

PROJECT RIO PRELIMINARY UTILITIES PLAN

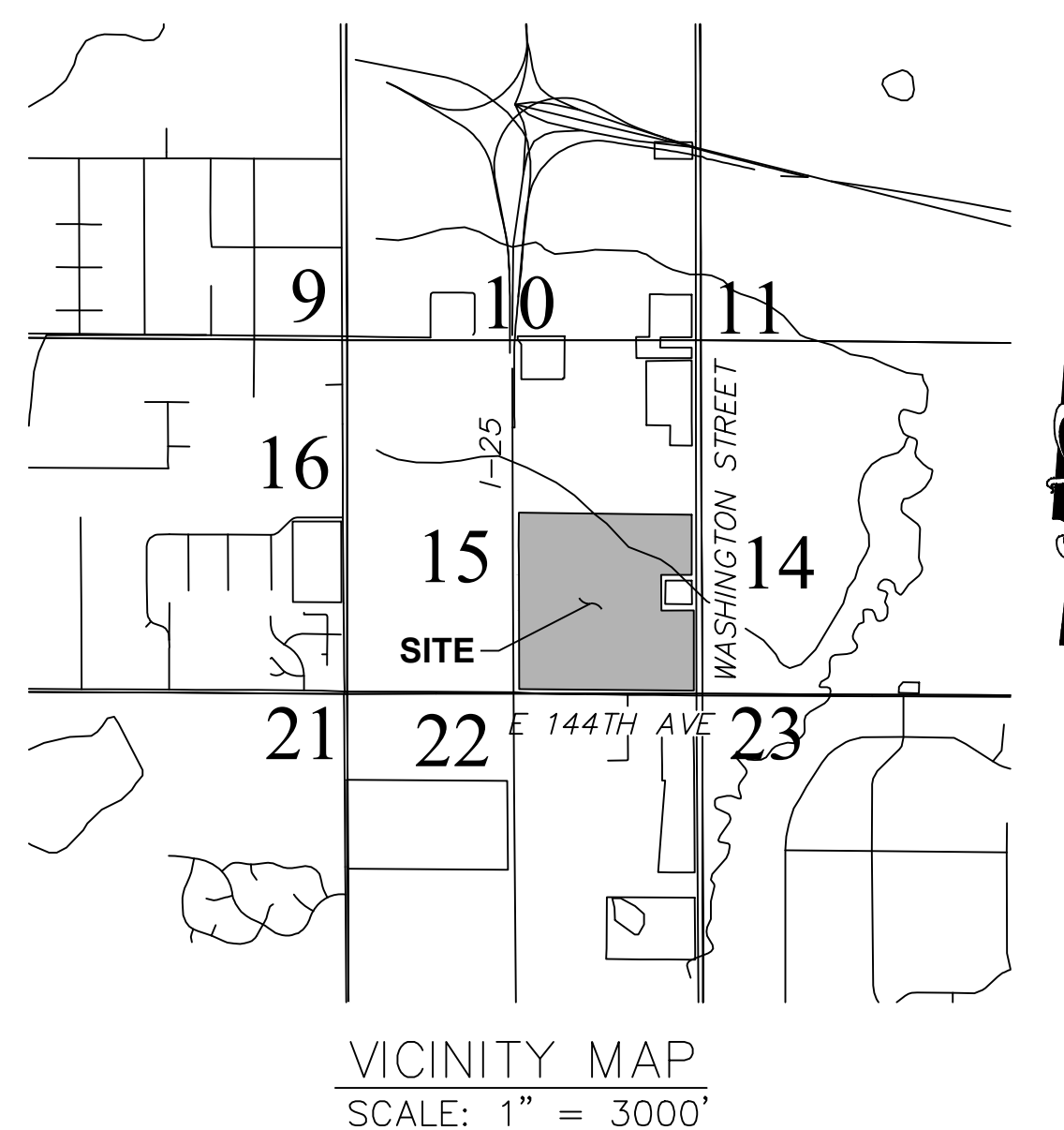
A PARCEL LOCATED IN THE SOUTHEAST QUARTER OF SECTION 15,
TOWNSHIP 1 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN,
CITY OF THORNTON, COUNTY OF ADAMS, STATE OF COLORADO

