CLIMATE PREVENT STABILIZATION AS LONG AS THE CONSTRAINTS AND ALTERNATIVE SCHEDULE IS DOCUMENTED ON THE SWMP, AND LOCATIONS ARE IDENTIFIED ON THE EC PLAN (SITE MAP).

14. RUNOFF FROM STOCKPILE AREA MUST BE CONTROLLED. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. INSTALL CMS/BMPS 5 FT AWAY FROM THE TOE OF THE STOCKPILE'S SLOPE.

15. WATER USE TO CLEAN CONCRETE TRUCKS SHALL BE DISCHARGED INTO A CONCRETE WASHOUT AREA (CWA). THE PREDEFINED CONTAINMENT AREA MUST BE IDENTIFIED WITH A SIGN, AND SHALL ALLOW THE LIQUIDS TO EVAPORATE OR DRY OUT. CWA DISCHARGES THAT MAY REACH GROUNDWATER MUST FLOW THROUGH SOIL THAT HAS BUFFERING CAPACITY PRIOR TO REACHING GROUNDWATER. THE CONCRETE WASHOUT LOCATION SHALL BE NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT AND WOULD RESULT IN BUFFERING CAPACITY NOT BEING ADEQUATE, SUCH AS NEAR NATURAL DRAINAGES, SPRINGS, OR WETLANDS. IN THIS CASE, A LINER UNDERNEATH IS NEEDED FOR AREAS WITH HIGH GROUNDWATER LEVELS. CWA SHALL NOT BE PLACED IN LOW AREAS, DITCHES OR ADJACENT TO STATE WATERS. PLACE CWA 50 FT AWAY FROM STATE WATERS.

16. WASTE, SUCH AS BUILDING MATERIALS, WORKERS TRASH AND CONSTRUCTION DEBRIS, MUST BE PROPERLY MANAGED TO PREVENT STORMWATER POLLUTION.

17. INSTALL STABILIZED STAGING AREA (SSA) TO STORE MATERIALS, CONSTRUCTION TRAILER, ETC.

18. IF CONDITIONS IN THE FIELD WARRANT ADDITIONAL CMS/BMPS TO THE ONES ORIGINALLY APPROVED ON THE SWMP OR EC PLAN (CIVIL DRAWING), THE LANDOWNER OR CONTRACTOR SHALL IMPLEMENT MEASURES DETERMINED NECESSARY, AS DIRECTED BY THE COUNTY.

19. PERMANENT CMS/BMPS FOR SLOPES, CHANNELS, DITCHES, OR DISTURBED LAND AREA SHALL BE PERFORMED IMMEDIATELY AFTER FINAL GRADING. CONSIDER THE USE EROSION CONTROL BLANKETS ON SLOPES 3:1 OR STEEPER AND AREAS WITH CONCENTRATED FLOWS SUCH AS SWALES, LONG CHANNELS AND ROADSIDE DITCHES.

20. THE DISCHARGE OF SANITARY WASTE INTO THE STORM SEWER SYSTEM IS PROHIBITED. PORTABLE TOILETS MUST BE PROVIDED, SECURED AND PLACED ON PERMEABLE SURFACES, AWAY FROM THE CURBSIDE, STORM INLETS AND/OR DRAINAGE WAYS.

21. REMOVE TEMPORARY CMS/BMPS ONCE FINAL STABILIZATION IS REACHED, UNLESS OTHERWISE AUTHORIZED.

22. FINAL STABILIZATION MUST BE IMPLEMENTED. FINAL STABILIZATION IS REACHED WHEN ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED, AND EITHER A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70% OF PRE DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT ALTERNATIVE METHOD HAS BEEN IMPLEMENTED.

23. PROVIDE SPILL PREVENTION AND CONTAINMENT MEASURES FOR CONSTRUCTION MATERIALS, WASTE AND FUEL STORAGE AREAS. BULK STORAGE (55 GALLONS OR GREATER) OF PETROLEUM PRODUCTS AND LIQUID CHEMICALS MUST HAVE SECONDARY CONTAINMENT, OR EQUIVALENT PROTECTION, IN ORDER TO CONTAIN SPILLS AND TO PREVENT SPILLED MATERIAL FROM ENTERING STATE WATERS.

24. REPORT SPILLS OR RELEASES OF CHEMICAL, OIL, PETROLEUM PRODUCT, SEWAGE, ETC., WHICH MAY REACH THE STORM SEWER OR ENTER STATE WATERS WITHIN 24 HOURS FROM TIME OF DISCOVERY. GUIDANCE AVAILABLE AT WWW.CDPHE.STATE.CO.US/EMP/SPILLSANDRELEASED.HTM. STATE OF COLORADO SPILL LINE: 1-877-518-5608. ADAMS COUNTY STORMWATER HOTLINE: 720-523-6400; PUBLIC WORKS 303 453 8787 AND THE TRI COUNTY HEALTH DEPARTMENT AT 303-220-9200.

MAINTENANCE STANDARD NOTES:

1. MAINTAIN AND REPAIR CMS ACCORDING TO APPROVED EROSION CONTROL PLAN (CIVIL DRAWING) TO ASSURE THEY CONTINUE PERFORMING AS ORIGINALLY INTENDED.

2. CMS/BMPS REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING BMP.

3. CMS SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN UNLESS OTHERWISE SPECIFIED.

4. SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CMS/BMPS DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, TO ACCURATELY REFLECT THE ACTUAL FIELD CONDITIONS. A NOTATION SHALL BE MADE IN THE SWMP, INCLUDING DATE OF CHANGES IN THE FIELD, IDENTIFICATION OF THE CMS REMOVED, MODIFIED OR ADDED, AND THE LOCATIONS OF THOSE CMS. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE.

5. MAINTAIN VEHICLE TRACKING CONTROL (VTC), IF SEDIMENT TRACKING OCCURS, CLEAN UP IMMEDIATELY. SWEEP BY HAND OR THE USE STREET SWEEPERS (WITH VACUUM SYSTEM). FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.

6. CWA MUST BE CLEANED ONCE WASTE ACCUMULATION REACHES ⅔ OF THE WET STORAGE CAPACITY OF THE STRUCTURE. LEGALLY DISPOSED OF CONCRETE WASTE. DO NOT BURY ON SITE.

7. CLEAN-UP SPILLS IMMEDIATELY AFTER DISCOVERY, OR CONTAIN UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. FOLLOW MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP, ALONG WITH PROPER DISPOSAL METHODS. RECORDS OF SPILLS, LEAKS, OR OVERFLOWS THAT RESULT IN DISCHARGE OF POLLUTANTS MUST BE DOCUMENTED AND MAINTAINED.

8. REMOVE SEDIMENT FROM STORM SEWER INFRASTRUCTURE (PONDS, STORM PIPES, OUTLETS, INLETS, ROADSIDE DITCHES, ETC.),AND RESTORE VOLUME CAPACITY UPON COMPLETION OF PROJECT OR PRIOR TO INITIAL ACCEPTANCE OF PUBLIC IMPROVEMENTS (IF APPLICABLE). DO NOT FLUSH SEDIMENT OFFSITE, CAPTURE ON-SITE AND DISPOSED OF AT AN APPROVED LOCATION. THESE NOTES ARE NOT INTENDED TO BE ALL-INCLUSIVE, BUT TO HIGHLIGHT THE BASIC STORMWATER POLLUTION PREVENTION REQUIREMENTS FOR CONSTRUCTION ACTIVITIES TO COMPLY WITH CDPS STORMWATER CONSTRUCTION PERMIT AND BE IN CONFORMANCE WITH COUNTY STANDARDS.

PRELIMINARY
-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
- -		
- -		
- -		
- -		

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL NOTES

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.0
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-ADE.dwg
20-218-X-SITE.dwg
20-218-X-SURVEY.dwg

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Layout Tab: C5.0 (EROSION)
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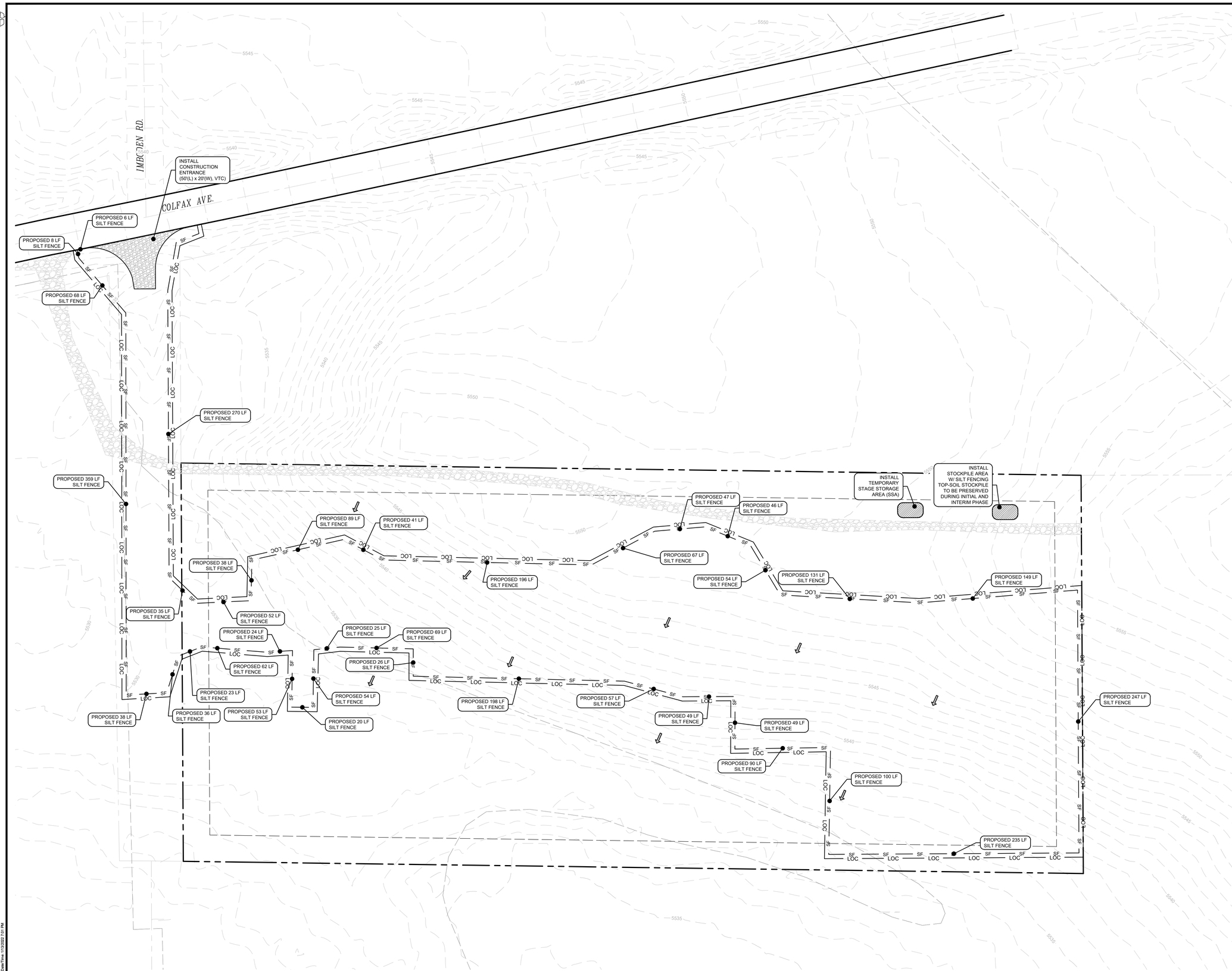

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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 5355 EXISTING CONTOUR
- 5350 PROPOSED CONTOUR
- SF PROPOSED SILT FENCE
- LOC PROPOSED LIMITS OF CONSTRUCTION
- TP PROPOSED TREE PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- VTC VEHICLE TRACKING CONTROL
- SF SILT FENCE

EROSION CONTROL GENERAL NOTES

1. THE EROSION CONTROL PLAN MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGE WAYS OR BORROW DITCHES AT THE RISK OF CONTRACTORS. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGES CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE.
2. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGE WAYS, AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT AND DEPOSITED AS A RESULT OF EROSION CONTROL MEASURE.
3. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ADAMS COUNTY STANDARD CONSTRUCTION DETAILS AND URBAN STORM DRAINAGE CRITERIA MANUAL.
4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

CONSTRUCTION SEQUENCING

1. CONTRACTOR TO OBTAIN ADAMS COUNTY BMP PERMIT.
2. CONTRACTOR TO INSTALL BMP PER EROSION CONTROL PLAN AND ANY ADDITIONAL BMP REQUESTED BY THE CITY INSPECTOR.
3. RECEIVE GRADING PERMIT FROM COUNTY TO START EARTHWORK.
4. INSTALL WATER AND SEWER UTILITIES WITH THE COORDINATION OF THE WATER & SEWER UTILITY DISTRICTS.
5. CONCRETE POURING OF DRIVEWAY AND SIDEWALKS.
6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

I HEARBY CERTIFY THAT THIS EROSION CONTROL DRAWING FOR THE 5280 BEACH WAS PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF ADAMS COUNTY STORM DRAINAGE DESIGN AND STORMWATER QUALITY REGULATIONS FOR THE OWNERS THEREOF.

PRELIMINARY
-FOR REVIEW ONLY-

THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE. THEY ARE PREPARED BY, OR UNDER THE SUPERVISION OF:

MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-		
-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE I

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.1
REVIEWER: MG			

5280 BEACH

Xrefs: 20-218-X-SEAL.dwg
20-218-X-BASE.dwg
20-218-X-SITE.dwg
20-218-X-BOUNDARY.dwg
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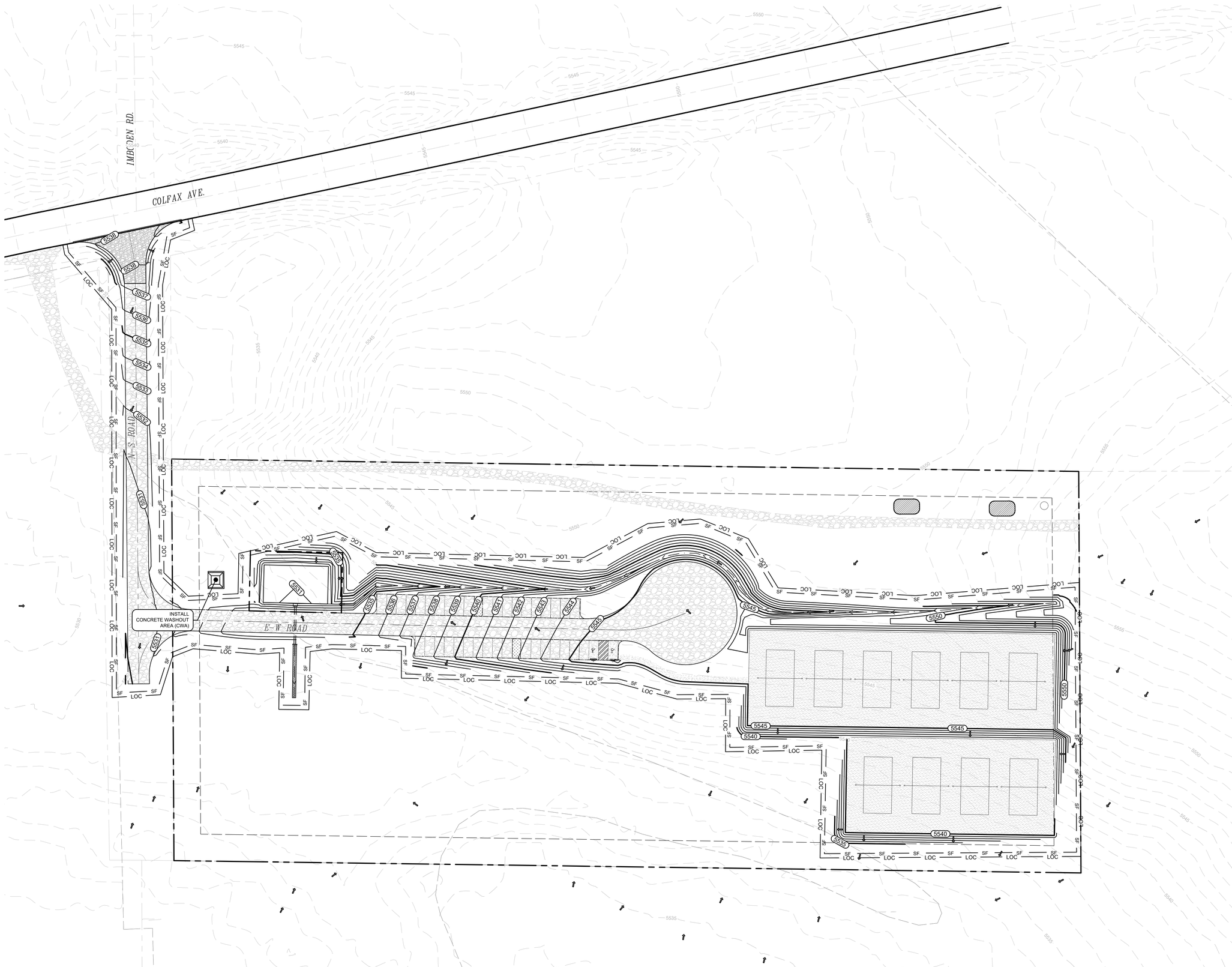

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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- 5355 EXISTING CONTOUR
- 5355 PROPOSED CONTOUR
- SF PROPOSED SILT FENCE
- LOC PROPOSED LIMITS OF CONSTRUCTION
- TP PROPOSED TREE PROTECTION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- VTC VEHICLE TRACKING CONTROL
- SF SILT FENCE

EROSION CONTROL GENERAL NOTES

1. THE EROSION CONTROL PLAN MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGE WAYS OR BORROW DITCHES AT THE RISK OF CONTRACTORS. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGES CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE.
2. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGE WAYS, AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT AND DEPOSITED AS A RESULT OF EROSION CONTROL MEASURE.
3. ALL EROSION CONTROL MEASURES SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE ADAMS COUNTY STANDARD CONSTRUCTION DETAILS AND URBAN STORM DRAINAGE CRITERIA MANUAL.
4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

CONSTRUCTION SEQUENCING

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4. INSTALL WATER AND SEWER UTILITIES WITH THE COORDINATION OF THE WATER & SEWER UTILITY DISTRICTS.
5. CONCRETE POURING OF DRIVEWAY AND SIDEWALKS.
6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

I HEARBY CERTIFY THAT THIS EROSION CONTROL DRAWING FOR THE 5280 BEACH WAS PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE PROVISIONS OF ADAMS COUNTY STORM DRAINAGE DESIGN AND STORMWATER QUALITY REGULATIONS FOR THE OWNERS THEREOF.

