



Correspondence Between Staff and Applicant

Approval Letter

GENTRY ON THE GREEN – 1st REVIEW LETTER – APPLICANT RESPONSES

11-ZN-2019

Target Date: Resubmittal to City - August 19,2019

Comment	Applicant Response
2001 General Plan:	
1. The major General Plan amendment narrative briefly (page 11) addresses the criteria associated with the Administration of the General Plan Section of the 2001 General Plan (pages 20-23 of the General Plan). With the next submittal, please respond clearly identifying all four criteria utilized in evaluating an amendment and specifically state all criteria that trigger a major amendment for this application.	<i>SECTION II.A of the Development Plan (DP) revised to include all four criteria</i>
2. Page 14 of the applicant’s narrative states that, “the only requested modification is to increase the maximum PUD property size from 25 acres to 42 acres to accommodate both phases of the proposed development plan into one application”/ Please note that the gross acreage of the site is 41.5 acres . as noted on Page 11 associated with the major General Plan amendment.	<i>Acknowledged. 42 acres was identified in the amended development standards because we elected to round up. Amended standards remain with 42 acres.</i>
3. Page 15 of the major General Plan amendment narrative briefly mentions Scottsdale’s Guiding Principles but does not qualify how the request responds to them. Upon resubmittal please respond to the following principles: Enhance Neighborhoods, Support Economic Vitality, Advance Transportation and Value Scottsdale’s Unique Lifestyle & Character.	<i>SECTION II.A revised to include a brief response to Enhance Neighborhoods, Support Economic Vitality, Advance Transportation and Value Scottsdale’s Unique Lifestyle & Character.</i>
4. Please respond to Goal 4, bullet 3 of the Character and Design Element specific to this site falling within the Suburban Streetscape Type, illustrating compatibility in the use of landscape material between pedestrians and transportation routes through the Greenbelt and Camelback Road frontage. Please also respond to Goal 4, bullet 12, of the Character and Design Element . and Goal 1, bullets 14 and 18 of the Open Space and Recreation Element, clarifying on both the site plan and landscape plan if there is any proposal related to landscaping within the public right-of-way along Hayden Road. Existing Aleppo Pine along Hayden Road frontage should be preserved to maintained through this proposal.	<i>SECTION IV.A revised to include additional bullets and responses. Open Space Goal 1, bullet 18 does not appear to be applicable (Scenic Corridor?). However, bullet 17 was added to discuss the importance of the Indian Bend Wash as a “Scottsdale landmark.”</i>
5. Please also provide a response how the proposed zoning district map amendment will be consistent with Character and Design Element: Goal 4 - Bullet 2; Goal 5 - Bullets 11 and 12; Goal 7 - Bullet 4.	<i>SECTION IV.A revised to include additional bullets and responses. Goal 4, bullet 2 applies to Downtown/Urban streetscapes. This site is located within the Suburban streetscape as discussed under Goal 4, Bullet 3 and identified in the Staff comment under #4. above.</i>
6. Page 2 of the applicant narrative briefly mentions a “voluntary contribution” to public art. Upon resubmittal please clarify if this contribution will be made to Scottsdale Public Art as a monetary contribution or public art piece contribution. Additionally, and if appropriate, please speak to the value of the contribution and the impact it is expected to make either on or offsite to the subject site. To this end, please respond to Goal 5 of the Character and Design Element and any applicable bullets, that will respond to how this proposal will build upon the community’s image and lifestyle by maximizing the potential of public art to enrich the daily lives of people that live in or visit Scottsdale.	<i>Regarding the voluntary contribution to public art, it is the developer’s intent for the public art installation/construction to occur on the Gentry site. SECTION I.A revised. SECTION IV.A revised to include additional bullets and responses regarding public art.</i>