SHEET INDEX

SHEET No.	DRAWING No.	DESCRIPTION	LAST REVISED
1	CU100	COVER SHEET	
2	CU101	PRELIMINARY WATER SERVICE PLAN	
3	CU102	PRELIMINARY SANITARY SEWER PLAN	

PLAN REFERENCES

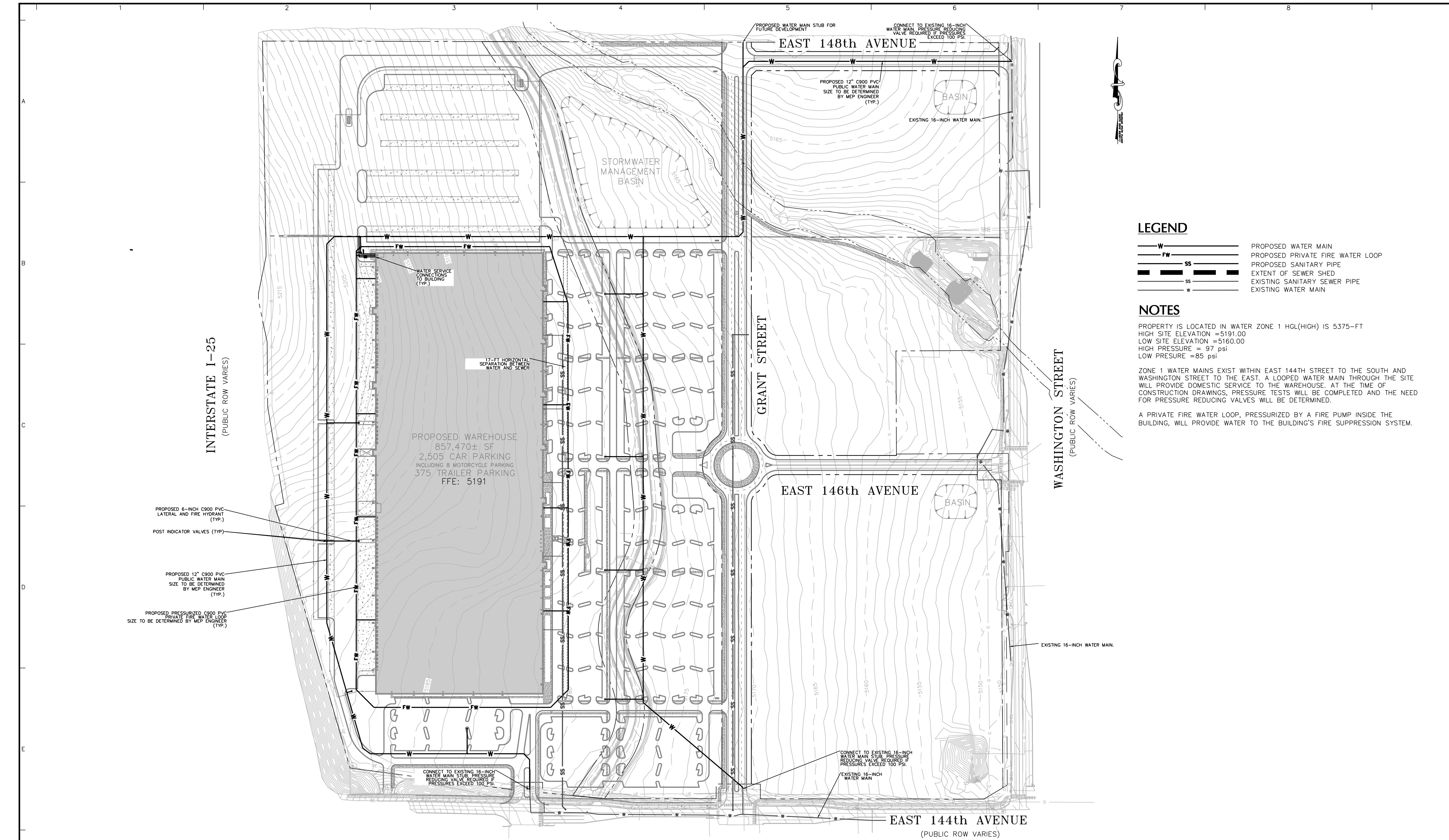
- BOUNDARY INFORMATION FROM:
 - A PLAN SET ENTITLED "ALTA/NSPS LAND TITLE SURVEY, SE 1/4 SEC 15, T1S, R68W, 6TH P.M. ADAMS COUNTY COLORADO" PREPARED BY AZTEC CONSULTANTS, INC. DATED 8/16/2017. (BULL CROSSING - PARCELS A & B).
 - A PLAN SET ENTITLED "ALTA/NSPS LAND TITLE SURVEY, SE 1/4 SEC 15, T1S, R68W, 6TH P.M. ADAMS COUNTY COLORADO" PREPARED BY AZTEC CONSULTANTS, INC. DATED 8/16/2017, LAST REVISED 9/16/2016. (THORNTON 40 - PARCELS C & D).
- TOPOGRAPHIC AND UTILITY INFORMATION FROM A CAD FILE RECEIVED ELECTRONICALLY FROM AZTEC CONSULTANTS, INC. ON 9/14/2016 AND 1/24/2017.
- FLOOD PLAIN INFORMATION FROM FEMA MAP NUMBER 08001C0303J (VERSION 2.3.2.2), REVISED TO REFLECT LOMR EFFECTIVE: NOVEMBER 25TH, 2016.
- WETLAND BOUNDARIES AS FIELD DELINEATED BY LANGAN ENGINEERING ON DECEMBER 8TH, 2016. PLANS SHOW APPROXIMATE LOCATION, DELINEATION PENDING JURISDICTIONAL DETERMINATION FROM USACE.