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE II

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.2
REVIEWER: MG			

5280 BEACH

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
Layout Tab: C5.2 - Erosion Control Plan
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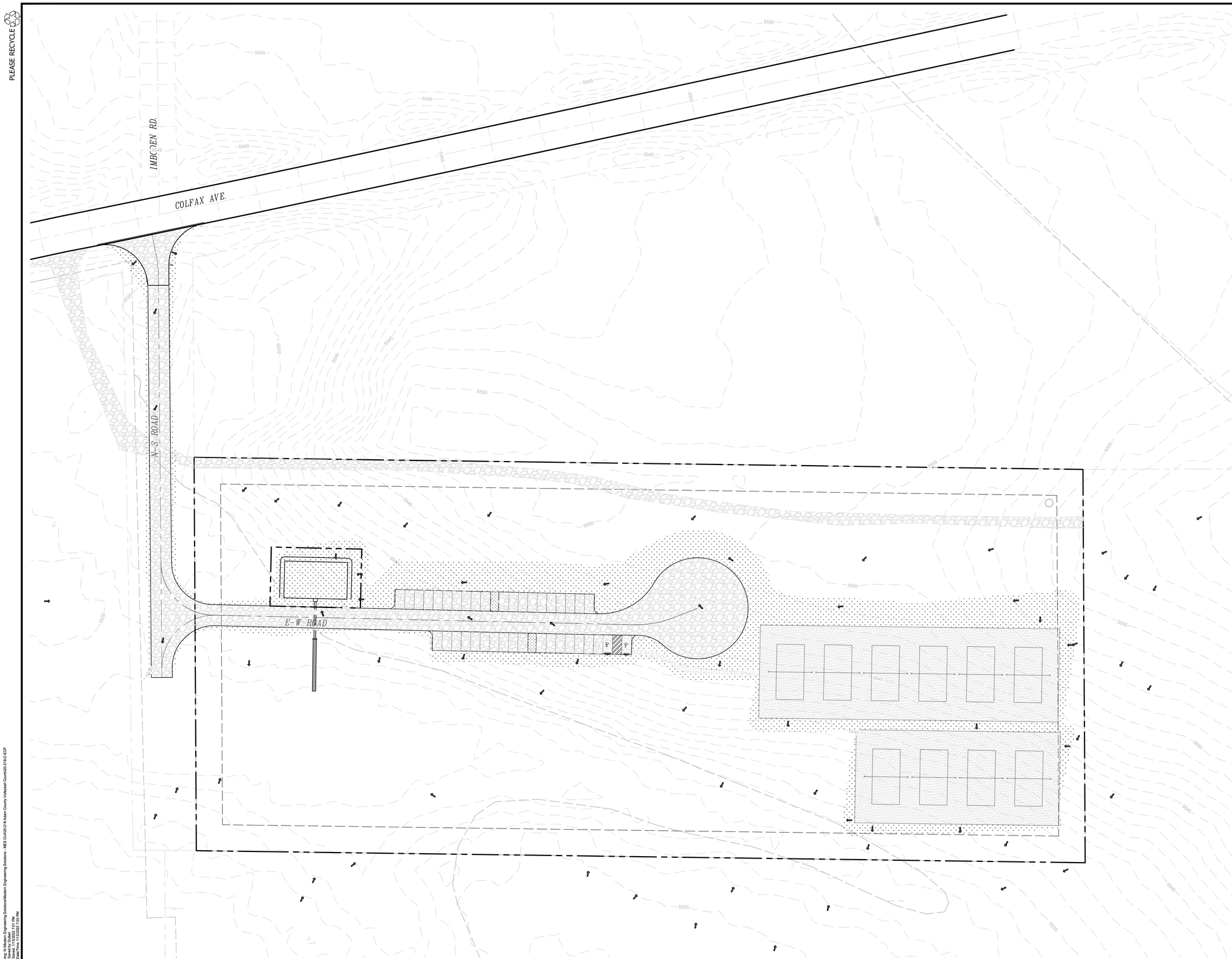

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LEGEND

	PROPERTY LINE
	EASEMENT LINE
5355	EXISTING CONTOUR
5350	PROPOSED CONTOUR
SF	PROPOSED SILT FENCE
LOC	PROPOSED LIMITS OF CONSTRUCTION
TP	PROPOSED TREE PROTECTION
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
VTC	VEHICLE TRACKING CONTROL
SF	SILT FENCE

EROSION CONTROL GENERAL NOTES

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4. ALL AREAS MUST RECEIVE SOIL ROUGHENING EVERY 30 DAYS DURING CONSTRUCTION

DISTURBED AREA = 145,750 S.F.
CUT/FILL = 3439.31 Cu. Yd.<Cut>

CONSTRUCTION SEQUENCING

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6. CONCRETE POURING OF HOUSE FOUNDATION PADS.
7. BEGIN HOUSE CONSTRUCTION.
8. SODDING AND HYDROSEEDING SITE.
9. FINALIZE BUILDING INTERIOR.
10. INSTALL LOT FENCING.
11. OBTAIN CERTIFICATE OF OCCUPANCY.
12. REMOVE BMP'S.

EROSION AND SEDIMENT CONTROL ENGINEER'S CERTIFICATION

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-		
-		
-		
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL PLAN - PHASE III

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.3
REVIEWER: MG			

PLEASE RECYCLE

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EP
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Plot Date/Time: 1/13/2022 7:03 PM
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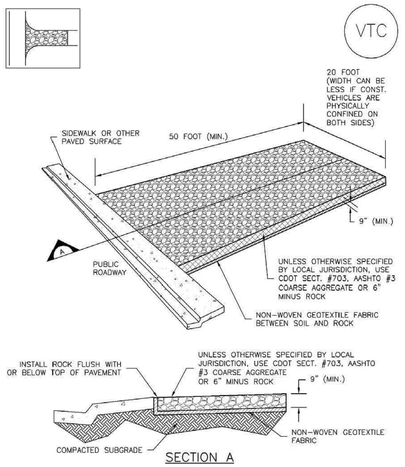
\20-218-X-SURVEY.dwg

5280 BEACH

Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

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4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

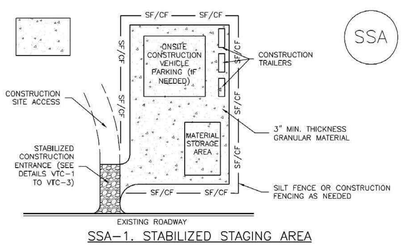
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

VTC-6 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-	-	
-	-	
-	-	
-	-	

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL DETAILS-I

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.2
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE
Xrefs: 20-218_R-SEAL.dwg
20-218_R-BASE.dwg
20-218-X-SITE.dwg
20-218-X-DISTRICT.dwg
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-EEP
Layout Tab: C5.2
Last Saved: 01/13/2022 7:01 PM
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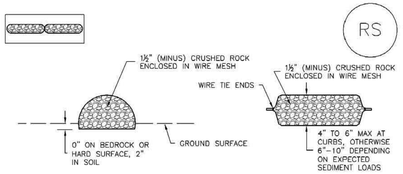
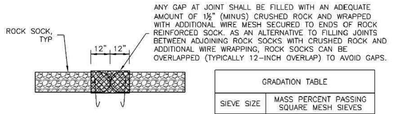


ROCK SOCK SECTION ROCK SOCK PLAN



ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION(S) OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS-1. ROCK SOCK PERIMETER CONTROL

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

Typical construction phasing BMPs include:

- Limit the amount of disturbed area at any given time on a site to the extent practical. For example, a 100-acre subdivision might be constructed in five phases of 20 acres each.
- If there is carryover of stockpiled material from one phase to the next, position carryover material in a location easily accessible for the pending phase that will not require disturbance of stabilized areas to access the stockpile. Particularly with regard to efforts to balance cut and fill at a site, careful planning for location of stockpiles is important.

Typical construction sequencing BMPs include:

- Sequence construction activities to minimize duration of soil disturbance and exposure. For example, when multiple utilities will occupy the same trench, schedule installation so that the trench does not have to be closed and opened multiple times.
- Schedule site stabilization activities (e.g., landscaping, seeding and mulching, installation of erosion control blankets) as soon as feasible following grading.
- Install initial erosion and sediment control practices before construction begins. Promptly install additional BMPs for inlet protection, stabilization, etc., as construction activities are completed.

Table CP-1 provides typical sequencing of construction activities and associated BMPs.

Maintenance and Removal

When the construction schedule is altered, erosion and sediment control measures in the SWMP and construction drawings should be appropriately adjusted to reflect actual "on the ground" conditions at the construction site. Be aware that changes in construction schedules can have significant implications for site stabilization, particularly with regard to establishment of vegetative cover.

PRELIMINARY
-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL DETAILS-II

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.3
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE
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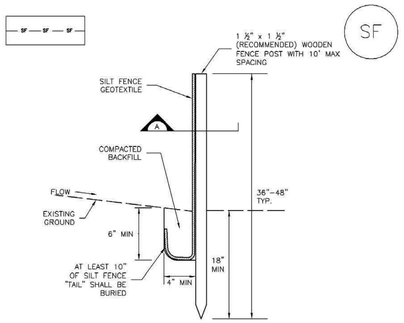
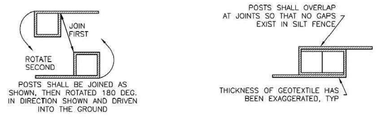


SILT FENCE



SECTION A

SF–1. SILT FENCE

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J–HOOK." THE "J–HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

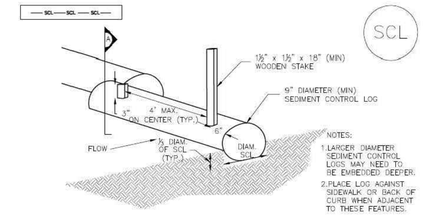
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

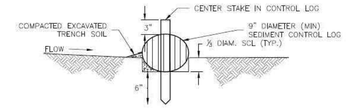
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

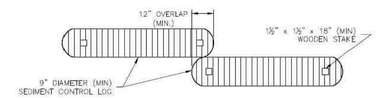
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



TRENCHED SEDIMENT CONTROL LOG



SECTION A
TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL–1. TRENCHED SEDIMENT CONTROL LOG

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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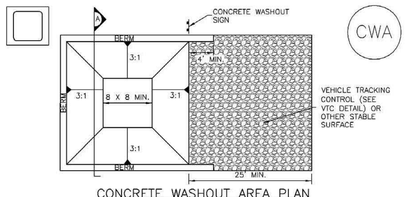
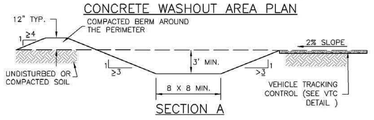


CONCRETE WASHOUT AREA PLAN



SECTION A

CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-	-	
-	-	
-	-	
-	-	

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EROSION CONTROL DETAILS-III

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C5.4
REVIEWER: MG			

5280 BEACH

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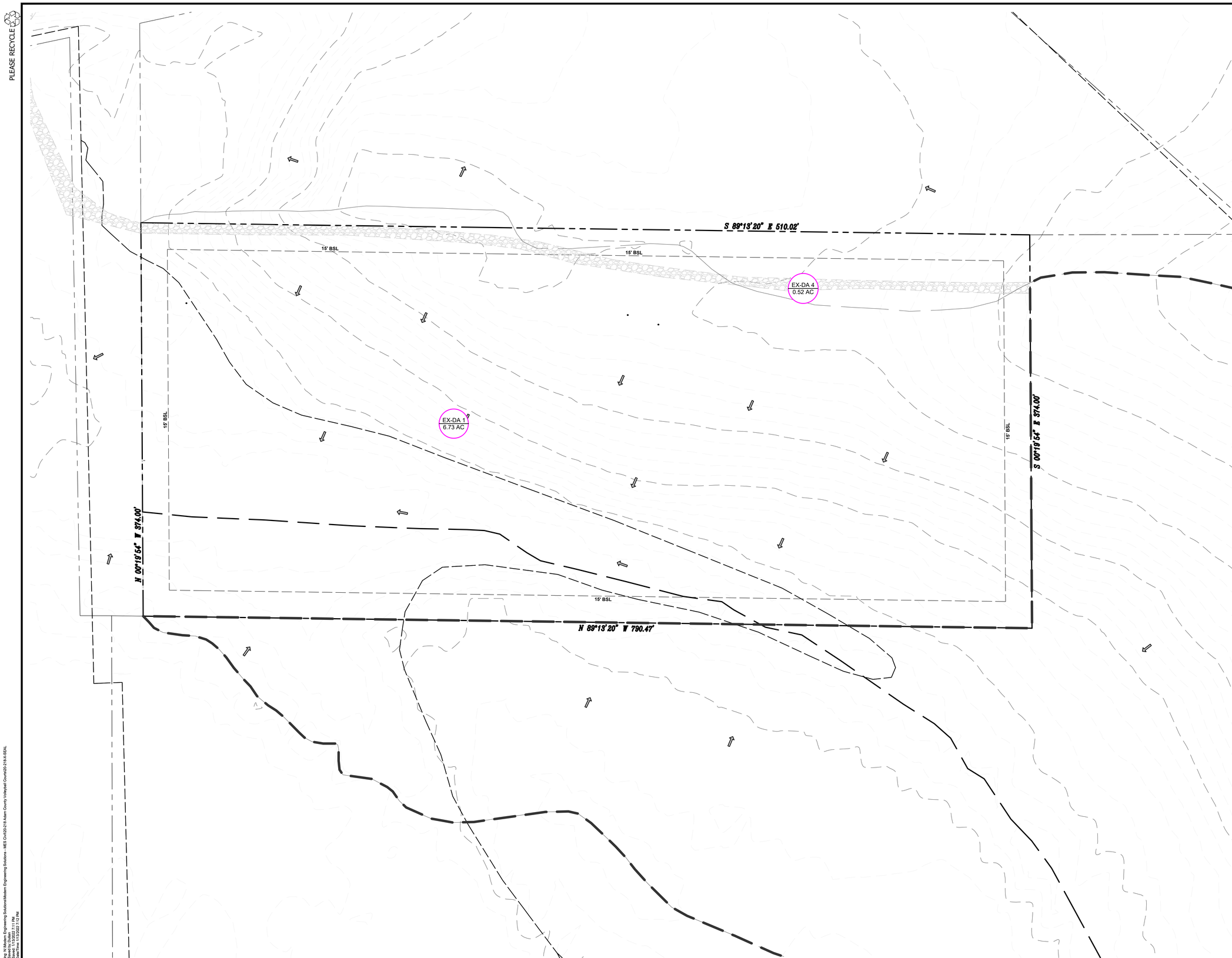

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NOTES

1) REFER TO GENERAL NOTES SHEET FOR CITY STANDARD GENERAL NOTES, UTILITY NOTES AND CONSTRUCTION DESIGN NOTES.
2) THE ADAMS COUNTY STORM DRAINAGE CRITERIA MANUAL WAS FOR DESIGN STORM FREQUENCY, RUNOFF COEFFICIENTS AND RAINFALL INTENSITIES.

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

EXISTING DRAINAGE AREA MAP

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C6.0
REVIEWER: MG			

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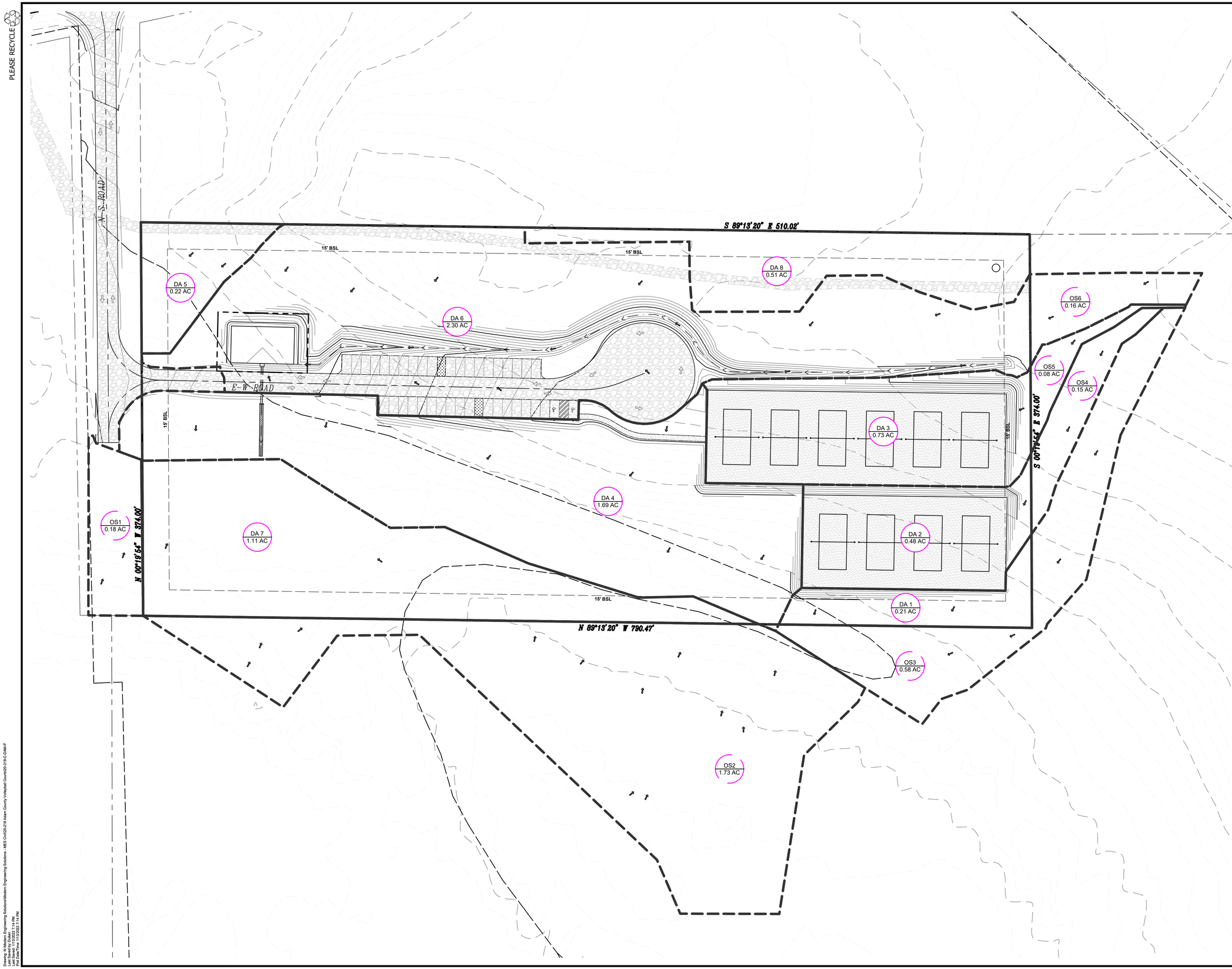

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

PROPOSED DRAINAGE AREA MAP

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C6.1
REVIEWER: MG			

5280 BEACH

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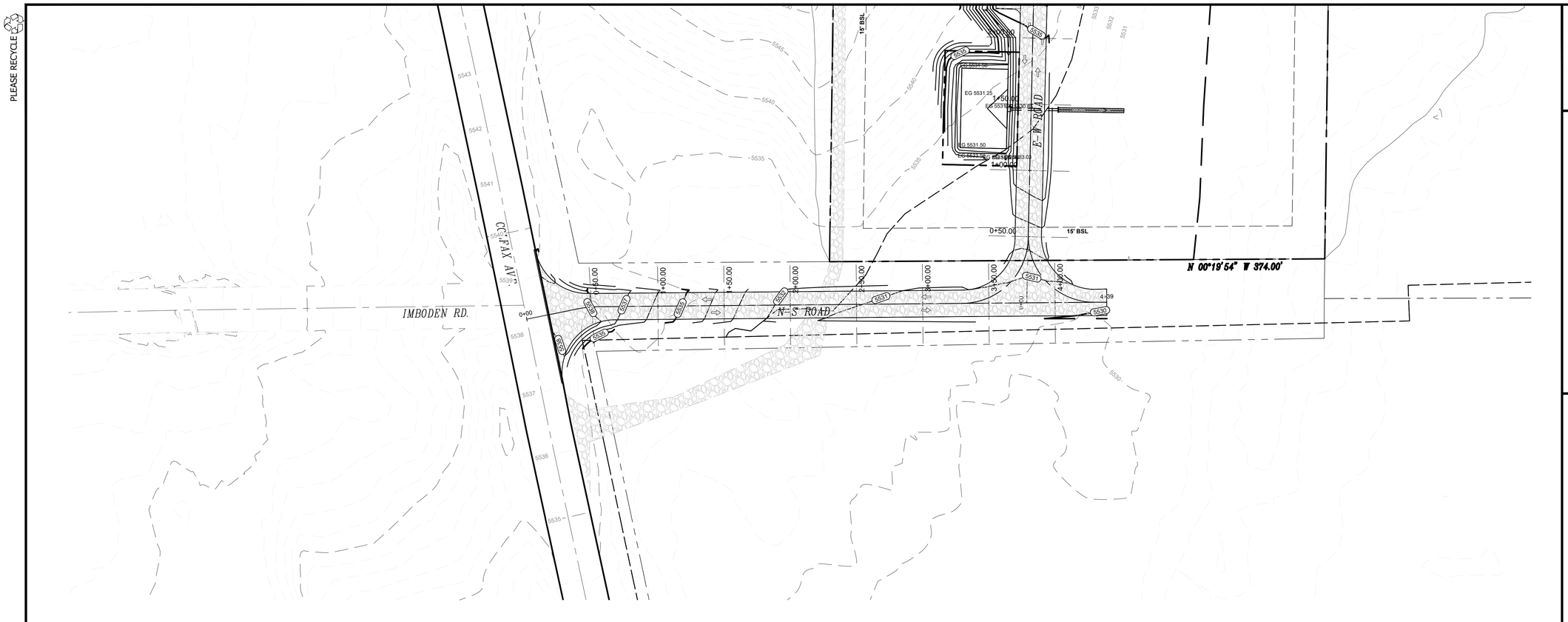