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7. Please respond to Goal 6 of the Character and Design Element which recognizes the value and visual significance that landscaping has upon the character of the community and maintain standards that result in substantial mature landscaping that reinforces the character of the city. The response should identify how the proposed landscaping plan will be equal to or better at implementing this goal.	<i>SECTION IV.A revised to include additional response regarding landscaping.</i>
8. Please respond to Goal 4, and applicable supporting bullets, of the Land Use Element which seeks to maintain a balance of land uses that support a high quality of life, and establish a diverse mixture of housing and leisure opportunities and the economic base needed to secure resources to support the community. Please include objectives of the Southern Scottsdale Character Area Plan in the response and state how a Mixed Use Neighborhood land use designation will equally or better implement the objectives than an Urban Neighborhood land use designation.	<i>SECTION IV.A revised to include bullet 5 and response language that speaks to the balance of land uses and appropriateness of the request for Mixed-Use Neighborhoods.</i>
9. Please respond to Goal 5, bullet 8, of the Land Use Element addressing why the sought request is appropriate for this location of the city . in terms of encouraging alternative modes of transportation.	<i>SECTION IV.A revised to include bullet 8.</i>
10. Please respond to Goal 7, bullets 1, 2, and 5, of the Land Use Element in describing how the proposed redevelopment will sensitively integrate, now as a designated Mixed Use Neighborhoods land use designation, into the surrounding physical and natural environments, the neighborhood setting, and the neighborhood itself.	<i>SECTION IV.A revised to include Goal 7 and bullets.</i>
11. Please respond to Goal 9, bullets 3 and 4, of the Land Use Element addressing how the proposed redevelopment will provide for uses that will create a high level of synergy while respecting the character of existing adjacent neighborhoods.	<i>SECTION IV.A revised to include additional bullets.</i>
12. Please respond to Goal 1, along with any applicable bullets, of the Economic Vitality Element, in addressing how the proposed redevelopment will sustain and strengthen Scottsdale’s position as a premier and international and national tourism destination and resort community.	<i>SECTION IV.A revised to include Goal 1 and applicable bullets.</i>
13. Page 6 of the applicant’s narrative describes the bicycle tourism industry; however, it does not identify the source for the information about the number of races that exist both locally and at a statewide level. With a resubmittal, please expand the discussion to include more specific information to Scottsdale that is sourced; please consider sourcing Experience Scottsdale and Scottsdale Tourism Department. To this end, please respond to Goal 4, bullet 4 of the Economic Vitality Element that will address how the proposed redevelopment furthers compatibility with Scottsdale’s economy.	<i>SECTION I.E. revised.</i>
14. Please respond to Goal 5, bullets 3, 5, and 6, of the Economic Vitality Element, addressing how the location of the non-residential development responds to the surrounding neighborhood. Please respond to this request in consideration of both the proposed site plan as well as the alternate site plan showing the grocery store option along North 78th Street.	<i>SECTION IV.A revised to include Goal 5 and bullets. Note that the grocery store option has been removed from the plan and thus bullet 3 does not apply.</i>

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15. Please note the response provided for Goal 7 of the Economic Vitality Element is repeated in two locations; see pages 23 and 25.	<i>SECTION IV.A revised – the repeated Goal 7 has been removed.</i>
16. Please respond to Goal 3, bullets 1, 3 and 5, of the Housing Element, addressing how the proposed development, now as a Mixed Use Neighborhood land use designation, will meet the socioeconomic needs of people who live and work near this location of the city. To this end, please also include a response to Goal 4, bullet 1, 4, and 6 of the Housing Element, which seeks to encourage the development of work force housing in new development, near commercial, and near transit areas.	<i>SECTION IV.A revised. Goal 3, bullet 3 and 5 do not apply, bullet 1 was added. Goal 4, bullet 1 and 6 were previously included. Bullet 4 was added.</i>
17. Please respond to Goal 10, along with any applicable bullets, of the Preservation and Environmental Planning Element, addressing how the proposed development may, if at all, utilize green building alternatives that support sustainable desert living. a. Please note, Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City’s Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource. More information on this initiative can be found at: https://sustainability.asu.edu/sustainable-cities/resources/lid-handbook/	<i>SECTION IV.A revised to include Goal 10 and relevant bullets. Noted regarding the City LID and GI programs.</i>
18. Page 28 of the applicant’s narrative states in response to Goals of the Growth Area Element, that “the proposed development will tie into existing infrastructure and systems will be upgraded where deemed appropriate.” Please clarify that any public infrastructure that will need to be upgraded as a result of this development proposal will be paid for by the developer.	<i>SECTION IV.A Growth Area revised regarding infrastructure.</i>
19. Please respond to Goal 1, bullet 3, of the Community Mobility Element, addressing how the proposed development, will enhance the unique character of Scottsdale through the design of the sites frontage to North Hayden Road.	<i>SECTION IV.A revised to include Goal 1 and bullet 3.</i>
20. Please respond to Goal 11 and any applicable bullets, of the Community Mobility Element, addressing how the proposed development, as a Mixed Use Neighborhood land use designation, will provide an opportunity for building “community” through neighborhood mobility.	<i>SECTION IV.A revised to include Goal 11 and relevant bullets.</i>
21. As a response to Goal 1 of the Community Involvement Element, with a resubmittal, please provide an updated Citizen Involvement Report that describes the key issues that have been identified through the public involvement process.	<i>A revised Citizen Involvement Report is provided with the resubmittal.</i>
22. Please respond to Goal LU3, Policy 3.5, of the Land Use Element, demonstrating how the proposed development, as a Mixed Use Neighborhood land use designation, and having requested modification to increase the maximum PUD property size from 25 acres to 42 acres to accommodate both phases of the proposed development, will bring greater participation from the private sector in	<i>SECTION IV .C. revised to include Policy 3.5.</i> <i>Page 9: The Greenbelt adjacent to the Gentry site will be improved as shown and described in the Development Plan with the help and coordination of City Staff as the property is owned by the City of Scottsdale. Coordination with The Corps of</i>