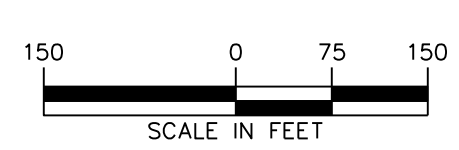
GENERAL NOTES

- ALL WATER LINES AND SANITARY SEWERS SHALL BE CONSTRUCTED PER THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS AND ALL APPLICABLE MASTERPLANS IN EFFECT AT THE TIME OF DEVELOPMENT. LARGER LINES SHALL BE CONSTRUCTED IF NECESSARY TO SERVE THE DEVELOPMENT. LINE SIZES SHALL BE DETERMINED WITH THE APPROVAL OF THE FINAL UTILITY REPORT.
- ALL OFF-SITE EASEMENTS FOR THE CONSTRUCTION OF THE WATER AND SANITARY SEWER SYSTEMS SHALL BE ACQUIRED BY THE DEVELOPER PRIOR TO APPROVAL OF SUBDIVISION PLAT. THE RECEPTION NUMBERS FOR THESE EASEMENTS SHALL BE INCLUDED ON THE PLAT.
- ALL WATER LINES CONSTRUCTED SHALL BE LOOPED, AND SYSTEM PRESSURE REDUCING VALVES SHALL BE UTILIZED TO KEEP THE STATIC PRESSURES BELOW 100 PSI. A MINIMUM STATIC PRESSURE OF 40 PIS SHALL BE MAINTAINED ON THE SITE.
- COORDINATION IS REQUIRED FOR SERVING WATER AND SANITARY SEWER TO ADJACENT PROPERTY OWNERS. STUB-OUTS SHALL BE PROVIDED FOR FUTURE DEVELOPMENT OF THESE PROPERTIES.
- THE DEVELOPER IS RESPONSIBLE FOR ANY IMPROVEMENTS TO APPLICABLE LIFT STATIONS NECESSARY TO SERVE THIS DEVELOPMENT. IMPROVEMENTS WILL BE DETERMINED IN CONJUNCTION WITH THE FINAL UTILITY REPORT.
- A FINAL UTILITY REPORT WILL BE REQUIRED WITH THE DEVELOPMENT OF EACH PARCEL. ALL NECESSARY IMPROVEMENTS REQUIRED TO SERVE THE DEVELOPMENT ARE THE RESPONSIBILITY OF THE DEVELOPER.
- THE OWNER SHALL AGREE TO PARTICIPATE IN ALL REIMBURSEMENT AGREEMENTS ASSOCIATED WITH THE PROPERTY.
- ALL METERS MUST BE SIZED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE AND ALL ADOPTED APPENDICES IN EFFECT AT THE TIME OF APPROVAL.