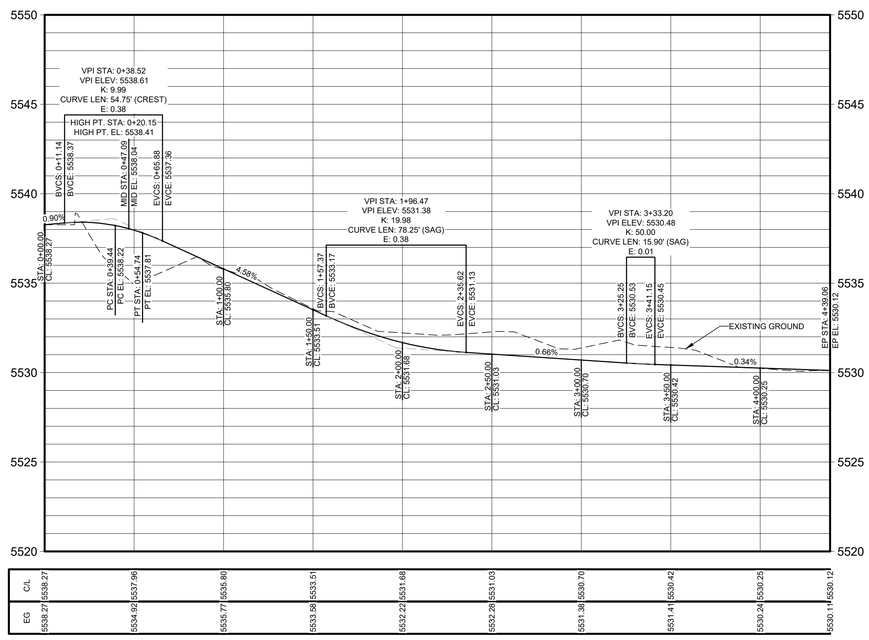

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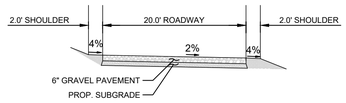
1) REFER TO GENERAL NOTES FOR GENERAL NOTES, PAVING NOTES, AND CITY GENERAL NOTES.
2) ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED ON PLANS.
3) REFER TO LANDSCAPE PLANS FOR HARDSCAPE IMPROVEMENTS AND IRRIGATION SLEEVES CROSSING PAVED AREAS.
4) ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED ON PLANS.
5) TP = TOP OF PAVEMENT (CONCRETE OR ASPHALT)
6) OS = OFFSET FROM ROAD CENTERLINE
7) REFER TO SHEET C9.0 - C9.1 FOR STANDARD PUBLIC DETAILS.



TYPICAL ROADWAY SECTION

PRELIMINARY
-FOR REVIEW ONLY-

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MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

N-S ROAD PLAN & PROFILE

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

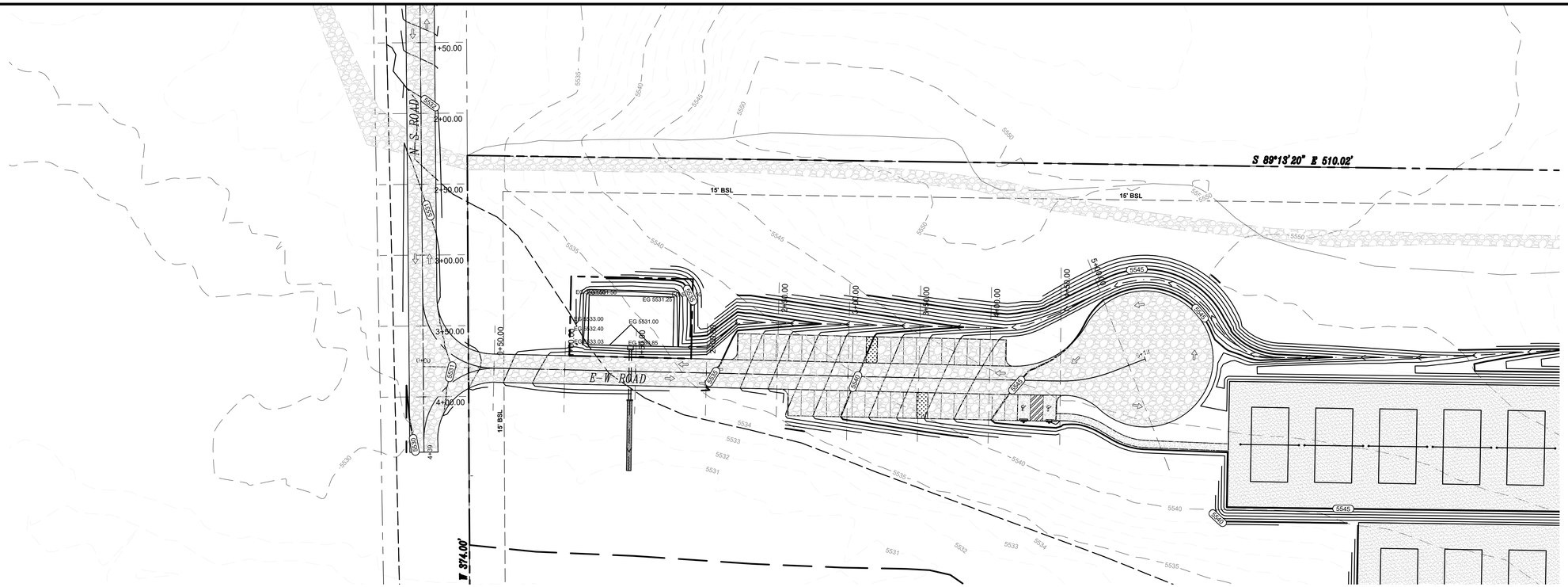
DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.0
REVIEWER: MG			

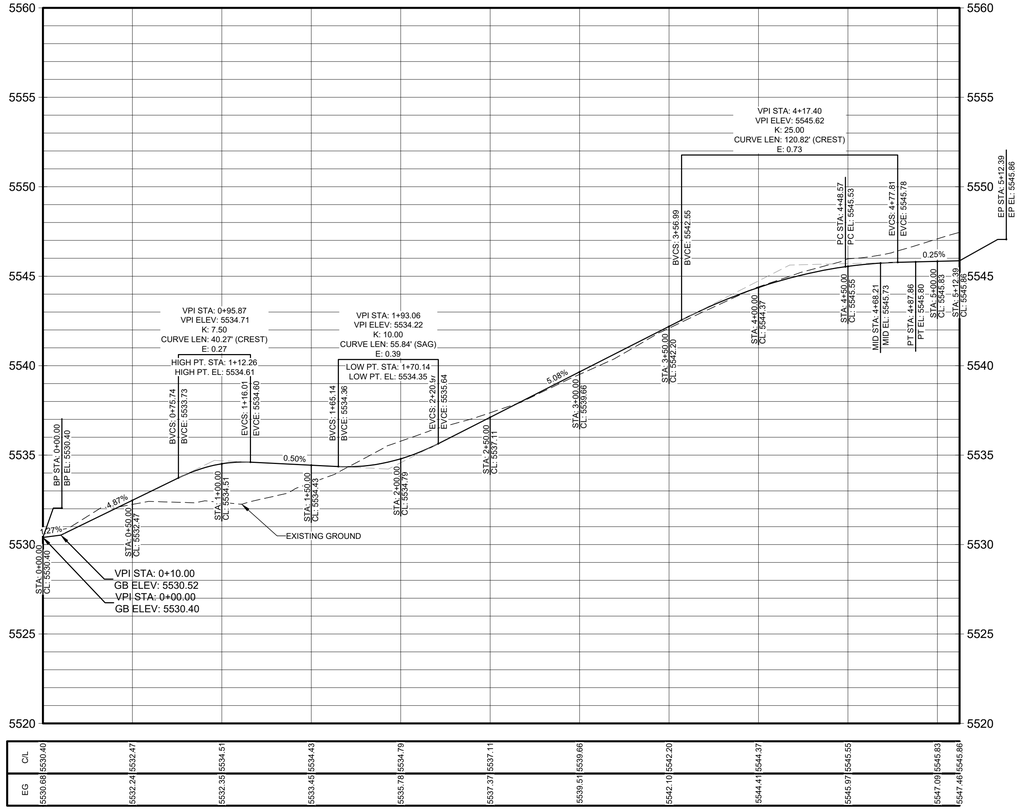
5280 BEACH

Xrefs: 20-218-X-BASE.dwg
20-218-X-PROPERTY.dwg
20-218-X-SITE.dwg
20-218-X-CONTOUR.dwg
20-218-X-SEAL.dwg

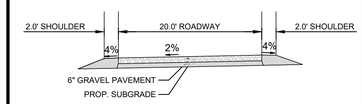
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-STREET PP
Layout: C7.0 N-S ROAD
Last Saved: 1/13/2022 3:46 PM
Plot Date/Time: 01/13/2022 3:16 PM

PLEASE RECYCLE





1) REFER TO GENERAL NOTES FOR GENERAL NOTES, PAVING NOTES, AND CITY GENERAL NOTES.
2) ALL ELEVATIONS ARE TOP OF CURB UNLESS OTHERWISE NOTED ON PLANS.
3) REFER TO LANDSCAPE PLANS FOR HARDSCAPE IMPROVEMENTS AND IRRIGATION SLEEVES CROSSING PAVED AREAS.
4) ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED ON PLANS.
5) TP = TOP OF PAVEMENT (CONCRETE OR ASPHALT)
6) OS = OFFSET FROM ROAD CENTERLINE
7) REFER TO SHEET C9.0 - C9.1 FOR STANDARD PUBLIC DETAILS.



TYPICAL ROADWAY SECTION

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

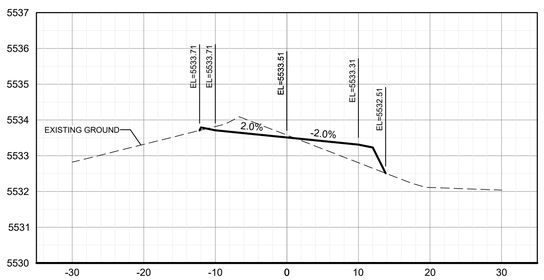
E-W ROAD PLAN & PROFILE

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.1
REVIEWER: MG			

5280 BEACH

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-STREET PP
User: PVillanueva
Last Saved: 1/13/2022 7:20 PM
Plot Date/Time: 1/13/2022 7:21 PM



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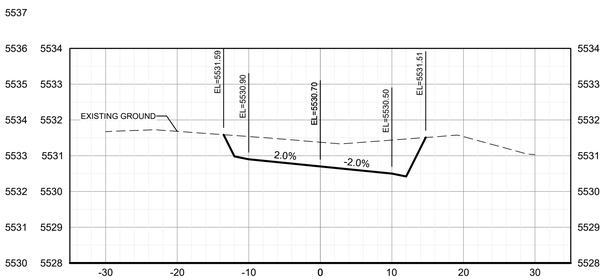
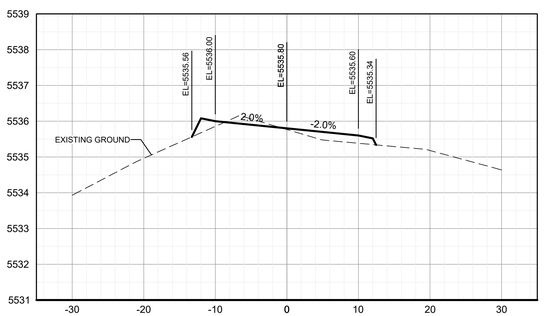


STA. 3+00.00



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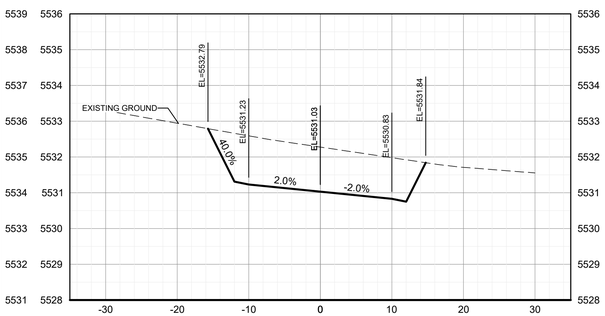

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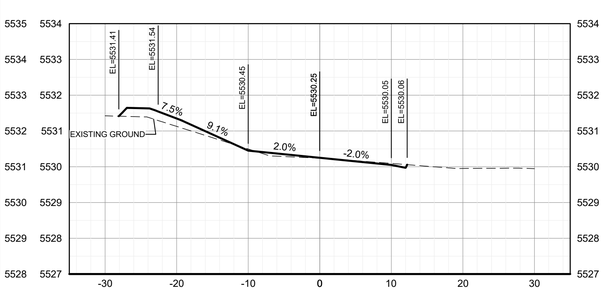

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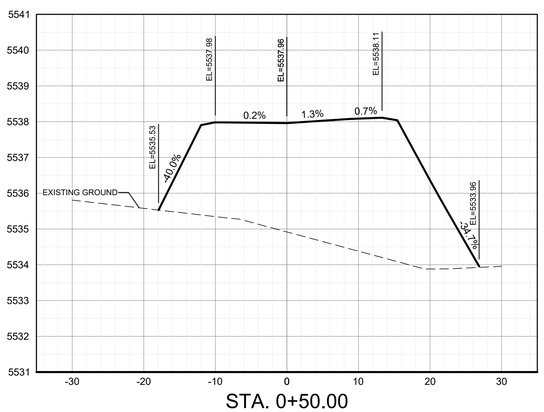

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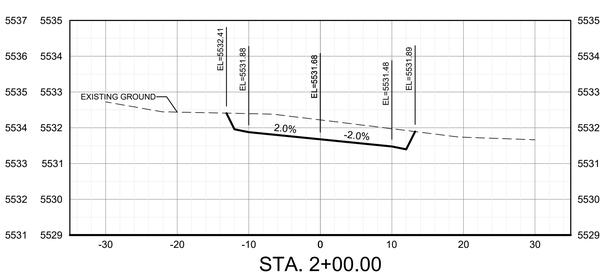

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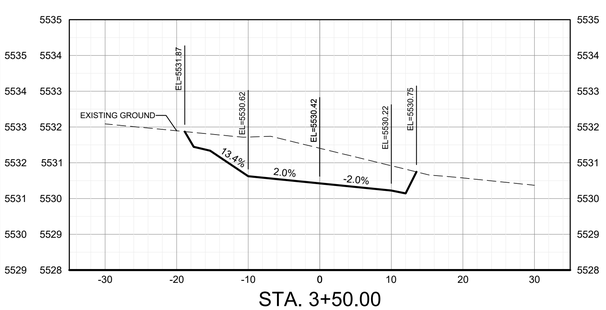

STA. 3+50.00

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01-14-2022
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

N-S ROAD SECTIONS

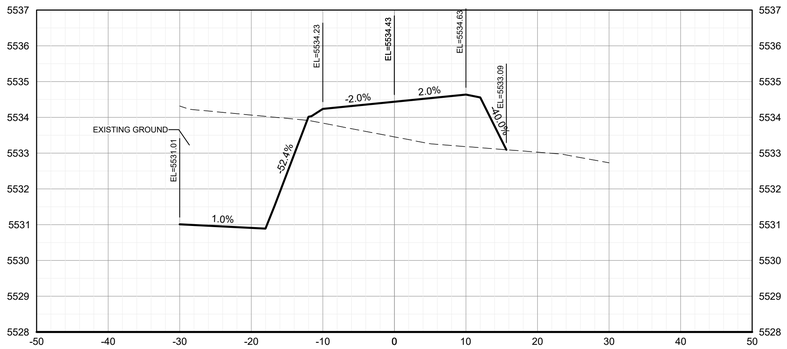
MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.2
REVIEWER: MG			

PLEASE RECYCLE

Xrefs: 20-218-X-BASE.dwg
20-218-X-BASE-PROP.dwg
20-218-X-SITE.dwg
20-218-X-UTIL.dwg
20-218-X-SEAL.dwg
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-STREET PP
Layout Tab: C7.2 N-S Sections
Last Saved: 1/13/2022 7:23 PM
Plot Date/Time: 1/13/2022 7:22 PM

5280 BEACH



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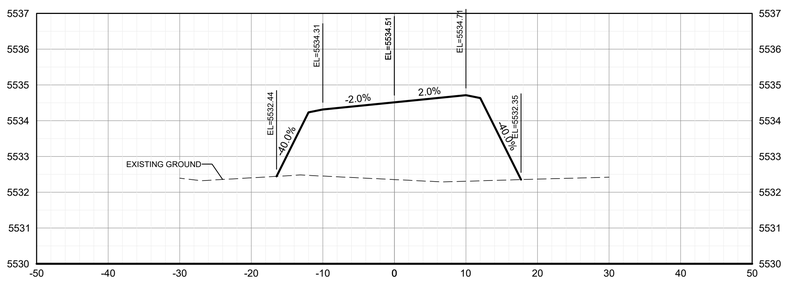

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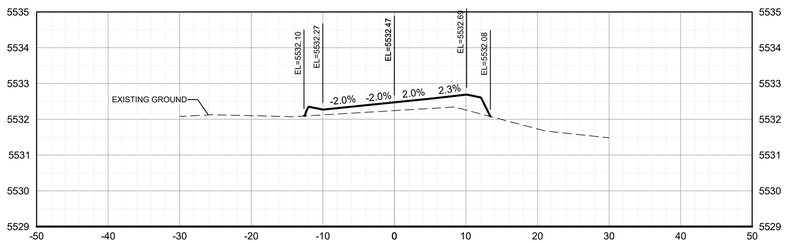

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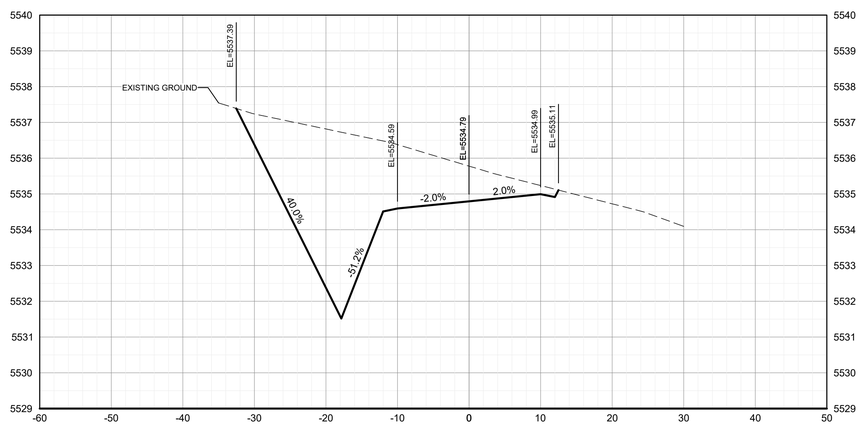