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<p>public amenities along Southern Scottsdale Corridors;</p> <p>a. Page 7 and 9 of the applicant’s narrative has conflicting statements regarding the landscape area and the sites frontage to the Greenbelt. Specifically, Page 7 cites, “As part of the Gentry on the Green’s development, the adjoining Greenbelt channel will be landscaped and maintained.” Page 9 cites, “If allowed, the Greenbelt channel will be improved as part of this project, so it can be enjoyed by residents, visitors, and even motorists as they travel on Hayden Road.” With a resubmittal, please clarify in the narrative response, and following discussion with Scottsdale’s Real Estate, Parks and Recreation, and Stormwater Departments what conditions of approval exist for both the proposed Greenbelt improvements and long-term maintenance obligations for those areas of the Greenbelt identified in the submittal.</p>	<p><i>Engineers is underway.</i></p>
<p>23. Please respond to Goal LU8, Policies LU81., 8.2, and 8.3, of the Land Use Element, addressing how the proposed development supports a dynamic range of land uses adjacent to Indian Bend Wash (Greenbelt) that promote, enhance, and engage this primary open space amenity.</p>	<p><i>SECTION IV .C. revised to include goal LU8 and policies.</i></p>
<p>24. Please respond to Goal EV2, Policy EV2.3, of the Economic Vitality Element, in consideration of the alternate site plan showing the grocery store option along North 78th Street. Please submit a market analysis that demonstrates the viability of a smaller-scale grocery store that can rely on a smaller customer base and floor space. Please also consider the operations of a traditional grocery store with any site plan considerations and make possible modifications that may be necessary in order to achieve a small grocer on this site. (i.e. Grocery carts).</p>	<p><i>The grocery store option has been removed from the development plan.</i></p>
<p>25. Please respond to Goal H1, Policies H1.1, 1.4 and 1.5, of the Housing Element, addressing how the proposed development is supporting (if at all) the development of workforce housing.</p>	<p><i>SECTION IV. C. revised to include Goal H1 and relevant policies.</i></p>
<p>26. Please note the response provided for Goal 2 of the Housing Element is repeated in two locations; see pages 41 and 42.</p>	<p><i>SECTION IV .C. revised – the repeated Goal 2 has been removed.</i></p>
<p>27. Please respond to Goal H4, Policies H.3 and H.4, of the Housing Element, addressing how the proposed development, now as a Mixed-Use Neighborhood land use designation, is supporting the option for older residents to remain in their neighborhood and “age in place”.</p>	<p><i>Phase 1 will offer elevator served units catering to age-targeted residents. Phase 2 of Gentry on the Green includes the opportunity to incorporate senior living in the land use mixed proposed with the development plan. The goal is to create a multigenerational lifestyle opportunity for the residents of Scottsdale with direct access to recreational amenities, multimodal transportation options, and supporting commercial land uses. Additionally, the site is within close proximity to HonorHealth Osborn offering state-of-the art medical care and support. Policy H 4.3 speaks to public, private and non-profit partnerships to develop a range of elder care programs, services and housing options. Policy H 4.4 speaks to providing ADA transit options. Both policies are premature to discuss in detail as the senior living component is an option for Phase 2 (planned for 10-15 years out).</i></p>