			 300 Kimball Drive, Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan Engineering and Environmental Services, Inc. Langan CI, Inc. Langan International LLC Collectively known as Langan		Project		Drawing Title		Project No.		Drawing No.							
					PROJECT RIO A PARCEL LOCATED IN THE SOUTHEAST QUARTER OF SECTION 15, TOWNSHIP 1 SOUTH, RANGE 68 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF THORNTON ADAMS COUNTY STATE OF COLORADO		PRELIMINARY UTILITY PLAN COVER SHEET		100612301 Date: 1/27/2017 Scale: N/A Drawn By: DTF Checked By: MRG		CSP CU100 Sheet 1 of 3							
<table border="1"> <thead> <tr> <th>Date</th> <th>Description</th> <th>No.</th> </tr> </thead> <tbody> <tr> <td colspan="3">REVISIONS</td> </tr> </tbody> </table>			Date	Description	No.	REVISIONS			SIGNATURE: RICHARD BURROW DATE SIGNED: _____ PROFESSIONAL ENGINEER CO Lic. No. PE.0050315									
Date	Description	No.																
REVISIONS																		



PROPOSED 6-INCH C900 PVC LATERAL AND FIRE HYDRANT (TYP.)
POST INDICATOR VALVES (TYP.)
PROPOSED 12" C900 PVC PUBLIC WATER MAIN SIZE TO BE DETERMINED BY MEP ENGINEER (TYP.)
PROPOSED PRESSURIZED C900 PVC PRIVATE FIRE WATER LOOP SIZE TO BE DETERMINED BY MEP ENGINEER (TYP.)