STA. 2+00.00

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E-W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.3
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
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Last Saved: 1/13/2022 7:20 PM
Plot Date/Time: 1/13/2022 7:23 PM
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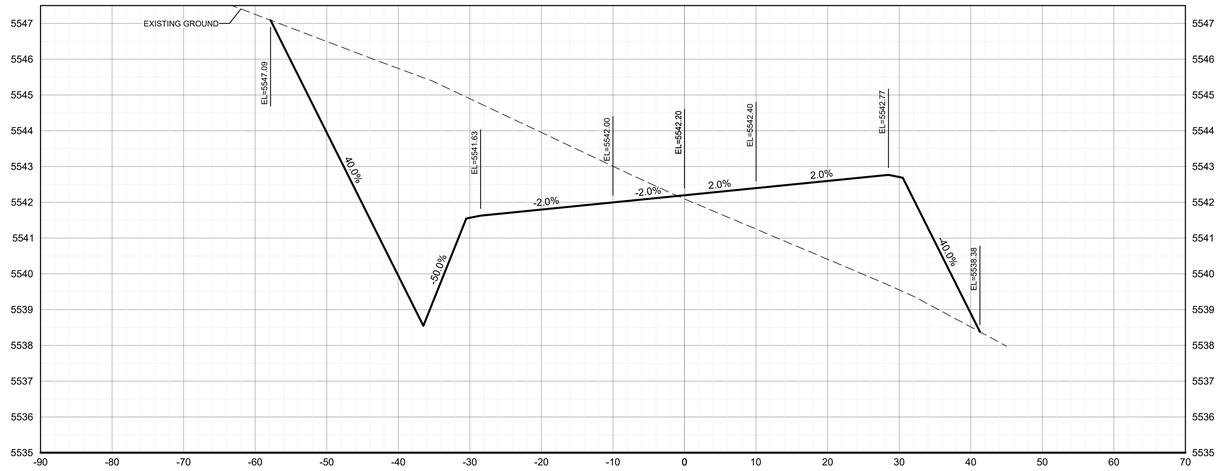
\20-218-X-SITE.dwg
\20-218-X-GRADE.dwg
\20-218-X-SEAL.dwg
5280 BEACH



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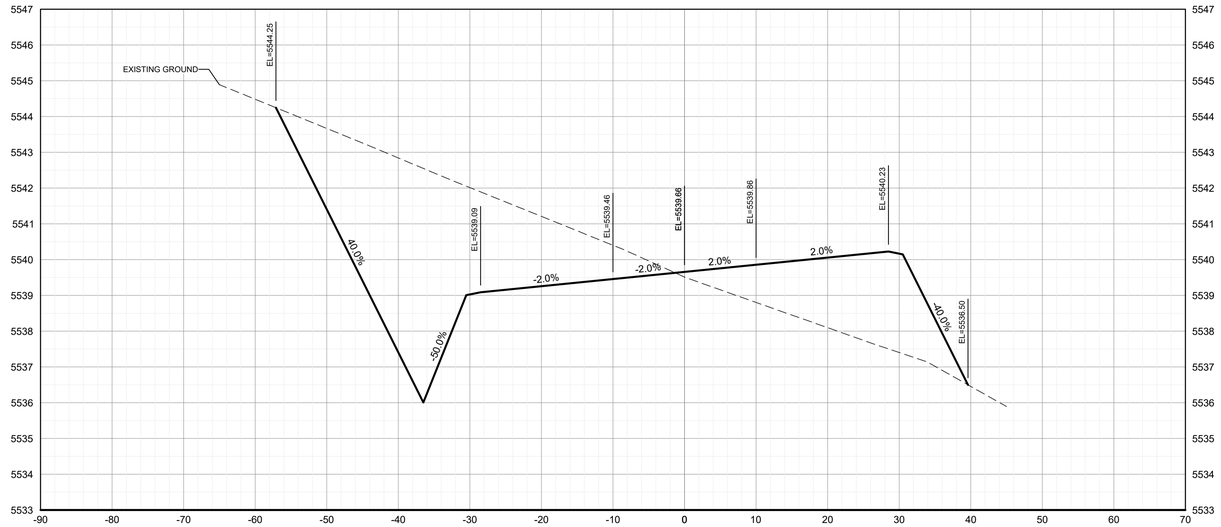

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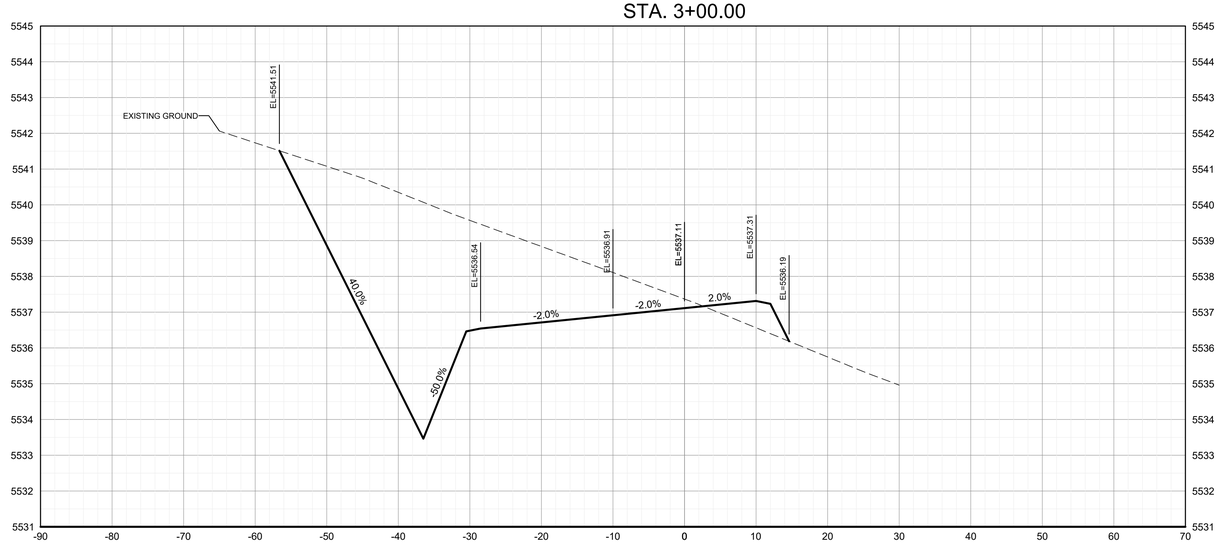

STA. 2+50.00

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01-14-2022
DATE

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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E-W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.4
REVIEWER: MG			

PLEASE RECYCLE

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Courts\20-218-C-STREET.PP
Layout: 20-218-C-STREET
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Plot Date/Time: 1/13/2022 7:24 PM
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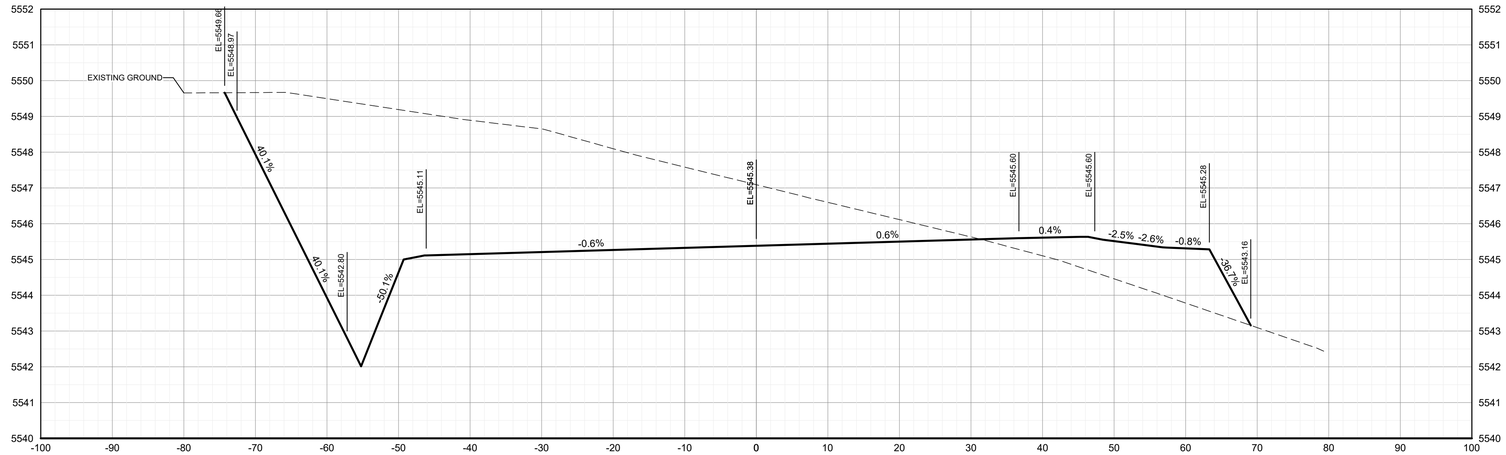
5280 BEACH



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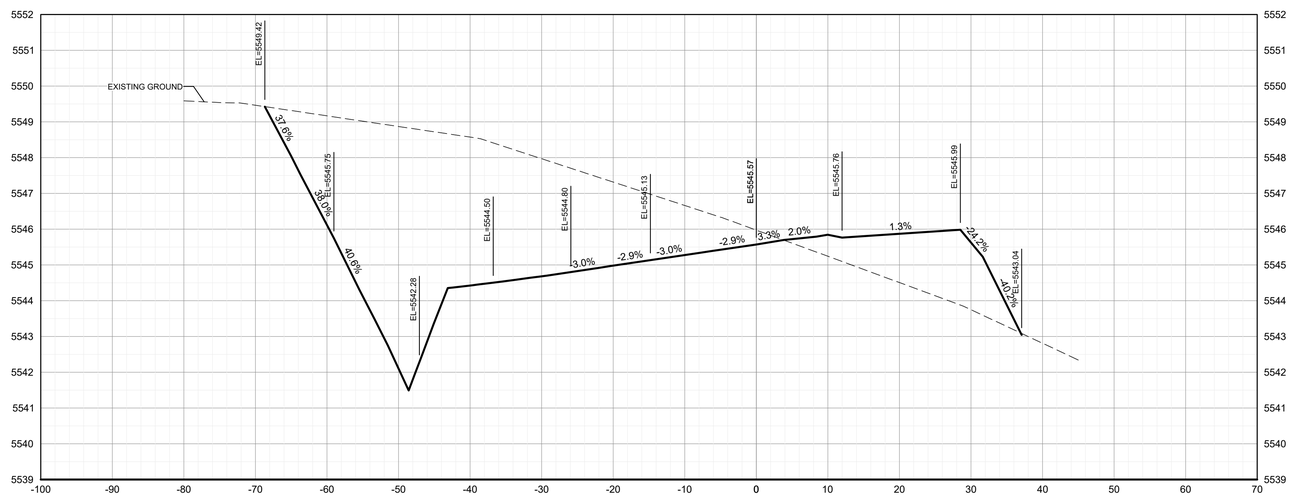

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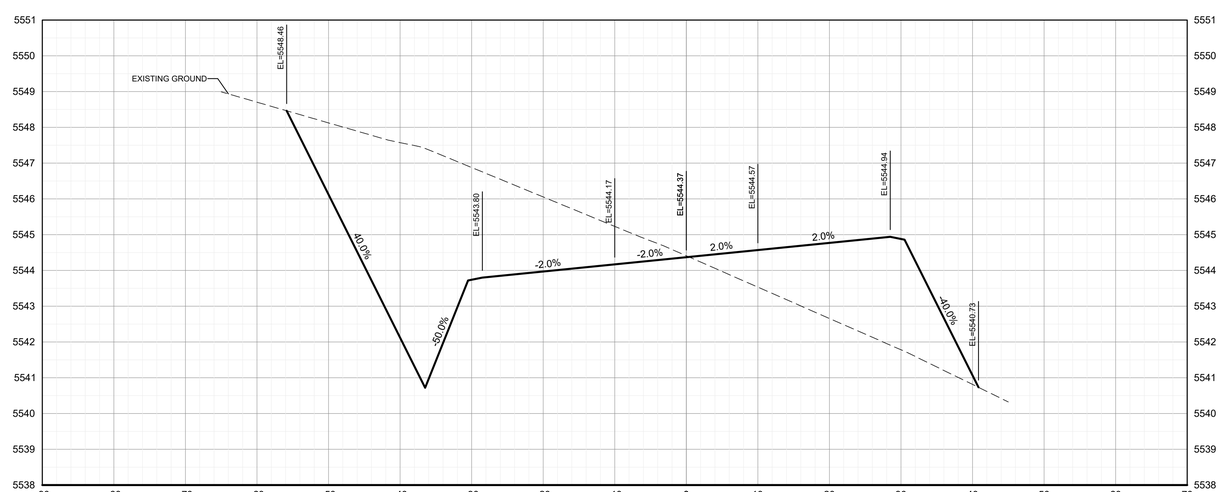

STA. 4+00.00

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TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

E - W ROAD SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C7.5
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE

Xrefs: 20-218-X-BASE.dwg
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20-218-X-SITE.dwg
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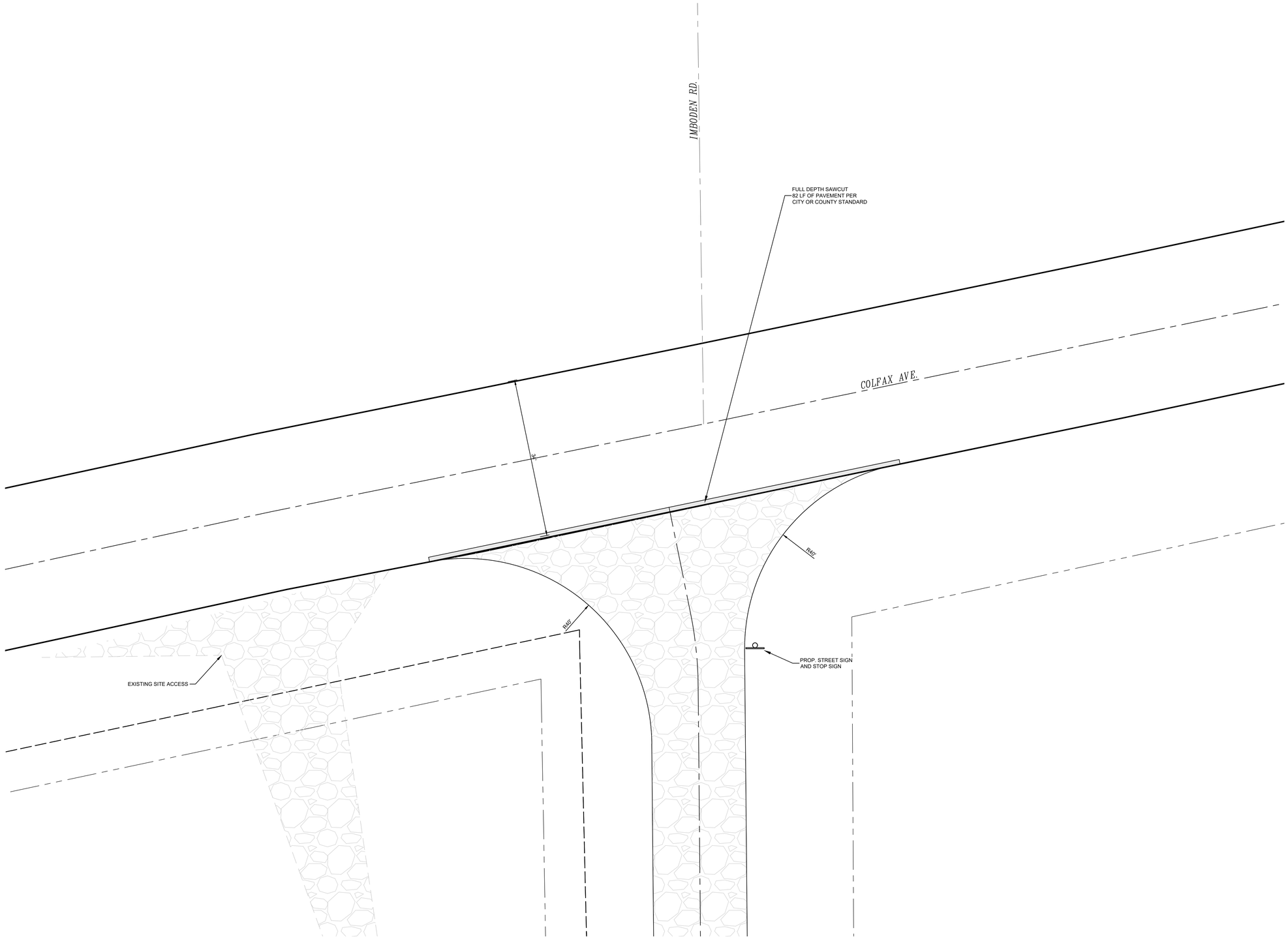

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TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
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5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

COLFAX DRIVEWAY

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

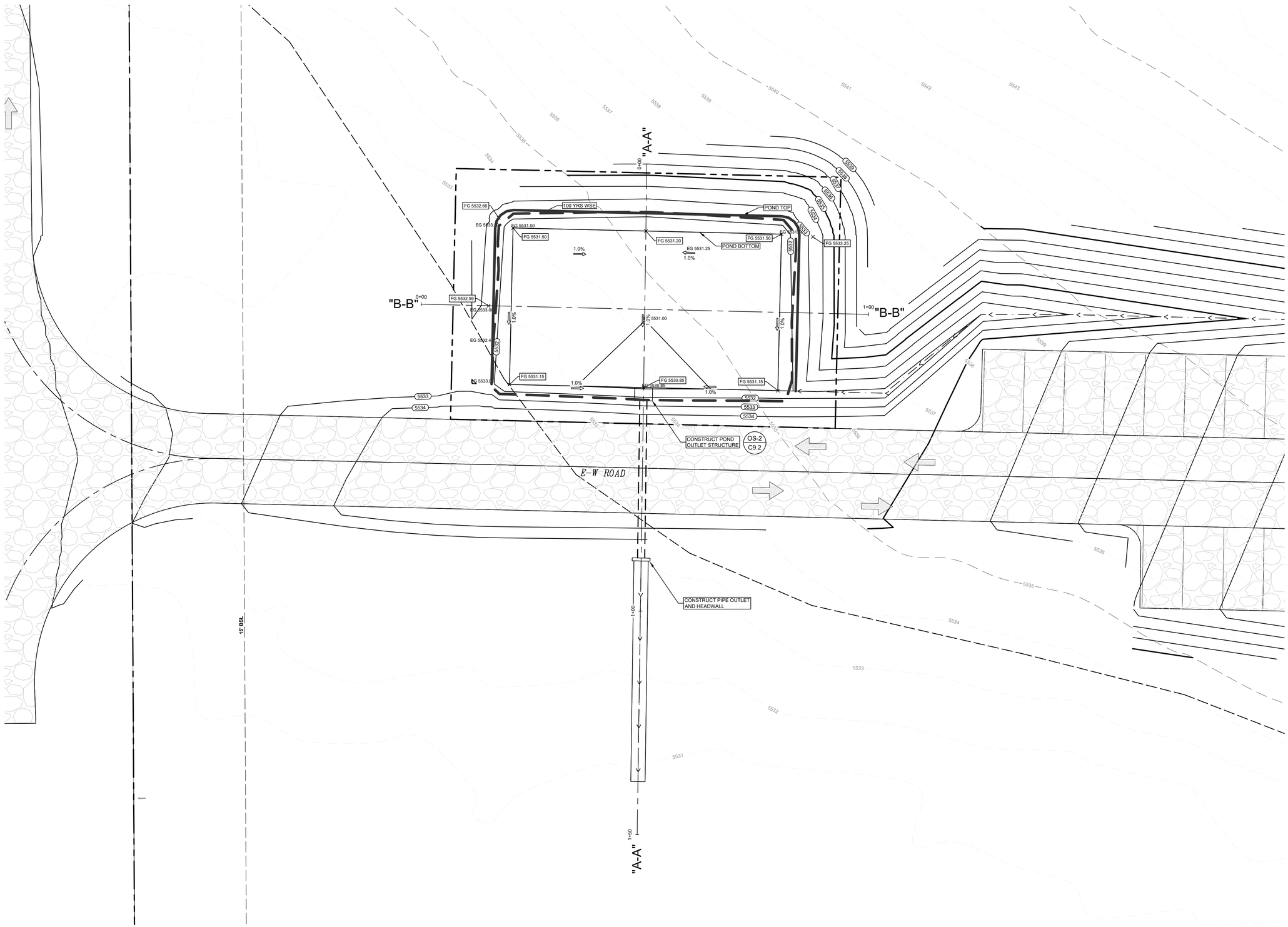
DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C8.0
REVIEWER: MG			

5280 BEACH

PLEASE RECYCLE

Xrefs: 20-218-X-SEAL.dwg
20-218-X-BASE-PROP.dwg
20-218-X-BASE.dwg
20-218-X-BORE.dwg

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Court\20-218-C-DIM
Last Saved: 1/13/2022 7:28 PM
Plot Date/Time: 1/13/2022 7:27 PM



0 40 80 Feet

GRADING NOTES

1. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
2. ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
3. LIMITS OF CONSTRUCTION AREA SHOWN ON THE EROSION CONTROL PLAN.