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28. Please respond to Goal CM1, Policy 1.7, of the Community Mobility Element, addressing how this proposal will promote “complete streets” to encourage multi-modal opportunities on Southern Scottsdale’s arterial streets. (East Camelback and North Hayden Roads)	<i>SECTION IV .C. revised to include CM 1.7.</i>
29. Please respond to the Goal CM4, Policies CM4.1 and CM4.2, of the Community Mobility Element, addressing how this proposal will advance the role of pedestrian and bicycle mobility and connectivity within Southern Scottsdale. Specifically, address the existing bus stop facilities the subject site has at 2 locations where there is no shelter (East Camelback Road), and the one facility along the east edge (North Hayden Road).	<i>SECTION IV .C. revised to include CM 4.1 and 4.2. The bus facilities will be upgraded per City standards.</i>
30. Please respond to Goal CM6, Policy CM6.2, of the Community Mobility Element, addressing how this proposal will mitigate the impacts of vehicular traffic on adjacent residential neighborhoods . specifically, North 78th Street . and with Phase 2, North Parkway Avenue.	<i>SECTION IV .C. revised to include CM 6.2 – also see TIMA.</i>
31. Please response to Goal CD5 - Policy 5.1 and 5.6; Goal CD10 - Policies 10.1, and 10.2. of the Character and Design Element.	<i>SECTION IV .C. revised to include CD 5 and CD 10 updates.</i>
Zoning	
32. The submitted application includes a request to utilize the Planned Shared Development Overlay (PSD) district on the subject property. With the resubmittal, please include a parcel diagram and development agreement identifying the proposed terms of the PSD including but not limited to parcel boundaries and transfer of development rights, in accordance with the requirements of Zoning Ordinance Section 6.1406.B.1 & 6.1406.C.1.	<i>A draft Development Agreement is underway including the division of parcel boundaries anticipated and terms of the PSD overlay transfer of development rights. The DA will be submitted under separate application.</i>
33. The submitted development plan states the only Planned Unit Development (PUD) standard proposed to be amended is the maximum development area standard. However, it appears the proposed building setbacks (specifically “average setback” as required in Section 5.5005.E. Table A) may need to be amended. With the resubmittal, please provide the average setback calculations in accordance with the Average Setback Diagram (Section 5.5005.E.2.) and update the legislative draft of amended developments standards accordingly. Please note: It is difficult to achieve an average setback at an “exact” number (i.e. 40 f). It may be beneficial to propose a range for the average setback requirement (i.e. 35 f . 40 f). Please provide justification for each requested amended development standard.	<i>SECTION III .B. revised</i> <ul style="list-style-type: none"> • “Minimum” average setback terminology • 78th Street building setback to accommodate angled parking • Camelback Road setback to accommodate bus bays and decel lane. • See new graphic ‘Average Setback Exhibit’ included in the development plan.
34. Please revise the “Building Height Plan” within the development plan to identify the actual proposed building heights, rather than number of stories, demonstrating compliance with Zoning Ordinance Section 5.5005.C. In addition, please specify the proposed building heights for Phase 2.	<i>SECTION V .F. revised.</i> <i>See revised ‘Building Height Plan’ graphic included in development plan.</i>
35. Please revise the “Parking Plan” within the development plan to specify the parking calculations (required and provided) for each of the proposed land uses in the project, in accordance with the requirements of Zoning Ordinance Section 9.103. Please consider including a parking calculation for guests and units that may	<i>SECTION V .I. revised.</i> <i>See revised ‘Parking Plan’ graphic included in development plan.</i>