Date	Description	No.
REVISIONS		

SIGNATURE _____ DATE SIGNED _____
 RICHARD BURROW
 PROFESSIONAL ENGINEER CO Lic. No. PE.0050315

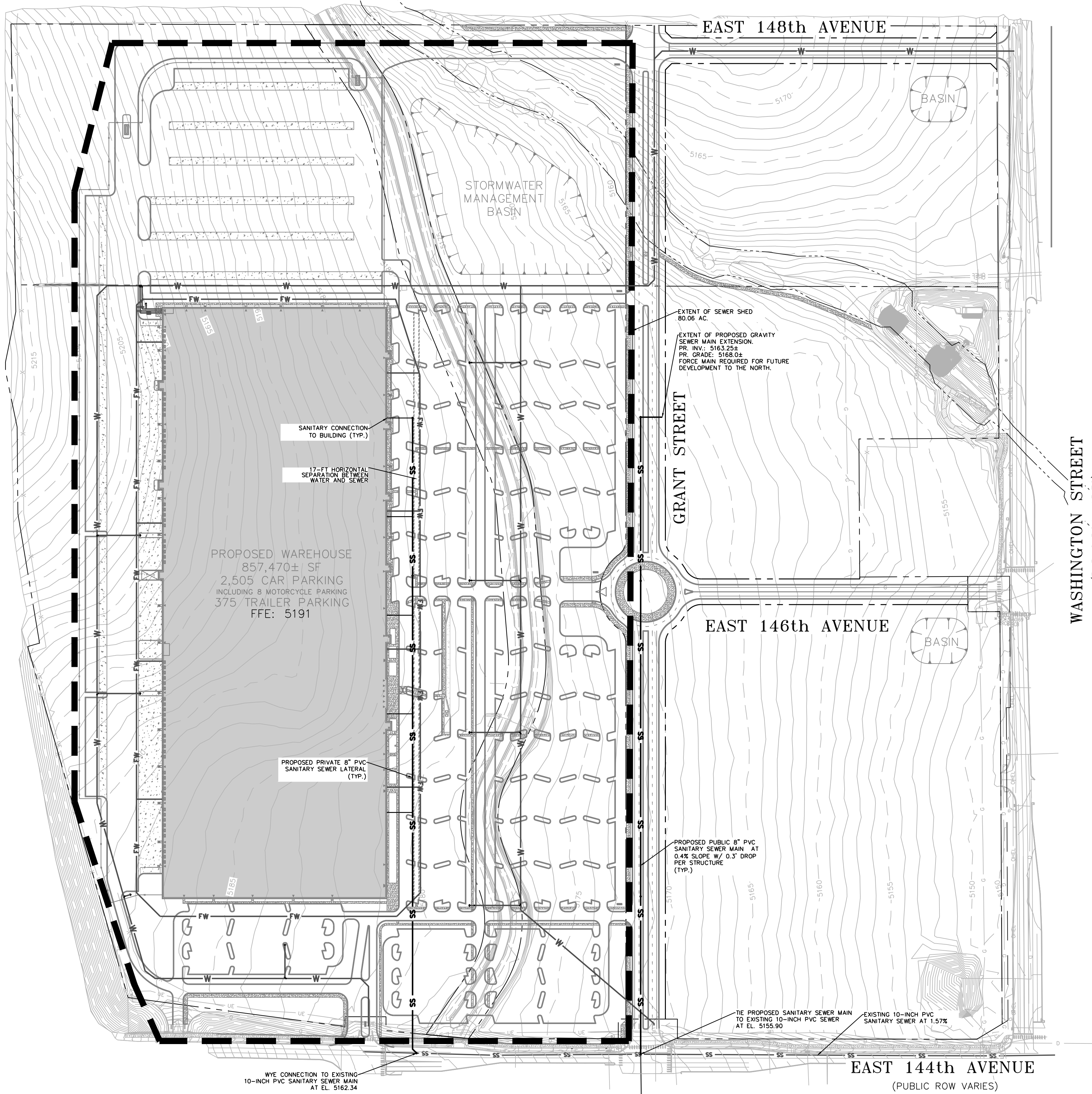
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 Collectively known as Langan

Project
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 CITY OF THORNTON
 ADAMS COUNTY STATE OF COLORADO

Drawing Title
PRELIMINARY WATER PLAN

Project No. 100612301	Drawing No. CSP CU101
Date 1/27/2017	
Scale 1" = 150'	
Drawn By DTF	Checked By MRG
Sheet 2 of 3	

INTERSTATE I-25
(PUBLIC ROW VARIES)



LEGEND

- W — PROPOSED WATER MAIN
- FW — PROPOSED PRIVATE FIRE WATER LOOP
- SS — PROPOSED SANITARY PIPE
- SS — EXTENT OF SEWER SHED
- W — EXISTING SANITARY SEWER PIPE
- W — EXISTING WATER MAIN

NOTES

AN EXISTING SANITARY SEWER MAIN IS LOCATED SOUTH OF THE SITE IN 144TH STREET.
THE ANTICIPATED SANITARY LOAD IS APPROXIMATELY 1,200,000 GALLONS PER MONTH (EQUIVALENT TO 40,000 GALLONS PER DAY) BASED ON RECORDS FROM SIMILAR FACILITIES.



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Drawing Title: **PRELIMINARY SEWER PLAN**

Project No. 100612301
Date 1/27/2017
Scale 1" = 150'
Drawn By DTF
Checked By MRG

Drawing No. CSP CU102
Sheet 3 of 3