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01-14-2022
DATE

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-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

DETENTION POND PLAN

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.0
REVIEWER: MG			

PLEASE RECYCLE

Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES On\20-218 Adam County Volleyball Courts\20-218-C-POND
Plot Date: 1/13/2022
Last Saved: 1/13/2022, 7:29 PM
Plot Date/Time: 1/13/2022 7:29 PM
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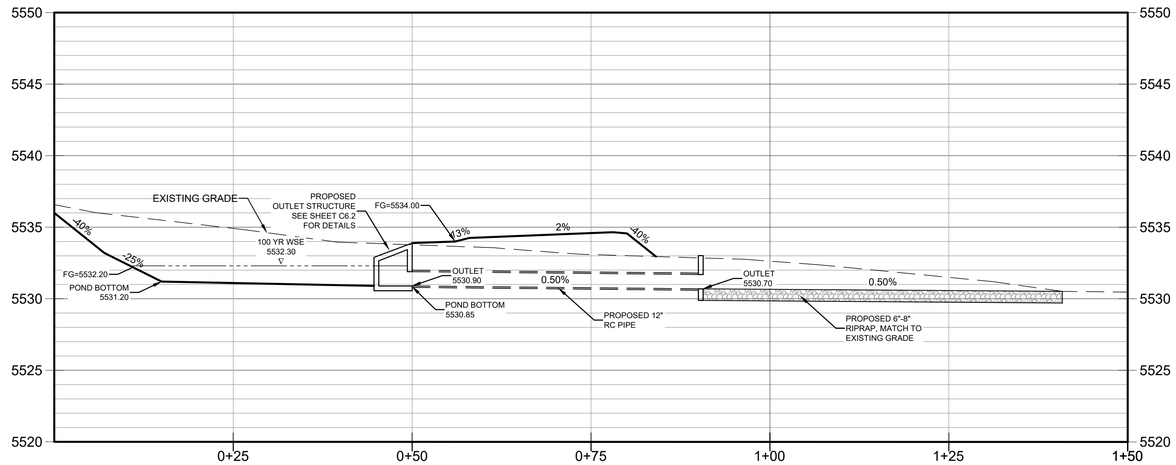
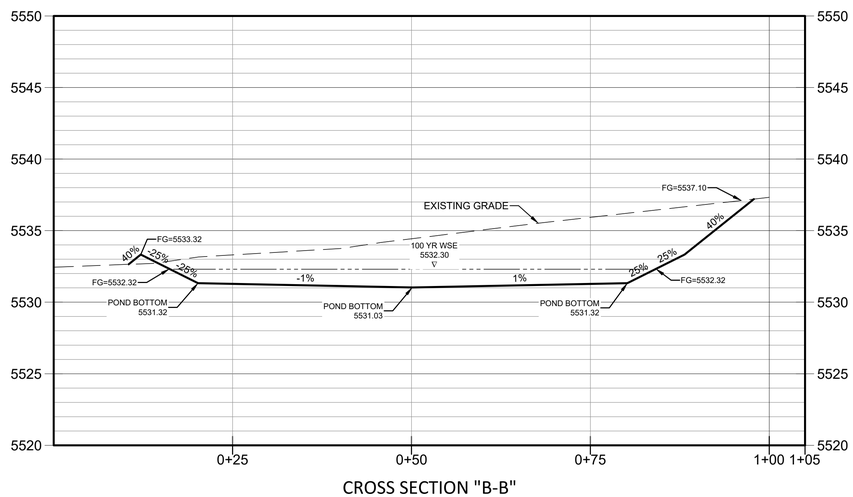
'20-218-X-UTIL.dwg
'20-218-X-SURVEY.dwg
'20-218-X-PROPOSE.dwg
'20-218-X-SEAL.dwg

5280 BEACH



CROSS SECTION "A-A"
H:1"=10'
V:1"=5'

V:1"=5'



CROSS SECTION "B-B"
H:1"=10'
V:1"=5'

PRELIMINARY
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DATE

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-		
-		
-		

5280 BEACH

WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

DETENTION POND SECTIONS

MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.1
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
Xrefs: 20-218-X-BASE.dwg
20-218-X-GRID.dwg
20-218-X-SURVEY.dwg
20-218-X-PROPERTY.dwg
20-218-X-SEAL.dwg
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Layout Tab: C9.1 (Pond Sections)
Last Saved: 1/13/2022 7:29 PM
Plot Date/Time: 01/13/2022 7:30 PM
5280 BEACH

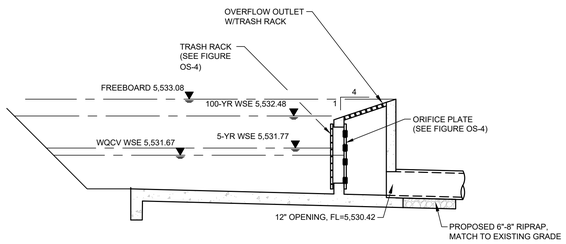
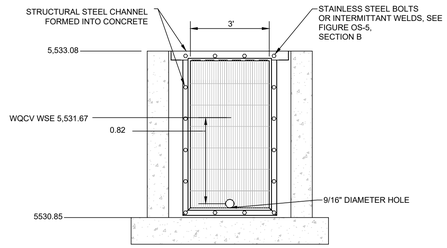


FIGURE 0S-2 TYPICAL OUTLET STRUCTURE



ELEVATION

ORIFICE PLATE NOTES:

1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER. SEE BELOW FOR PLATE THICKNESS.

WQCV TRASH RACKS:

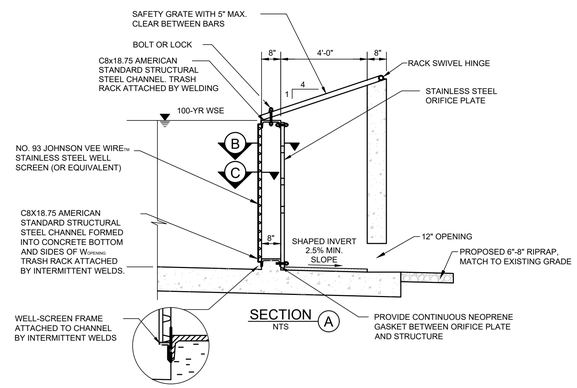
1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. TRASH RACK OPEN AREAS ARE FOR SPECIFIED TRASH RACK MATERIALS. TOTAL TRASH RACK SIZE MAY NEED TO BE ADJUSTED FOR MATERIALS HAVING DIFFERENT OPEN AREA/GROSS AREA RATIO (R VALUE).
4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

OVERFLOW SAFETY GRATES:

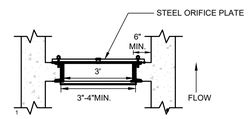
1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
3. SAFETY GRATES SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
4. STRUCTURAL DESIGN OF SAFETY GRATES SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

FIGURE OS-4 ORIFICE PLATE AND TRASH RACK DETAILS AND NOTES

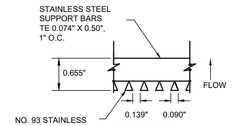
NTS



SECTION A
NTS



SECTION B
NTS



SECTION C
NTS

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA)
= 0.60

FIGURE OS-5 TYPICAL OUTLET STRUCTURE WITH WELL SCREEN TRASH RACK

PRELIMINARY
-FOR REVIEW ONLY-

THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE. THEY ARE PREPARED BY, OR UNDER THE SUPERVISION OF:

MICHAEL R. GROSELLE 125681
TYPE OR PRINT NAME PE #
01-14-2022
DATE

NO.	DATE	REVISION
-		
-		
-		
-		
-		

5280 BEACH
WATKINS STORAGE SUBDIVISION, BLK 1 & LOT 1
CITY OF WATKINS, ADAMS COUNTY, COLORADO

OUTLET ORIFICE DETAILS

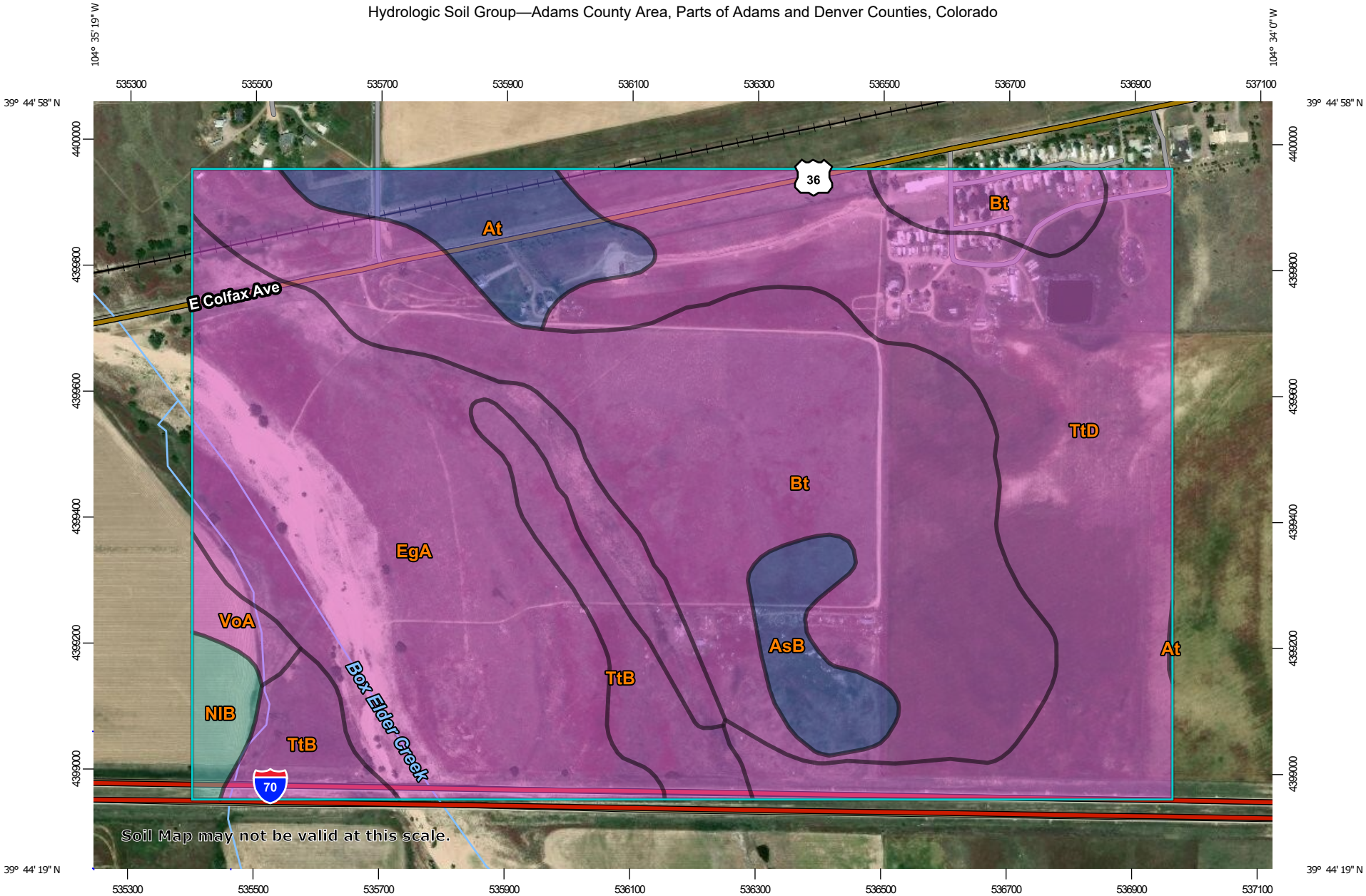
MODERN ENGINEERING SOLUTIONS
71S FENTON ST
LAKEWOOD, CO 80226
PHONE: (214) 734-2305

DESIGNED: NA	DATE	PROJECT #	SHEET
DRAWN: PV	JANUARY 2022	20-218	C9.2
REVIEWER: MG			

PLEASE RECYCLE
5280 BEACH
Xrefs: 20-218-X-BASE.dwg
20-218-X-OUTLET.dwg
20-218-X-SURVEY.dwg
20-218-X-GRADE.dwg
20-218-X-SEAL.dwg
Drawing: N:\Modern Engineering Solutions\Modern Engineering Solutions - MES Civil\20-218 Adam County Volleyball Courts\20-218-C-POND
Last Saved: 1/14/2022 2:45 PM
Last Saved By: PVELEZ
Plot Date/Time: 01/14/2022 8:40 PM
5280 BEACH

Appendix E – Soil Map

Hydrologic Soil Group—Adams County Area, Parts of Adams and Denver Counties, Colorado



Map Scale: 1:8,590 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 400 800 1600 2400

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Adams County Area, Parts of Adams and Denver Counties, Colorado
Survey Area Data: Version 18, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 17, 2015—Oct 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AsB	Ascalon sandy loam, 0 to 3 percent slopes	B	11.2	2.9%
At	Ascalon-Platner association, 0 to 5 percent slopes	B	18.3	4.7%
Bt	Blakeland-Truckton association	A	122.2	31.5%
EgA	Ellicott-Glenberg complex, 0 to 3 percent slopes, occasionally flooded	A	102.4	26.4%
NlB	Nunn loam, 1 to 3 percent slopes	C	5.4	1.4%
TtB	Truckton loamy sand, 0 to 3 percent slopes	A	23.6	6.1%
TtD	Truckton loamy sand, 3 to 9 percent slopes	A	101.0	26.0%
VoA	Vona sandy loam, 0 to 1 percent slopes	A	4.1	1.0%
Totals for Area of Interest			**388.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Fidelity National Title
NATIONAL COMMERCIAL SERVICES

1401 17th St, #480
Denver, CO 80202
Phone: (303) 942-2200

DATE: April 21, 2021
FILE NUMBER: 100-N0032238-030-TE1
PROPERTY ADDRESS: 1970 Imboden Road, Watkins, CO 80137
BUYER/BORROWER: Sovereign One LLC, a Colorado limited liability company
OWNER(S): Watkins Storage Company, Limited Liability Company, a Colorado limited liability company
YOUR REFERENCE NUMBER:
ASSESSOR PARCEL NUMBER: R0152718

PLEASE TAKE NOTE OF THE FOLLOWING REVISED TERMS CONTAINED HEREIN:

None.

WIRED FUNDS ARE REQUIRED ON ALL CASH PURCHASE TRANSACTIONS. FOR WIRING INSTRUCTIONS, PLEASE CONTACT YOUR ESCROW OFFICE AS NOTED ON THE TRANSMITTAL PAGE OF THIS COMMITMENT.

TO:	**Escrow Officer**	**ATTN:**	Tammi Ellis
		PHONE:	(303) 942-2202
		FAX:	**(303) 628-1671**
		E-MAIL:	Tammi.Ellis@fnf.com
	Escrow Assistant	**ATTN:**	Anna Young
		PHONE:	(303) 942-2207
		E-MAIL:	anna.young1@fnf.com
	Title Officer	**ATTN:**	Liam Macartney
		PHONE:	(303) 942-2208
		E-MAIL:	Liam.Macartney@fnf.com
	Sales Executive	**ATTN:**	Katie Nobel
		E-MAIL:	knobel@fnf.com

TO:	**Sovereign One LLC, a Colorado limited liability company 7623 Ingalls Street Arvada, CO 80003**	**ATTN:**	**Susan Maureen Gillan**
		PHONE:	**(303) 961-4847**
		FAX:	
		E-MAIL:	**mike.patton@thelabrp.com**
TO:	**Watkins Storage Company, Limited Liability Company, a Colorado limited liability company 1565 Genesee Ridge Road Golden, CO 80401**	**ATTN:**	**Terry K. Jensen**
		PHONE:	**(303) 548-9396**
		FAX:	
		E-MAIL:	**tkj8500@comcast.net**
TO:	**Colorado Land Realty 800 US Hwy 36 Byers, CO 80103**	**ATTN:**	**Frank B. Linnebur**
		PHONE:	**(303) 748-7028**
		FAX:	
		E-MAIL:	**7487028@gmail.com**
TO:	**Jensen Land Company 7397 Norfolk Place Castle Pines, CO 80108**	**ATTN:**	**Terryl Jensen**
		PHONE:	**(303) 790-8500**
		FAX:	
		E-MAIL:	**tkj8500@comcast.net**

TO:	**National Commercial Services Downtown** **1401 17th St** **#480** **Denver, CO 80202**	**ATTN:** **PHONE:** **FAX:** **E-MAIL:**	**Tammi Ellis** **(303) 942-2200** **(303) 628-1671** **Tammi.Ellis@fnf.com**

END OF TRANSMITTAL

COMMITMENT FOR TITLE INSURANCE

Issued by

Fidelity National Title Insurance Company

NOTICE

IMPORTANT—READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRA CONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and the Commitment Conditions, **Fidelity National Title Insurance Company**, a Florida Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I—Requirements have not been met within 180 Days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Countersigned

By:

Darren Hone
Authorized Signature

Fidelity National Title Insurance Company

By:

ATTEST Raymond R. Quirk President

Marjorie Nemzura Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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AMERICAN LAND TITLE ASSOCIATION

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I—Requirements;
(f) Schedule B, Part II—Exceptions; and
(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

(i) comply with the Schedule B, Part I—Requirements;
(ii) eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
(iii) acquire the Title or create the Mortgage covered by this Commitment.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.
(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

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AMERICAN LAND TITLE ASSOCIATION

Transaction Identification Data for reference only:

Issuing Agent:	Fidelity National Title, National Commercial Services
Issuing Office:	1401 17th Street, Suite 480, Denver, CO 80202
Loan ID Number:	
Issuing Office File Number:	100-N0032238-030-TE1
Property Address:	1970 Imboden Road, Watkins, CO 80137
Revision Number:	

SCHEDULE A

AMERICAN LAND TITLE ASSOCIATION COMMITMENT

1. Commitment Date: **April 16, 2021**
2. Policy to be issued:
   (a) ALTA Owners Policy 6-17-06
   Proposed Insured: Sovereign One LLC, a Colorado limited liability company
   Proposed Policy Amount: $275,000.00
   (b) None
   Proposed Insured:
   Proposed Policy Amount: $0.00
3. The estate or interest in the Land described or referred to in this Commitment is:

   A Fee Simple
4. The Title is, at the Commitment Date, vested in:

   Watkins Storage Company, LLC, a Colorado limited liability company
5. The Land is described as follows:

   See Exhibit A attached hereto and made a part hereof.