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house multiple occupants. In addition, please expand the parking plan to include Phase 2.	
36. Please revise the "Open Space Plan" within the development plan to include the open space calculations (required and provided), in accordance with Zoning Ordinance Section 5.5005.I.2.	<i>SECTION V .O. revised. See revised 'Open Space Plan' graphic included in development plan.</i>
37. Please revise the development plan to include "typical" building sections adjacent to each perimeter street condition demonstrating compliance with the Building Envelope requirements of Zoning Ordinance Section 5.5005.F. Please ensure the sections include the back of the planned curb line, including the planned curb line for bus bays, deceleration lands and turn lanes, and the appropriate dimensions for the minimum setback.	<i>SECTION V . revised. See new 'Building Setback Envelope' graphic included in development plan.</i>
38. Please revise the development plan to include additional plans and/or narrative in response to the Private outdoor living space requirements of Zoning Ordinance Section 5.5005.I.1.	<i>SECTION V. revised to add private outdoor living space compliance language.</i>
39. Please revise the development plan to include Phase 2 details on the vehicular circulation plan, bicycle circulation plan, master plan, site plan, shaded walkways plan, and building heights plan, in accordance with the Plan & Report Requirements for Development Applications.	<i>SECTION V. revised. The site plan for Phase 2 has remained conceptual as discussed with City Staff. An updated pedestrian circulation plan, internal bicycle circulation exhibit, vehicular circulation exhibit, shaded walkway plan and transition plan provided with resubmittal.</i>
40. Please revise the Transitions Plan to illustrate the transition that is proposed along the southern edge of Phase One and Phase Two, in accordance with the Plan & Report Requirements for Development Applications.	<i>SECTION V .E. revised. See additional 'Transitions Plan' graphic included in development plan.</i>
Circulation:	
41. In accordance with Section 47-36 of the Scottsdale Revised Code, please revise the development plan to include an additional five (5) feet right-of-way dedication for East Camelback Road, for a total half-street width of forty-five (45) feet. This dedication will be required prior to building permit issuance.	<i>We agree to dedicate an additional five (5) of right-of-way along Camelback Road. If there are conflicts with existing drainage easements and/or culverts this will need to be further evaluated with the City and Corps.</i>
42. In accordance with Section 47-36 of the Scottsdale Revised Code, please revise the development plan to include an additional ten (10) feet right-of-way dedication for each side of North 78th Street, for a total right-of-way width of eighty (80) feet. This dedication will be required prior to building permit issuance. <u>Please note:</u> Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource when planning improvements adjacent to and within the City's right-of-way.	<i>We agree to dedicate an additional ten (10) of right-of-way along 78th Street; east 10' with Phase I and west 10' with Phase 2.</i>
Fire:	
43. Please revise the development plan to demonstrate access roads extend to within 300' of all portions of the building, in accordance with Fire Ord 4283 503.1.1.	<i>SECTION V. revised. See revised 'Fire Lane Exhibit' graphic included in development plan.</i>

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44. Please revise the development plan to demonstrate minimum drive widths of 24', in accordance with Fire Ord 4283 503.2.1.	<i>Revise SECTION V. revised. See revised 'Fire Lane Exhibit' graphic included in development plan.</i>
45. Please revise the development plan to demonstrate unobstructed vertical clearance minimum 13'6" for all fire lanes, in accordance with Fire Ord. 4283, 503.2.1.	<i>See note added to revised 'Fire Lane Exhibit' graphic included in development plan.</i>
45. Please revise the development plan to demonstrate unobstructed vertical clearance minimum 13'6" for all fire lanes, in accordance with Fire Ord. 4283, 503.2.1.	<i>See note added to revised 'Fire Lane Exhibit' graphic included in development plan.</i>
46. Please revise the development plan to designate Fire Lanes for all Commercial / Multi-Family (24' min) in accordance with Fire Ord. 4283, 503.3.	<i>See note added to revised 'Fire Lan Exhibit' graphic included in development plan.</i>
47. "Key switch/preemption sensor" is required for commercial/Multi-family/Gated communities, in accordance with Fire Ord. 4283, 503.6.1.	<i>Acknowledged. Key switch/preemption sensor will comply with Fire Ord. 4283, 503.6.1.</i>
48. Please revise the development plan to demonstrate Hydrant spacing, existing and proposed, in accordance with Fire Ord. 4283,507.5.1.2	<i>Hydrant spacing is meeting the spacing requirements of Fire Ord. 4283, 507.5.1.2.</i>
49. Please revise the development plan to demonstrate the location of the Fire Department Connection, in accordance with Fire Ord. 4283, 912.	<i>See revised 'Fire Lane Exhibit' graphic included in development plan.</i>
Drainage:	
50. Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource. Although the submitted drainage report for the project has been accepted, it may be beneficial to follow-up with the stormwater reviewer if LID techniques will be implemented into the development.	<i>Acknowledged.</i>
Water and Waste Water:	
51. Please submit the revised Water and Waste Water Design Report(s) with the original redlined copy of the report with the rest of the resubmittal material identified in Attachment A.	<i>Included with resubmittal.</i>
Archaeology:	
52. Based on Scottsdale Revised Code, Chapter 46, Article VI, Protection of Archaeological Resources, Section 46-132 - Surveys of archaeological sites and exemptions, this development proposal will be exempt from the requirement to provide an archaeological resources survey and report. Regardless of the exemption, any development on the property is subject to the requirements of Scottsdale Revised Code, Chapter 46, Article VI, Protection of Archaeological	<i>Acknowledged.</i>