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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SCHEDULE A
(Continued)

PREMIUMS:

Owners Policy	741.00
ALTA 39-06 - Policy Authentication	0.00
Deletion of 1 - 4 upon requirements met and provided there is no recent, ongoing or anticipated construction on the land	75.00
Tax Certificate	18.00

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EXHIBIT A
LEGAL DESCRIPTION

Lot 1, Block 1, Watkins Storage Subdivision, County of Adams, State of Colorado.

For Informational Purposes Only

Tax ID No.: 0181732301001

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AMERICAN LAND TITLE ASSOCIATION

SCHEDULE B

PART I – REQUIREMENTS

All of the following Requirements must be met:

a. Pay the agreed amounts for the interest in the land and/or for the mortgage to be insured.

b. Pay us the premiums, fees and charges for the policy.

c. Obtain a certificate of taxes due from the county treasurer or the county treasurer's authorized agent.

Note: Any documents being executed in conjunction with this transaction must be signed in the presence of an authorized Company employee, an authorized employee of an agent, an authorized employee of the insured lender, or by using Bancserv or other approved third-party service. If the above requirement cannot be met, please call the Company at the number provided in this report.

d. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

Limited Liability Company: Watkins Storage Company, Limited Liability Company, a Colorado limited liability company

a) A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member

b) A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

c) Recordation of a Statement of Authority

d) Copies of resolution(s), agreements and/or other documentation necessary to establish the authority of parties executing on behalf of entities disclosed as part of an organizational structure managing said Limited Liability Company The Company will require the following documents for review prior to the issuance of any title insurance

e. Deed sufficient to convey the fee simple estate or interest in the Land described or referred to herein, to the Proposed Insured Purchaser.

f. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created as to Sovereign One LLC, a Colorado limited liability company.

g. The Company will require that an Owner's Affidavit be completed by the party(s) named below before the issuance of any policy of title insurance.

Party(s): Watkins Storage Company, Limited Liability Company, a Colorado limited liability company

The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit.

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AMERICAN LAND TITLE ASSOCIATION

SCHEDULE B
PART I – Requirements
(Continued)

Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.

Note: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

END OF REQUIREMENTS

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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AMERICAN LAND TITLE ASSOCIATION

SCHEDULE B

PART II – EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any facts, rights, interests or claims that are not shown by the Public Records but which could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

3. Any encroachments, encumbrances, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by Public Records.

4. Any lien or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires of record for the value the estate or interest or mortgage thereon covered by this Commitment.

   NOTE: The above exception will not appear on policies where closing and settlement has been performed by the Company.

6. Water rights, claims of title to water, whether or not these matters are shown by the Public Records.

7. All taxes and assessments, now or heretofore assessed, due or payable.

   NOTE: This tax exception will be amended at policy upon satisfaction and evidence of payment of taxes.

8. Terms, conditions, provisions, agreements, reservations and obligations contained in the Warranty Deed as set forth below:

   Recording Date: May 11, 1909
   Recording No.: Book 25 Page 215

9. Any taxes or assessments by reason of the inclusion of the Land in the Bennett Fire Protection District:

   Recording Date: October 2, 1962
   Recording No.: Book 1018 Page 159

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AMERICAN LAND TITLE ASSOCIATION

SCHEDULE B
PART II – Exceptions
(Continued)

10. Terms, conditions, provisions, agreements and obligations contained in the Royalty Contract as set forth below:

    Recording Date: July 7, 1977
    Recording No.: Book 2156 Page 380

11. Any taxes or assessments by reason of the inclusion of the Land in the Bennett Park and Recreation District:

    Recording Date: January 22, 2001
    Recording No.: Reception No. C0753045

    Order of Inclusion:
    Recording Date: October 9, 2008
    Recording No.: Reception No. 2008000080754

12. Terms, conditions, provisions, agreements and obligations contained in the Zoning Hearing Decision – Case #PRJ2002-00051 as set forth below:

    Recording Date: May 9, 2003
    Recording No.: Reception No. C1140647

13. Easements, notes, terms, conditions, provisions, agreements and obligations as shown on the plat of Watkins Storage Subdivision:

    Recording Date: July 3, 2003
    Recording No.: Reception No. C1169122

14. Terms, conditions, provisions, agreements and obligations contained in the Incorporation Map of the Town of Watkins as set forth below:

    Recording Date: July 23, 2004
    Recording No.: Reception No. 20040723000655880

    Discontinuance Map of Town of Watkins:
    Recording Date: December 19, 2006
    Recording No.: Reception No. 2006001011620

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SCHEDULE B
PART II – Exceptions
(Continued)

15. An oil and gas lease for the term therein provided with certain covenants, conditions and provisions, together with easements, if any, as set forth therein.

Dated:	July 7, 2016
Lessor:	Hiline Resources, LLC
Lessee:	Watkins Storage Company, Limited Liability Company, a Colorado limited liability company
Recording Date:	July 18, 2016
Recording No.:	Reception No. 2016000057186

16. An oil and gas lease for the term therein provided with certain covenants, conditions and provisions, together with easements, if any, as set forth therein.

Dated:	August 15, 2016
Lessor:	Hiline Resources, LLC
Lessee:	Watkins Storage Company, Limited Liability Company, a Colorado limited liability company
Recording Date:	September 2, 2016
Recording No.:	Reception No. 2016000073535

17. Terms, conditions, provisions, agreements and obligations contained in the Notice of Letter Agreement as set forth below:

Recording Date:	February 7, 2019
Recording No.:	Reception No. 2019000009513

18. Terms, conditions, provisions, agreements and obligations contained in the Minerals Deed as set forth below:

Recording Date:	June 25, 2020
Recording No.:	Reception No. 2020000058030
And	
Recording No.:	Reception No. 2020000058031

END OF EXCEPTIONS

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AMERICAN LAND TITLE ASSOCIATION

DISCLOSURE STATEMENT

- Pursuant to Section 38-35-125 of Colorado Revised Statutes and Colorado Division of Insurance Regulation 8-1-2 (Section 5), if the parties to the subject transaction request us to provide escrow-settlement and disbursement services to facilitate the closing of the transaction, then all funds submitted for disbursement must be available for immediate withdrawal.
- Colorado Division of Insurance Regulation 8-1-2, Section 5, Paragraph H, requires that "Every title insurance company shall be responsible to the proposed insured(s) subject to the terms and conditions of the title insurance commitment, other than the effective date of the title insurance commitment, for all matters which appear of record prior to the time of recording whenever the title insurance company, or its agent, conducts the closing and settlement service that is in conjunction with its issuance of an owners policy of title insurance and is responsible for the recording and filing of legal documents resulting from the transaction which was closed". Provided that Fidelity National Title, National Commercial Services conducts the closing of the insured transaction and is responsible for recording the legal documents from the transaction, exception No. 5 in Schedule B-2 will not appear in the Owner's Title Policy and Lender's Title Policy when issued.
- Colorado Division of Insurance Regulation 8-1-2, Paragraph M of Section 5, requires that prospective insured(s) of a single family residence be notified in writing that the standard exception from coverage for unfiled Mechanics or Materialmans Liens may or may not be deleted upon the satisfaction of the requirement(s) pertinent to the transaction. These requirements will be addressed upon receipt of a written request to provide said coverage, or if the Purchase and Sale Agreement/Contract is provided to the Company then the necessary requirements will be reflected on the commitment.
- Colorado Division of Insurance Regulation 8-1-3, Paragraph C. 11.f. of Section 5 - requires a title insurance company to make the following notice to the consumer: “A closing protection letter is available to be issued to lenders, buyers and sellers.”
- If the sales price of the subject property exceeds $100,000.00 the seller shall be required to comply with the Disclosure of Withholding Provisions of C.R.S. 39-22-604.5 (Nonresident Withholding).
- Section 39-14-102 of Colorado Revised Statutes requires that a Real Property Transfer Declaration accompany any conveyance document presented for recordation in the State of Colorado. Said Declaration shall be completed and signed by either the grantor or grantee.
- Recording statutes contained in Section 30-10-406(3)(a) of the Colorado Revised Statutes require that all documents received for recording or filing in the clerk and recorder's office shall contain a top margin of at least one inch and a left, right, and bottom margin of at least one-half of an inch. The clerk and recorder may refuse to record or file a document that does not conform to requirements of this paragraph.
- Section 38-35-109 (2) of the Colorado Revised Statutes, requires that a notation of the purchasers legal address, (not necessarily the same as the property address) be included on the face of the deed to be recorded.
- Regulations of County Clerk and Recorder's offices require that all documents submitted for recording must contain a return address on the front page of every document being recorded.
- Pursuant to Section 10-11-122 of the Colorado Revised Statutes, the Company is required to disclose the following information:
  - The subject property may be located in a special taxing district.
  - A Certificate of Taxes Due listing each taxing jurisdiction shall be obtained from the County Treasurer or the County Treasurer's authorized agent.
  - Information regarding special districts and the boundaries of such districts may be obtained from the Board of County Commissioners, the County Clerk and Recorder or the County Assessor.
- Pursuant to Section 10-11-123 of the Colorado Revised Statutes, when it is determined that a mineral estate has been severed from the surface estate, the Company is required to disclose the following information: that there is recorded evidence that a mineral estate has been severed, leased, or otherwise conveyed from the surface estate and that there is a substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and that such mineral estate may include the right to enter and use the property without the surface owner's permission.

Note: Notwithstanding anything to the contrary in this Commitment, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Commitment. If the policy does contain an arbitration clause, and the Amount of Insurance is less than the amount, if any, set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened**. DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
http://www.fbi.gov

Internet Crime Complaint Center:
http://www.ic3.gov

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FIDELITY NATIONAL FINANCIAL, INC.
PRIVACY NOTICE

Effective January 1, 2021

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A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (*e.g.*, name, address, phone number, email address);
- demographic information (*e.g.*, date of birth, gender, marital status);
- identity information (*e.g.* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.* loan or bank account information); and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;

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- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law. We may share your Personal Information with affiliates (other companies owned by FNF) to directly market to you. Please see "Choices with Your Information" to learn how to restrict that sharing.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information
We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information
If you do not want FNF to share your information among our affiliates to directly market to you, you may send an "opt out" request as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you without your consent.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

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For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

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Accessing and Correcting Information; Contact Us

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Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

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Michael Groselle

From: Michael Weakley <mweakley@tchd.org>
Sent: Monday, April 27, 2020 4:33 PM
To: Michael Groselle
Subject: Lab Volleyball Facility

Mike,

Tri-County Health Department is unable to provide a "will serve" letter for the property as there are many factors that go into whether a property can be served by OWTS. TCHD prefers to provide a comprehensive set of comments in response to a referral request from Adams County. This allows TCHD to review the proposed project in its entirety and include all public health related comments including Onsite Wastewater Treatment Systems.

Michael Weakley
Water Program Supervisor
Environmental Health Division
6162 S. Willow Drive
Greenwood Village, CO 80111
O 720-200-1593 | C 720-774-3412
mweakley@tchd.org | www.tchd.org

Michael Groselle

From: Comaniciu - DNR, Ioana <ioana.comaniciu@state.co.us>
Sent: Thursday, January 13, 2022 2:12 PM
To: Michael Groselle
Subject: Re: Will Serve Letter for Adams County-Well Permits
Attachments: 2001CW185.pdf; 80CW232.pdf

Good Afternoon,
According to our records the parcel ID # 0181732301001 is 7.25 acres and is located in the NW1/4 of the SW1/4 of Section 32, Township 3 South, Range 64 West of the 6th P.M. Our records show that the groundwater underlying the 7.25 acre parcel was adjudicated in the Division 1 Court case no. 01CW185 (80CW232). A copy of the decree is attached to this email. In that decree, Denver, Arapahoe and Laramie-Fox Hills aquifers groundwater was adjudicated underlying approximately 375 acres of land located in the S1/2 of Section 31 (231 acres) and the SW1/4 of Section 32, T3S, R64W of the 6th P.M. The following annual amounts were decreed in Case No. 80CW232:Denver aquifer-50 acre-feet, Arapahoe aquifer 124.6 acre-feet and Laramie-Fox Hills aquifer - 32.4 acre-feet. City of Aurora is the owner and user of the water decreed in Case No. 80CW232 underlying and associated with the 231 acres located in Section 31, in the following amounts: Denver aquifer-30.7 acre-feet, Arapahoe aquifer 76.7 acre-feet and Laramie-Fox Hills aquifer - 20 acre-feet. The water decreed in Case No. 80CW232 underlying and associated with the remaining 144 acres located in Section 32 are: Denver aquifer-16.3 acre-feet, Arapahoe aquifer 47.9 acre-feet and Laramie-Fox Hills aquifer - 12.4 acre-feet.
Lylla Jensen is the owner of 24 acres of the total 144 acres as shown on Attachment A of the decree in case no. 01CW185. The 7.25 acre parcel in question is located within the 24 acres. The water decreed in Case No. 80CW232 underlying and associated with the 24 acres are: Denver aquifer-2.2 acre-feet, Arapahoe aquifer 8.1 acre-feet and Laramie-Fox Hills aquifer - 2 acre-feet.

Our records also show that, well permit no. 238334 is located on the property. Well permit no. 238334 is an exempt permit for the Denver aquifer that was issued as the only well on 35 acres described as a part of the North 1/2 of the Southwest 1/4 of Section 32, Township 3 South, Range 64 West of the 6th P.M. The 7.25 acre parcel was part of the 35 acres described in the well permit. Note that another exempt well permit for the 7.25 acre property cannot be issued. However the parcel may qualify for a non-exempt permit if the following conditions are met:
1. A portion of the water decreed in Case No. 01CW185 (82CW232) is transferred from the current water right holder (Lylla Jensen) to the current property owner through a Special Warranty Deed or a Quit Claim Deed. The Special Warranty Deed or the Quit Claim Deed for water would need to specify the annual amount of water that is being transferred, the court case number associated with that amount and the aquifer.
2. The application in case no. 2001CW185 requested that the water associated with Planet Wells A, B, and F from 80CW232 be withdrawn through wells located at any location on the 144 acre property identified in that application. That request was not approved when the decree in case no. 2001CW185 was entered by the water court. Therefore, according to the decree in case no. 2001CW185 (80CW232) the wells constructed under the decree in case no. 2001CW185 (80CW232) are limited to the locations specified for Planet Wells A-F in the decree. Arapahoe wells C and D are tied up as a replacement source in the augmentation plan decreed for the City of Aurora in case no. 87CW210, leaving only the water associated with Arapahoe well A, Laramie-Fox Hills Well B and Denver wells E and F as the only water that could be used for other purposes. A proposed well could only be issued for the 7.25 acre parcel if it is located within 200 feet of the location identified in the decree for Arapahoe well A, Laramie-Fox Hills Well B and Denver wells E and F.

Since the 7.25 acre property appears to be more than 200 feet of the decreed location of Arapahoe well A, Laramie-Fox Hills Well B and Denver wells E and F, the decree in case no. 2001CW185 (80CW232) will need

to be amended by the water court so that the water associated with Planet Wells A, B, E, and F from 80CW232 can be withdrawn through wells located at any location on the 144 acre property.

I hope this answered your question. Please contact me at this office if you have any other questions.
Sincerely,

Ioana Comaniciu, P.E.
Water Resources Engineer

P 303-866-3581 x 8246
1313 Sherman St., Suite 818, Denver, CO 80203
ioana.comaniciu@state.co.us | www.colorado.gov/water

On Wed, Jan 12, 2022 at 6:14 PM Michael Groselle <Mike@mod-eng.com> wrote:

Hello,

We are working on developing the parcel adjacent to this one and need to get an updated version of this letter for our parcel. We ended up not closing on the original 13.77 acre property. Could you please send us the information? Our parcel number is: 0181732301001

Regards,

Michael Groselle, P.E.

Chief Executive Officer

Office: 720-815-7937

Cell: 214-734-2305

MODERN ENGINEERING SOLUTIONS

From: Comaniciu - DNR, Ioana <ioana.comaniciu@state.co.us>
Sent: Monday, April 27, 2020 4:44 PM

To: Michael Groselle <Mike@mod-eng.com>
Subject: Will Serve Letter for Adams County-Well Permits

Dear Mr. Micheal Groselle,

This email is in response to your AskDWR question regarding the feasibility of a well permit for a proposed new development in Adams County. You indicated that one of the items needed by the county is a will serve letter from the division of water resources stating the possibility of obtaining a well permit for the property.

Please note that the State Engineer's office will provide an opinion on water supply plans for new developments regarding material injury to existing water rights or the adequacy of the proposed plan if a referral is submitted to this office by the board of county commissioners. However, we performed a cursory review of your request and note that the comments provided herein do not address the adequacy of the water supply plan for this project or the ability of the water supply plan to satisfy any County regulations or requirements. In addition, the comments provided herein cannot be used to guarantee a viable water supply plan or infrastructure, the issuance of a well permit, or the physical availability of water.

Based on the information provided the property in question was identified as a 13.77 acre parcel located in the NE1/4 of the SW1/4 of Section 32, Township 3 South, Range 64 West of the 6th P.M. Our records show that the groundwater underlying the 13.77 acre parcel was adjudicated in the Division 1 Court case no. 01CW185 (attached). The decree in case no. 01CW185 is part of the decree entered in case no. 80CW232. In 80CW232 decree, Denver, Arapahoe and Laramie-Fox Hills aquifers groundwater was adjudicated underlying approximately 375 acres of land located in the S1/2 of Section 31, Township 3 South, Range 64 West of the 6th P.M. (231 acres) and the SW1/4 of Section 32, Township 3 South, Range 64 West of the 6th P.M. (144 acres). The 13.77 acres are part of the 144 acres located in the SW1/4 of Section 32, Township 3 South, Range 64 West of the 6th P.M. The decree in case no. 01CW185 is associated with the 144 acres. The 144 acres comprises three parcels of 76 acres, 44 acres and 24 acres. The 13.77 acre parcel is part of the 24 acres owned by Lylla Jensen. A copy of the map showing all the tree parcels is included with the decree in case no. 01CW185. The amounts decreed for the Denver, Arapahoe and Laramie-Fox Hills aquifers underlying the 24 acre parcel are 2.2 acre-feet for the Denver aquifer, 8.1 acre-feet for the Arapahoe aquifer and 2 acre-feet for the Laramie-Fox Hills aquifer. A portion of these amounts would apply to the 13.77 acre parcel.

In order to obtain a well permit for the 13.77 acre parcel an applicant has to demonstrate that he/she acquired the right to the water adjudicated in case no. 01CW185. Along with a permit application we will require the submission of a water transfer deed (Special Warranty Deed). The Special Warranty Deed should specify the court case number, the amount that was transferred and the aquifer that the water was transferred. The ability to obtain a well permit, and the allowed uses, will be determined at the time that a well permit application is submitted to and reviewed by the State Engineer's Office.

I hope this answered your question. Please contact me at this office if you have any other questions.

Sincerely,

Ioana Comaniciu, P.E.
Water Resources Engineer

P 303-866-3581 x 8246

1313 Sherman St., Suite 818, Denver, CO 80203

ioana.comaniciu@state.co.us | www.water.state.co.us

DISTRICT COURT, WATER DIVISION I, COLORADO

Case No. 80 CW232

FINDINGS AND RULING OF THE REFEREE AND DECREE OF THE WATER COURT

CONCERNING THE APPLICATION FOR WATER RIGHTS OF:

PLANET COMPANIES in ADAMS COUNTY

THIS CLAIM, having been filed with the Water Clerk, Water Division I, on August 25, 1980 and the Referee being fully advised in the premises, does hereby find:

All notices required by law of the filing of this application have been fulfilled, and the Referee has jurisdiction of this application.

A Statement of Opposition was filed by Danford-Champlin Farms, Ltd. on October 27, 1980 and time for filing any additional statements has expired. A Stipulated Agreement dated February 19, 1982 removes the opposition by Danford-Champlin Farms, Ltd., and is on file in this case.

All matters contained in the application having been reviewed, and testimony having been taken where such testimony is necessary, and such corrections made as are indicated by the evidence presented herein,
IT IS HEREBY THE RULING OF THE WATER REFEREE:

1. The name and address of the claimant:

   Planet Companies
   1751 Franklin Street
   Denver, Colorado 80218

2. The name of the structures:

   Wells to be Augmented; all adjudicated in Case W-1132:

   Behrens Well No. 1-20199-2
   Behrens Well No. 2-20199-1
   Behrens Well No. 3-20199-3
   Behrens Well No. 4-20199-4
   Behrens Well No. 5-20199-5

   Augmentation water to be provided from:

   Planet Well No. A-22802-F
   Planet Well No. B-22803-F
   Planet Well No. C-26522-F
   Planet Well No. D-26523-F
   Planet Well No. E-26581-F
   Planet Well No. F-26582-F

3. The legal description of the structures:

All wells are located in Township 3 South, Range 64 West of the 6th P.M., Adams County. More specifically, the wells are located as follows:

Behrens Well No. 1-20199-2 is in the SE¼SE¼, Section 31, 1208 feet north of the south line and 683 feet west of the east line.

Behrens Well No. 2-20199-1 is in the NE¼SE¼, Section 31, 1510 feet north of the south line and 904 feet west of the east line.

Behrens Well No. 3-20199-3 is in the SE¼SE¼, Section 31, 628 feet north of the south line and 638 feet west of the east line.

Behrens Well No. 4-20199-4 is in the NW¼SE¼, Section 31, 1415 feet north of the south line and 2298 feet west of the east line.

Behrens Well No. 5-20199-5 is in the NW¼SE¼, Section 31, 1415 feet north of the south line and 1862 feet west of the east line.

Planet Well No. A-22802-F is in the SW¼SW¼, Section 32, 1200 feet north of the south line and 800 feet east of the west line.

Planet Well No. B-22803-F is in the SW¼SW¼, Section 32, 1200 feet north of the south line and 850 feet east of the west line.

Planet Well No. C-26522-F is in the SW¼SW¼, Section 31, 1000 feet north of the south line and 1300 feet east of the west line.

Planet Well No. D-26523-F is in the SE¼SE½, Section 31, 1250 feet north of the south line and 1300 feet west of the east line.

Planet Well No. E-26581-F is in the NE¼SE¼, Section 31, 1500 feet north of the south line and 1300 feet west of the east line.

Planet Well No. F-26582-F is in the SW¼SW¼, Section 32, 1300 feet north of the south line and 1100 feet east of the west line.

Note: The locations of Wells No. A through F may vary slightly because of terrain conditions, but shall be drilled within 200 feet of given location.

4. The source of water:

Behrens Wells 1 through 5: Ground water tributary to Box Elder Creek which is tributary to the South Platte River.

Planet Wells A, C and D: Non-tributary Arapahoe Aquifer.
Planet Well B: Non-tributary Laramie-Fox Hills Aquifer.
Planet Wells E and F: Non-tributary Denver Aquifer.

5. The dates of appropriation:

Planet Well No. A-22802-F: September 26, 1977
Planet Well No. B-22803-F: September 26, 1977
Planet Well No. C-26522-F: August 23, 1978
Planet Well No. D-26523-F: August 23, 1978
Planet Well No. E-26581-F: August 23, 1978
Planet Well No. F-26582-F: August 23, 1978

6. The amount of water:

Planet Well No. A-22802-F: 0.0067 cubic feet per second (3 gpm) limited to 57.6 acre feet annually CONDITIONAL.

Planet Well No. B-22803-F: 0.044 cubic feet per second (20 gpm) limited to 32.4 acre feet annually CONDITIONAL.

Planet Well No. C-26522-F: 0.17 cubic feet per second (75 gpm) limited to 67 acre feet annually with Well D-26523-F CONDITIONAL.

Planet Well No. D-26523-F: 0.17 cubic feet per second (75 gpm) limited to 67 acre feet annually with Well C-26522-F CONDITIONAL.

Planet Well No. E-26581-F: 0.067 cubic feet per second (30 gpm) limited to 25 acre feet annually CONDITIONAL.

Planet Well No. F-26582-F: 0.067 cubic feet per second (30 gpm) limited to 25 acre feet annually CONDITIONAL.

7. The use of the water:

Agricultural and Municipal purposes.

8. Annual yield of the wells based upon applicant's ownership of 375 acres in S½, Section 31 and SW¼, Section 32:

Behrens Wells 1 through 5 are allowed to produce a maximum of 234 acre feet per year if augmented according to this decree.

Planet Wells A, C and D are allowed to produce a maximum of 124.6 acre feet per year or such adjusted amount as may be permitted by the Colorado Division of Water Resources following completion of the wells and review of aquifer conditions.

Planet Well No. B-22803-F is allowed to produce 32.4 acre feet per year or such adjusted figure as may be permitted by the Colorado Division of Water Resources following completion of the well and review of aquifer conditions.

Planet Wells No. E-26581-F and F-26582-F are allowed to produce 50 acre feet per year or such adjusted figure as may be permitted by the Colorado Division of Water Resources following completion of the well and review of aquifer conditions.

9. Plan for Augmentation:

The applicant plans to fully develop its 375 acres into 500 units with 3.5 people per unit with an annual gross requirement of 203.2 acre feet per year for in-household purposes (assuming 5% consumptive use), lawn and park irrigation limited to 4,000 square feet per household or a total of 45.9 acres which will result in an estimated annual diversion of 157 acre feet. In order to accomplish this plan, the applicant is permitted to produce water from the tributary wells continuously into a central water system, only so long as non-tributary water is produced to augment the depletions resulting from the tributary pumping. During the months of June, July, August and September, sufficient non-tributary water must be produced to provide non-tributary effluent discharge from the sewerage system into the alluvial aquifer of Box Elder Creek equal to 80% of the water produced from the alluvial wells. During the months of October, November, December, January, February, March, April and May, sufficient non-tributary water must be produced to provide non-tributary effluent discharge from the sewerage system into the alluvial aquifer of Box Elder Creek equal to a minimum of 5% of the water produced from the alluvial wells. If it is shown that the actual consumptive use during the months of October, November, December, January, February, March, April and May is greater than 5%, the applicant shall replace the greater amount and petition the court to modify this decree.

10. Measurement of Water and Records: Applicant shall provide measuring devices acceptable to the Division Engineer Water Division No. 1 for each of the wells and for the discharge from the sewerage plant and shall maintain records and furnish reports of measurements at the end of each month or as may be requested by the Division Engineer.

11. The applicant shall not operate Behrens Wells No. 1 - No. 5 at any time that there is insufficient non-tributary water or non-tributary effluent being replaced in accordance with paragraph 9.

12. This plan for augmentation shall be subject to reconsideration by the water judge on the question of injury to the vested rights of others for a period of 4 years from the date of this decree pursuant to 1973 CRS 37-92-304(6).

13. In constructing and maintaining wells which draw non-tributary water from designated aquifers, the applicant shall encase the well with an impervious lining at all levels, except at the level of the designated aquifer, to prevent withdrawal of groundwater and water in other aquifers. After construction of the well, applicant shall attach an identification tag, outside any well structure, specifying owner's name, name of well, permit number and aquifer.

14. It is also ordered that the conditional right herein awarded is hereby continued in full force and effect until October, 1987 . If Applicant desires to maintain such conditional decree, an application for a quadrennial finding of reasonable diligence shall be filed on or before October, 1987 or a showing made on or before such date that the conditional water right has become an absolute water right by reason of the completion of the appropriation.

DATED this 27th day of October, 1983.

RAYMOND S. LIESMAN
Water Referee
Water Division No. I

THE COURT FINDS: NO PROTEST WAS FILED IN THIS MATTER.

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: _____

ROBERT A. BEHRMAN
Water Judge
Water Division No. I
State of Colorado

CENTRAL FILES

IN THE WATER COURT IN AND FOR

WATER DIVISION I, STATE OF COLORADO

CASE NO. W-1132

IN THE MATTER OF THE APPLICATION FOR) WATER RIGHTS OF ETTA J. BEHRENS)	FINDINGS AND RULING OF THE REFEREE

THIS CLAIM, having been filed with the Water Clerk, Water Division I, on June 17, 1971, and the Referee being fully advised in the premises, does hereby find:

1. All notices required by law of the filing of this application have been fulfilled, and the Referee has jurisdiction of this application.

2. No statement of opposition to said application has been filed, and the time for filing such statement has expired.

3. The name and address of the applicant is:

   Etta J. Behrens
   Box 3
   Watkins, Colorado 80137

4. The name of the structure:

   Well No. 1-20199-2
   Well No. 2-20199-1
   Well No. 3-20199-3
   Well No. 4-20199-4
   Well No. 5-10561

5. The legal description of the structure:

   All of the following wells are located in Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

   Well No. 1-20199-2, beginning at the Southwest Corner of said Section 31 and bearing South 6°30' West 4936 feet.

   Well No. 2-20199-1, beginning at the Southwest Corner of said Section 31 and bearing South 20°02' West 3924 feet.

   Well No. 3-20199-3, beginning at the Southwest Corner of said Section 31 and bearing South 13°05' West 4991 feet.

   Well No. 4-20199-4, beginning at the Southwest Corner of said Section 31 and bearing South 22°31' West 3518 feet.

   Well No. 5-10561, located approximately 1350 feet North and 750 feet West of the Southeast Corner of said Section 31.

6. The source of water is: Groundwater

7. The date of appropriation:

Well No. 1-20199-2 - Spring of 1950
Well No. 2-20199-1 - Spring of 1950
Well No. 3-20199-3 - May 31, 1952
Well No. 4-20199-4 - June 30, 1953
Well No. 5-10561 - May 23, 1955

8. The amount of water claimed:

Well No. 1-20199-2 - 1.12 cubic feet per second 504
Well No. 2-20199-1 - 1.12 cubic feet per second 504
Well No. 3-20199-3 - .90 cubic feet per second 405
Well No. 4-20199-4 - .72 cubic feet per second 324
Well No. 5-10561 - 1.12 cubic feet per second 504

9. The use of the water is:

Well No. 1-20199-2, irrigation on the Northwest Quarter of the Southeast Quarter of Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

Well No. 2-20199-1, irrigation on the Southeast Quarter of the Southeast Quarter of Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

Well No. 3-20199-3, irrigation on the Southeast Quarter of the Southeast Quarter of Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

Well No. 4-20199-4, irrigation on the Northwest Quarter of the Southeast Quarter of Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

Well No. 5-10561, irrigation on the Southeast Quarter of the Northwest Quarter of Section 31, Township 3 South, Range 64 West of the 6th P.M., Adams County, Colorado.

WHEREFORE, the Water Referee rules that Etta J. Behrens be awarded a priority on Well No. 1-20199-2 of the Spring of 1950 for 1.12 cubic feet per second for irrigation purposes; a priority on Well No. 2-20199-1 of the Spring of 1950 for 1.12 cubic feet per second for irrigation purposes; a priority on Well No. 3-20199-3 of May 31, 1952 for .90 cubic feet per second for irrigation purposes; a priority on Well No. 4-20199-4 of June 30, 1953 for .72 cubic feet per second for irrigation purposes and a priority on Well No. 5-10561 of May 23, 1955 for 1.12 cubic feet per second for irrigation purposes.

DATED this 25th day of January, 1972.

No protest was filed in this matter
The foregoing ruling is confirmed
and approved, and is made the
Judgment and Decree of this court

Dated: February 14, 1972

Water Judge

Thomas J. Aron, Jr., Water Referee
Water Division I, State of Colorado

DISTRICT COURT
WATER DIVISION NO. 1

CASE NO. 80 CW 232

DILIGENCE

HAS BEEN FILED

SEE CASE NO. 87CW 210

DIV I

CASE NO. 80 CW 232

IS MODIFIED

SEE CASE NO. 86 CW 313

DISTRICT COURT, WATER DIVISION 1, COLORADO Court Address: P.O. Box 2038 Greeley, Colorado 80632	
GMJ FAMILY TRUST, DEREK AND SUSAN SWANGER, ROY ENTER, AND LYLLA JENSEN, AS SUCCESSORS IN INTEREST TO PLANET COMPANIES, Applicants, IN ADAMS COUNTY,	**Δ COURT USE ONLY Δ** Case Number: 2001CW185 (80CW232)
Attorneys: Petrock & Fendel, P.C. Carmen S. Hall, Atty. Reg. #19985 700 Seventeenth Street, Suite 1800 Denver, Colorado 80202 Telephone: (303) 534-0702	

FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE, JUDGMENT AND DECREE

This claim for change of water right having been filed in October, 2001, and all matters contained in the application having been reviewed, and testimony having been taken where such testimony is necessary, and such corrections made as are indicated by the evidence presented herein, the following is hereby the Ruling of the Referee as follows:

Dist 1

FINDINGS OF FACT

1. Names and addresses of Applicants:

   GMJ Family Trust
   47517 County Road 17
   Elizabeth, Colorado 80107

Derek and Susan Swanger and Roy Enter
1150 S. Xenia Street
Denver, Colorado 80231

Lylla Jensen
3244 Country Club Parkway
Castle Rock, Colorado 80104

2. Objections: A statement of opposition was filed by the City of Aurora. No other statements of opposition have been filed and the time for filing of such statements has expired.

3. Subject matter jurisdiction: Timely and adequate notice of the application was published as required by statute, and the Court has jurisdiction over the subject matter of this proceeding and over the parties affected hereby, whether they have appeared or not.

4. History of Case: The subject of this case is a decree entered in Case No. 80CW232 to Applicant Planet Companies in this court. In that decree, Denver, Arapahoe and Laramie-Fox Hills aquifer groundwater was adjudicated underlying approximately 375 acres of land located in the S1/2 of Section 31 (231 acres) and the SW1/4 of Section 32, T3S, R64W of the 6th P.M. as shown on Attachment A. The following annual amounts were decreed in Case No. 80CW232:

Aquifer	Annual Amount
Denver	50.0 acre-feet
Arapahoe	124.6 acre-feet
Laramie-Fox Hills	32.4 acre-feet

50.0 − 30.7 = 19.3
124.6 − 76.7 = 47.9
32.4 − 20.0 = 12.4

A. Objector City of Aurora is the owner and user of the water decreed in Case No. 80CW232 underlying and associated with the 231 acres located in Section 31 as shown on Attachment A in the following amounts:

Aquifer	Annual Amount
Denver	30.7 acre-feet
Arapahoe	76.7 acre-feet
Laramie-Fox Hills	20.0 acre-feet

No part of the decree entered in this Case No. 01CW185 shall affect any water owned and used by the City of Aurora and underlying the land in Section 31, as referenced herein, or decreed in Case Nos. W-1132, 80CW232, and 87CW210, including but not limited to Behrens Well Nos. 1 through 5.

B. Applicants are the owners and users of the water decreed in Case No. 80CW232 underlying and associated with the 144 acres located in Section 32 in the following amounts:

Aquifer	Annual Amount
Denver	16.3 acre-feet*
Arapahoe	47.9 acre-feet
Laramie-Fox Hills	12.4 acre-feet

*The interest of each of the Applicants in the Denver aquifer was reduced by 1 acre-foot and 3 acre-feet total in the amended decree for use through exempt wells, if necessary.

Applicant GMJ Family Trust is the owner of 76 acres, Derek and Susan Swanger and Roy Enter are owners of 44 acres, and Lylla Jensen is the owner of 24 acres of the total 144 acres as shown on Attachment A hereto and the following associated amounts of groundwater:

Aquifer	GMJ Family Trust	Swanger and Enter	Jensen	
Denver	9.2 acre-feet	4.9 acre-feet	2.2 acre-feet	16.3
Arapahoe	25.2 acre-feet	14.6 acre-feet	8.1 acre-feet	47.9
Laramie-Fox Hills	6.6 acre-feet	3.8 acre-feet	2.0 acre-feet	12.4

5. Applicants have dropped any claim to change their interests in the water rights decreed in Case No. 80CW232 in any way. However, the proceeding paragraph provides a current status of the ownership of said water rights as decreed in Case No. 80CW232.

JUDGMENT AND DECREE

6. The foregoing Findings of Fact are fully incorporated herein.

RULING ENTERED this 18 day of November, 2002.

Raymond S. Liesman
Water Referee
Water Division 1

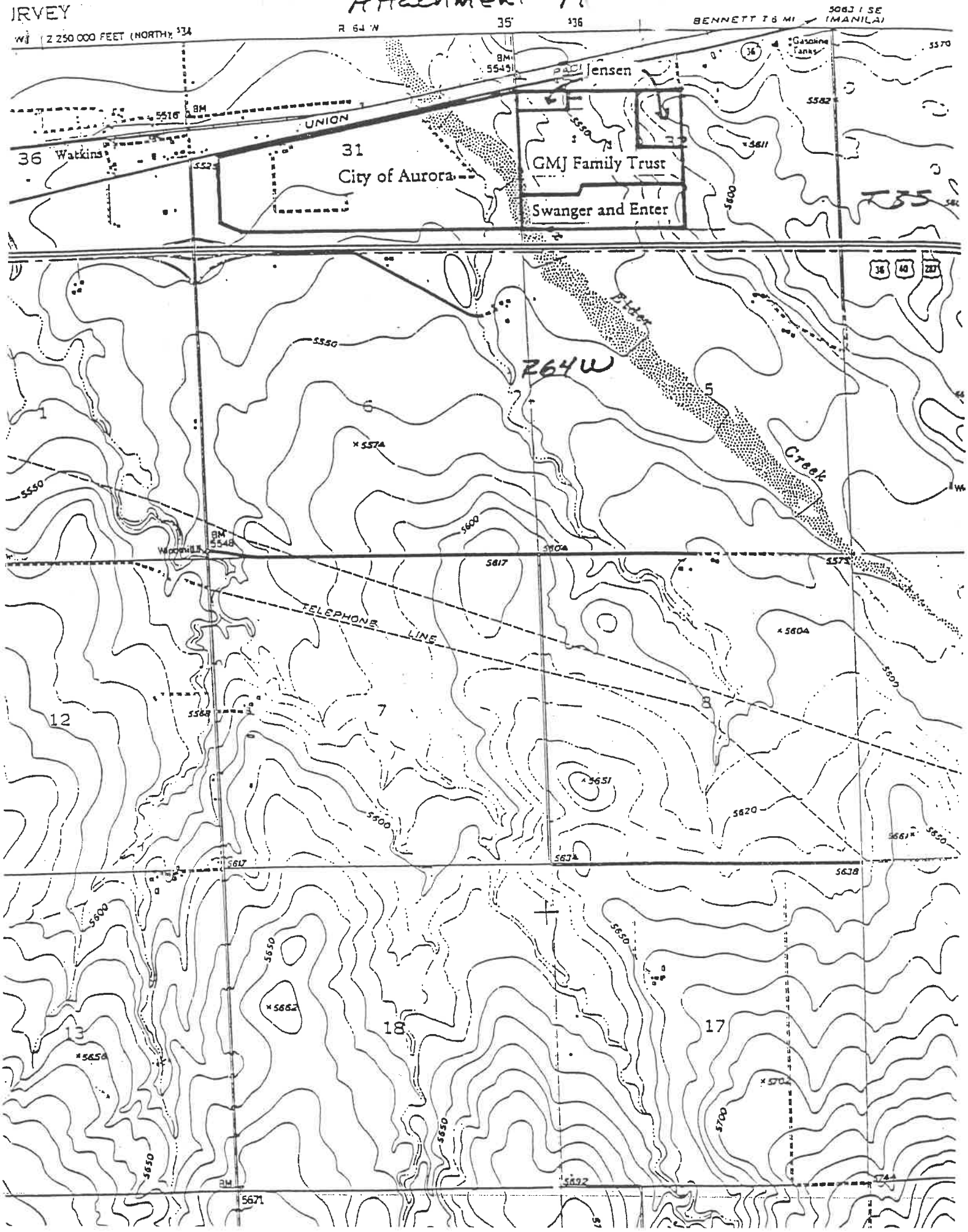
THE COURT DOTH FIND THAT NO PROTEST TO THE RULING OF THE REFEREE HAS BEEN FILED. THE FOREGOING RULING IS CONFIRMED AND APPROVED AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Date: DEC 0 9 2002

Jonathan W. Hays
Water Judge
Water Division 1

E INTERIOR
JRVEY

Attachment A



WILL SERVE LETTER

January 13, 2022

Michael Groselle
Modern Engineering Solutions
1565 Osceola St
Denver, CO 80402

Re: Parcel # 0181732301001

Dear Michael Groselle,

This letter is to confirm that Xcel Energy is your utility provider for electric service. In accordance with our tariffs, on file with and approved by the Colorado Public Utilities Commission, electric facilities can be made available to serve the project at Parcel # 0181732301001. The cost, and whether any reinforcements or extensions are required, for the Company to provide those facilities will be determined by your designer upon receipt of application and project plans.