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Resources, Section 46-134 - Discoveries of archaeological resources during construction.	
Site Design:	
53. Along the Indian Bend Wash frontage there appears to be a conflict between the Bicycle Circulation Plan, the Shaded Walkways Plan and the Fire Lanes Plan. Please provide information and illustrations that will explain the concepts that will facilitate coordination between the bicycle, shaded walkway, and emergency access elements of this Development Plan.	<i>Conflicts between plans resolved and coordination between various elements refined (bicycle, shaded walkway, emergency). The fire lane is now shown more prominent on the hardscape plan (Section V. Q) with the 8' path and 16' of grass-crete. Additional sections have been provided to describe the relationship of the 24' total fire lane and the trees creating the Shaded Walkway.</i>
54. Please revise the "Building Height Plan" to provide more 2 Story and 3 Story on the Camelback Road frontage, the Indian Bend Wash frontage, the 78th Street frontages, and the Parkway Avenue frontage of Phase one and Phase Two, to more appropriately transition the building mass to the adjacent streets and neighborhoods.	<i>Sec. V.F. revised. See revised 'Building Height Plan' graphic included in development plan and building elevations.</i>
55. In accordance with the City of Scottsdale Design Standards and Policies Manual Chapter 5 Section 1.901 and Section 1.902.E internal site circulation must have quality traffic flow in order to ensure public safety. Higher levels of pedestrian traffic in and around the "observation zone", then may be found in other areas of the paseo, is anticipated. Consequently, the proposed location of the bike pathway between the "observation zone" and the splash pad may create pedestrian safety concerns. Please revise the location of either the bike pathway or the "observation zone" within the "Landscape" Master Plan (Page 74).	<i>Sec. V. revised. The Landscape Master Plan (Section V. Q) has been modified, as shown on the Hardscape Plan to include a walk your bike zone that will depicted with signage and include dismount area.</i>
56. Please revise the "Hardscape Plan" within the development plan (Page 71) so the type of hardscape proposed within area "B", is in compliance with the City of Scottsdale Design Standards and Policies Manual Chapter 2 Section 1.310. Please consider a more stable paver for all main pedestrian access points from public right of ways.	<i>Sec. V.Q revised. The hardscape (Section V. Q) plan has been revised to show all walks off of public right-of-ways is concrete. The NaturalPave (or similar) product being proposed in other locations is a resin pavement used as main pathways in several parks throughout the west recently and will be developed during a later phase to comply with City of Scottsdale standards.</i>
57. Please provide the following information regarding provision of refuse for the development, in accordance with the Design Standards & Policies Manual Section 2-1.309. <ul style="list-style-type: none"> a. Locate and position the enclosure(s), update site plan accordingly: <ul style="list-style-type: none"> 1. Approach pad so that the refuse truck route to and from the public street has a minimum unobstructed vertical clearance of thirteen (13) feet six (6) inches (fourteen 14 feet is recommended), and unobstructed minimum vertical clearance above the approach pad and refuse enclosure of twenty-five (25) feet (The vertical clearances are subject to modification based on enclosure container size, location and positioning as determined by the Sanitation Director, or designee.) 2. In a location that is easily accessible for collection, and does not require 	<i>Sec.V. revised. See new 'Refuse Collection Plan' graphic included in development plan.</i>

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<p>the refuse truck to “backtrack”;</p> <p>3. A maximum 100 feet distance for building service exit to refuse enclosure;</p> <p>4. So that collection vehicles do not back up more than thirty-five (35) feet;</p> <p>5. So that path of travel for the refuse truck accommodates a minimum vehicle of turning radius of 45 feet, and vehicle length of 40 feet.</p> <p>b. Design the refuse enclosure(s) and approach pad to be level, with a maximum of a two (2) percent slope. Do not place the enclosure(s):</p> <ol style="list-style-type: none"> 1. Between the on-site buildings and adjacent lower density residential uses unless there is no reasonable alternative. In these situations, orient the enclosure toward the interior of the property; 2. Next to drainage ways or basins, unless there is no reasonable alternative; 3. Between the street and the front of the building unless there is no reasonable alternative; or, 4. At the end of a dead-end parking aisle. <p>c. Required Number of Non-Residential, Mixed-Use, and Multi-Family Residential Refuse and Recycling Enclosures. Update site plan accordingly:</p> <ol style="list-style-type: none"> 1. Non-Residential, Mixed-Use, and Multi-Family Residential developments shall provide the refuse enclosures such that 1 commercial refuse container is provided for every 20 residential units and 1 commercial refuse container is provided for every 20,000 square feet of non-residential space. <p>d. Compactors may be used as an alternative to refuse or recycling containers. To determine adequacy + site location of compactors, if proposed, please provide the following on a site/refuse plan, compactor:</p> <ol style="list-style-type: none"> 1. Type 2. Capacity - State on site plan compactor capacity conversion equating to requirements provided above. 	