Your utility service(s) will be provided after the following steps are completed:

- ***Application submitted to Xcel Energy's "Builders Call Line (BCL)"*** – once your application is accepted you will be assigned a design department representative who will be your primary point of contact
- ***Utility design is completed*** – you must provide your design representative with the site plan, the one - line diagrams, and panel schedules for electric and gas loads if applicable
- ***All documents provided by design representative are signed and returned***
- ***Payment is received*** (Residential Service Laterals if applicable)
- ***Required easements are granted*** - you must sign and return applicable easement documents to your Right-of-Way agent
- ***Site is ready for utility construction -*** the site ready information can be found on our website at may be viewed at Construction and Inspection | Xcel Energy.

An estimated scheduled in-service date will be provided once these requirements have been met. It is important to keep in mind that the terms and conditions of utility service, per our tariffs, require that you provide adequate space and an easement on your property for all gas and electric facilities required to serve your project, including but not limited to gas and electrical lines and meters, transformers, and pedestals. General guidelines for requirements can be found on our website at xcelenergy.com/InstallAndConnect.

Xcel Energy looks forward to working with you on your project and if I can be of further assistance, please contact me at the phone number or email listed below.

Sincerely,

Thomas Spisak
Xcel Energy Planner

Mailing address: Xcel Energy
3751 Fraser St
Aurora, CO 80011

Adams County
Agricultural Property Profile

Parcel Number: 0181732300002

Owners Name and Address:	**Property Address:**
JENSEN TERRYL KAYNE TRUST 50% INT ANDJENSEN VICKI D LIVING TRUST THE 50% INT 1565 GENESEE RIDGE RD GOLDEN CO 80401-8000	CO

Account Summary

Legal Description

SECT,TWN,RNG:32-3-64 DESC: PT OF THE SW4 OF SEC 32 DESC AS FOLS BEG AT A PT ON N LN OF SD SW4 660 FT W OF NE COR OF SD SW4 TH S 00D 00M 41S W 1009 FT TH N 89D 32M 03S E 659/88 FT M/L TO A PT ON THE E LN OF SD SW4 WHICH PT IS 990 FT S OF THE NE COR OF SD SW4 TH N 00D 00M 41S E 990 FT TH N 88D 48M 58S W 660 FT TO THE POB EXC RD (REC NO C0999663) 13/7770A

Subdivision Plat

N/A

Account Summary

Account Numbers	Date Added	Tax District	Mill Levy
R0127981	10/18/2000	446	84.010

Permits

Permit Cases

PRJ2004-00028

Sales Summary

December 29, 2021,

Adams County Public Works Department
4955 E 74th Ave,
Commerce City, CO 80022

Columbine Duplexes Traffic Impact Analysis

Dear Adams County Public Works,

Modern Engineering Solutions, LLC ("MES") conducted a Traffic Impact Analysis (TIA) on behalf of 5280 Beach to support the request for a new development located in Adams County near the intersection of Colfax Ave and Imboden Road. The current development plans call for a gravel road, parking, detention ponds, and 8 outdoor volleyball courts. Figure 1 shows an aerial of the subject development tract.

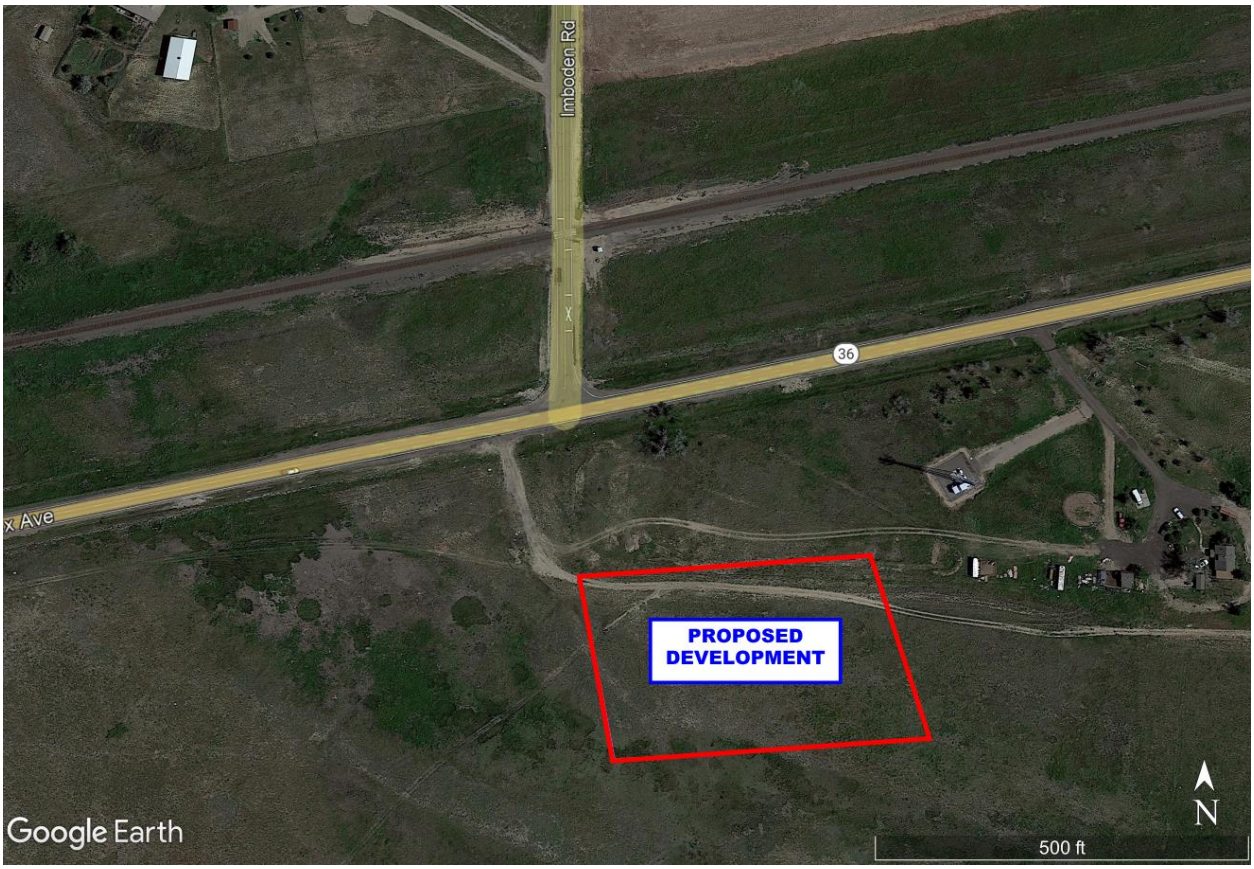


Figure 1 – Site Location Map

LAND USE AND TRIP GENERATION FROM THE DEVELOPMENT

MES used the most recent site plan of the site prepared by MES and 5280 Beach. For purposes of this report the site was assumed to be developed as "Tennis Courts." Beach volleyball courts are similar to tennis courts in size as well as the amount of people present to participate in an event. MES generated trips for the proposed development for the build out scenario, assuming full build out by the end of 2022. Trips were generated using the historical data published by the Institute of Transportation Engineers' Trip

Generation Manual, 10th Edition. Trips were generated for the typical weekday AM and PM peak hours. Table 1 shows the land use, density, and trip generation calculations for the build out scenario.

Table 1 – Site Generated Traffic

ITE Code	Land Use Type	Unit	Number of Units	Daily Rate	Daily Total Trips	AM Hour	PM Hour
490	Tennis Courts	Courts	8	30.32	243	N/A	34

IMPACTS ON SURROUNDING AREAS

Traffic to this development will primarily come in and out from Colfax Ave. on the driveway located in the Imboden Road Right of Way that leads into the development proposed development.

Michael Groselle, P.E.

If you have any questions or concerns about the responses feel free to reach out to me.

Sincerely,

Michael Groselle, P.E.
Mike@mod-eng.com
Office: 720-815-7937
Cell: 214-734-2305

COLORADO LICENSED
MICHAEL ROBERT GROSELLE
52071
PROFESSIONAL ENGINEER
2021-12-29

Michael Groselle

From: Posey - DNR, Hannah <hannah.posey@state.co.us>
Sent: Wednesday, November 24, 2021 11:02 AM
To: Michael Groselle
Subject: Re: Adams County 404 Permitting Request
Attachments: 2021 CPW Recommended Survey Protocol for Burrowing Owls 04062021.pdf

Mike,

I looked at your AJD requests. It looks like the project is outside of the buffer zone for Box Elder Creek. The other concern I would have for this area is if there are prairie dogs, there's potential for burrowing owls. Burrowing owls are protected species. CPW recommends that if any earth moving will begin March 15- August 31, a survey should be conducted. I attached survey protocol to this email. Please let me know if you have any questions.

Thanks

On Thu, Nov 18, 2021 at 5:44 PM Michael Groselle <Mike@mod-eng.com> wrote:

I just sent in an email to Aaron the ADJ request. I am attaching it here as well!

Regards,

Michael Groselle, P.E.

Chief Executive Officer

Office: 720-815-7937

Cell: 214-734-2305

MODERN ENGINEERING SOLUTIONS

From: Posey - DNR, Hannah <hannah.posey@state.co.us>
Sent: Thursday, November 18, 2021 1:33 PM
To: Michael Groselle <Mike@mod-eng.com>
Subject: Re: Adams County 404 Permitting Request

COLORADO
Parks and Wildlife
Department of Natural Resources

RECOMMENDED SURVEY PROTOCOL AND ACTIONS TO PROTECT NESTING BURROWING OWLS

Western Burrowing Owls (*Athene cunicularia hypugaea*) are commonly found in prairie dog towns throughout Colorado. Burrowing owls require prairie dog or other suitable burrows (e.g. badger, Wyoming ground squirrel) for nesting and roosting. Western burrowing owls breed throughout the western United States, southern Canada, and northern Mexico and winter in the southern United States and throughout Mexico. Colorado's burrowing owls are mostly migratory but overwintering owls have been documented.

Federal and state laws prohibit the harming or killing of burrowing owls and the destruction of active nests. It is quite possible to inadvertently kill burrowing owls during prairie dog poisoning projects, removal of prairie dogs, destruction of burrows and prairie dogs using a concussive device, or during earth moving for construction. Because burrowing owls often hide in burrows when alarmed, it is not practical to haze the birds away from prairie dog towns prior to prairie dog poisoning/removal, burrow destruction, or construction activity. Because of this, Colorado Parks and Wildlife (CPW) recommends surveying prairie dog towns for burrowing owl presence before potentially harmful activities are initiated.

The following guidelines are intended as advice on how to determine if burrowing owls are present in a prairie dog town, and what to do if burrowing owls are detected. These guidelines do not guarantee that burrowing owls will be detected if they are present. However, adherence to these guidelines will greatly increase the likelihood of detection.

Seasonal Timing

Burrowing owls typically arrive on breeding grounds in Colorado in late March or early April, with nesting beginning a few weeks later. Active nesting has been recorded and may be expected from late March through early August. Adults and young may remain at prairie dog towns until migrating to wintering grounds in late summer or early autumn.

Surveys should be conducted during times when burrowing owls may be present on prairie dog towns. Although nesting most commonly occurs March 15th through August 31st, burrowing owls may be present at burrows several months after young have fledged. Therefore, CPW recommends that targeted surveys should be conducted for any activities resulting in ground disturbing destruction or poisoning of burrows between March 15th and October 31st. Note, there is a small chance to encounter burrowing owls in Colorado during the winter. Although CPW does not necessarily recommend surveys between November 1 and March 14, if burrowing owls are known to be present in an area in the winter, CPW's recommendations apply.

Daily Timing

Burrowing owls may be active throughout the day and night; however, peaks in activity in the morning and evening make these the best times for conducting surveys (Conway and Simon 2003). Surveys should be

Wildlife Specialties LLC

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December 22, 2021

Michael Groselle, CEO via E-mail
Modern Engineering Solutions, LLC
71 South Fenton Street
Lakewood, CO 80226

Subject: Burrowing Owl Habitat Assessment – 5280 Beach

Dear Michael:

This letter provides the results of the Western Burrowing Owl (*Athene cunicularia hypugaea* - BUOW) habitat assessment conducted today December 22, 2021 at the property known as 5280 Beach near Watkins, Colorado. Migratory birds, including the Western Burrowing Owl, are protected under state and federal laws. In Colorado, the Colorado Parks and Wildlife (CPW) enforces these laws and provides guidance on how to avoid disturbing nesting BUOW to limit the chance of a violation of these laws.

Western Burrowing Owl most commonly are found in prairie dog towns in which they nest in inactive prairie dog burrows. Burrows created by other species (e.g., coyotes, foxes, ground squirrels etc.) are used as well. Areas in which BUOW habitat is found is always in areas with very short vegetation so that the BUOW can detect predators. In Colorado surveys for nesting BUOW or burrows being used outside of the nesting season are required between March 15th and October 31st (nesting occurs between March 15th and August 31st). Surveys are only required when suitable habitat is present within the project area or within 660 feet of the project area or where disturbance will occur (for larger projects such as residential developments or near drilling rigs the buffer is enlarged to ¼ mile). Activity closer than these buffers may lead to nest abandonment or other indirect harm to the owls.

Habitat within the 5280 Beach project area is highly modified and has been changed from the native shortgrass prairie habitat. The plant community is comprised of predominantly non-native species (some of which are invasive species) including Canada thistle (*Cirsium arvense* – identified as a List B species under Colorado law), cheatgrass (*Bromus tectorum*), crested wheatgrass (*Agropyron cristatum*), and smooth brome (*Bromus inermis*). Native plant species included blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), and plains prickly pear cactus (*Opuntia polyacantha*); none were dominant and were not found throughout the project area. These grasses and other plants were robust and in some areas over three feet in height and no bare ground or areas with short vegetation is present within the project area. Photos 1 and 2 are representative of the project area.

There is no suitable BUOW habitat present within the project area and the 660-foot buffer. No prairie dogs are present within the project area or within the buffer (none were seen within ¼ mile of the project area from publicly accessible roads). The combination of the lack of prairie dog burrows and the height of the vegetation does not provide suitable nesting or roosting BUOW habitat.

One raptor nest (possibly a Red-tailed Hawk [*Buteo jamaicensis*]) nest was noticed approximately 0.2 miles to the west of the project area. I wanted to make you aware of this because the CPW recommends no surface occupancy (beyond that which historically occurred in the area) within ⅓ mile radius of active nests and includes no permitted, authorized, or human encroachment activities within ⅓ mile radius of active nests from February 15 through July 15. If earth work or other disturbances will occur during that time period, I recommend monitoring the nest to determine if it is active and if so to coordinate with CPW. Development that encroaches on rural nest sites is more likely to cause abandonment.

Please contact me if you have questions.

Sincerely,

Jerry Powell, M.S.
Certified Ecologist

Photo 1: 5280 Beach from the center of the northern project boundary looking south.

Photo 2: 5280 Beach from the southeastern corner of the project area west.

Electronically Recorded RECEPTION#: 2021000073247,
6/17/2021 at 8:12 AM, 1 OF 2,
REC: $18.00 DocStamp: $27.50
TD Pgs: 2 Josh Zygielbaum, Adams County, CO.

After Recording Return to
Sovereign One LLC, a Colorado limited liability company
Susan Maureen Gillan
7623 Ingalls Street
Arvada, CO 80003

SPECIAL WARRANTY DEED

This Deed, made **June** 16 **, 2021**

Between **Watkins Storage Company, Limited Liability Company, a Colorado limited liability company, who acquired title as Watkins Storage Company, LLC, a Colorado limited liability company,** grantor(s) and **Sovereign One LLC, a Colorado limited liability company**, whose legal address is **7623 Ingalls Street, Arvada, CO 80003**, grantee(s)

WITNESSETH, That the grantor(s), for and in the consideration of the sum of TWO HUNDRED SEVENTY-FIVE THOUSAND DOLLARS AND NO/100'S ($275,000.00) the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm, unto the grantee(s), his heirs and assigns forever, all the real property together with improvements, if any, situate, lying and being in the County of **Adams,** State of **COLORADO** described as follows:

Lot 1, Block 1, Watkins Storage Subdivision, County of Adams, State of Colorado.

also known by street and number as **1970 Imboden Road, Watkins, CO 80137**

TOGETHER with all and singular hereditaments and appurtenances, thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances and except taxes and assessments for the year 2021 and subsequent years, and subject to those items shown on the commitment.

TO HAVE AND TO HOLD said premises above bargained and described, with the appurtenances, unto the grantee, their heirs and assigns forever. The grantor(s), for themselves, their heirs and personal representatives or successors, does covenant and agree that they shall and will WARRANT AND FOREVER DEFEND the above-bargained premises in the quiet and peaceable possession of the grantee(s), their heirs and assigns, against all and every person or persons claiming the whole or any part thereof, by, through or under the grantor(s).

The singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

IN WITNESS WHEREOF, the grantor has executed this on the date set forth above.

SELLER:

Watkins Storage Company, LLC, a Colorado limited liability company

By: _____
Terryl K. Jensen, Manager

By: _____
Vicki D. Jensen, Manager

STATE OF COLORADO }ss:
COUNTY OF Denver

The foregoing instrument was acknowledged before me **June 16, 2021** by **Terryl K Jensen and Vicki D. Jensen as Managers of Watkins Storage Company, Limited Liability Company, a Colorado limited liability company, who acquired title as Watkins Storage Company, LLC, a Colorado limited liability company** .
Witness my hand and official seal.

TIFFANY DELIA GILBERT
Notary Public – State of Colorado
Notary ID 20014036156
My Commission Expires Jan 5, 2022

_____
Notary Public
My Commission expires: 1.5.2022

Adams County Treasurer & Public Trustee

RECEIPT OF PAYMENT (Tax, Fees, Costs, Interests, Penalties)

Account	Parcel Number	Receipt Date	Receipt Number
R0152718	0181732301001	Feb 26, 2021	2021-02-26-NetVantage-16004

WATKINS STORAGE COMPANY LLC
1565 GENESEE RIDGE RD
GOLDEN, CO 80401-8000

Situs Address	Payor
1970 IMBODEN RD	

Legal Description

SUB:WATKINS STORAGE SUBDIVISION BLK:1 LOT:1

Property Code	Actual	Assessed	Year	Area	Mill Levy
INDUS UNIMPROVED LND - 0300	40,600	11,770	2020	446	73.291

Payments Received

Check	$862.64
Check Number 00220014	

Payments Applied

Year	Charges	Billed	Prior Payments	New Payments	Balance
2020	Tax Charge	$862.64	$0.00	$862.64	$0.00
				$862.64	$0.00
			Balance Due as of Feb 26, 2021		**$0.00**

WE ARE EXPANDING TO SERVE YOU BETTER! WATCH FOR NEW LOCATIONS ON OUR WEBSITE!

4430 S ADAMS COUNTY PKWY C2436
BRIGHTON CO 80601
[Stay Safe! Please use website services www.adcotax.com]

Email: treasurer@adcogov.org
Telephone: 720-523-6160

ALL CHECKS ARE SUBJECT TO FINAL COLLECTION. THANK YOU FOR YOUR PAYMENT!