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<p>3. Location</p> <p>i. Place the refuse compactor container and approach pad so that the refuse truck route to and from the public street has a minimum unobstructed vertical clearance of thirteen (13) feet six (6) inches (fourteen 14 feet is recommended), and unobstructed minimum vertical clearance above the concrete approach slab and refuse compactor container storage area concrete slab of twenty-five (25) feet.</p> <p>ii. Place the refuse compactor container in a location that does not require the bin to be maneuvered or relocated from the bin's storage location to be loaded on to the refuse truck.</p> <p>iii. Provide a refuse compactor container approach area that has a minimum width of fourteen (14) feet and length of sixty (60) feet in front of the container.</p> <p>iv. Demonstrate path of travel for refuse truck accommodates a minimum vehicle turning radius of 45', and vehicle length of 40'.</p>	
<p>58. Although it is not a requirement, recycling is an amenity found to be desired by Scottsdale Residents. Please clarify whether or not recycling containers will be provided as an amenity for the development.</p>	<p><i>The Owner is willing to commit to recycling under a city-wide program but does not want commit to providing a private program for the residential development.</i></p>
<p>TIMA:</p>	
<p>59. The submitted Traffic Impact Mitigation Analysis (TIMA), is limited to the + 26.5-acre Phase 1 portion of the development, however, was submitted as part of a zoning case for a +42-acre site including both phases of development. There appear to be substantial traffic impacts based on the Phase 1 data alone, which may be exacerbated by the additional development proposed within Phase 2. Although development of Phase 2 may be several years out and design fluid, development assumptions should be made for Phase 2 and incorporated into the TIMA. Please revise the TIMA to include analysis for the entire application area, in accordance with the Design Standards & Policies Manual Section 5-1.</p>	<p><i>Revised TIMA to include trip generation calculations for Phase2.</i></p>
<p>60. The submitted TIMA indicates that Phase 1 only of the project will add 11.9 seconds of average delay per vehicle at Hayden/Camelback, PM peak hour (LOS D . LOS E) and 89.7 seconds of delay (LOS C . F) specifically to the SB right movement See DSPM 5[?]1.801 B1. Phase 1 only of the project will also add over 4,000 vehicles per day to 78th Street which has a capacity of 5,000 vehicles per day. There is concern regarding the additional impacts Phase 2 may create on top of the Phase 1 impacts explored in this TIMA. Please consider additional improvements to mitigate these impacts, including but not limited to the following: <u>DSPM Section 5-1.801.</u></p>	<p><i>a) We reviewed this driveway connection option and will not be able to accommodate this consideration.</i></p> <p><i>b) Discussion with City Transportation. Pursuing additional data to implement full access.</i></p> <p><i>c) Included in analysis.</i></p> <p><i>d) Included alternative connection.</i></p> <p><i>e) The team considered this alternative, however, it is not included with the revised plan.</i></p>

Comment	Applicant Response
<ul style="list-style-type: none"> a. New access to Hayden Road. Consideration for partial or full access. b. With shift of Driveway A on Camelback Road to the west, consider possibility for full access. c. Add a protected phase on Camelback Road left turns to 78th Street to assist with increased traffic and potential U-turns. d. Widen of Camelback Road’s eastbound approach to Hayden Road to add dedicated bike lane, wider sidewalk. e. Evaluate extending Montecito Ave from Parkway Ave to 78th St and/or Hayden Rd. 	
<p>61. The submitted TIMA is missing the following intersections: Hayden Road & Indian School Road, Miller Road & Indian School Road, and Hayden Road & Chaparral Road. The study intersections were agreed upon in a 3/19/19 meeting with the traffic engineer. Please revise the TIMA to include analysis for these intersections, in accordance with the Design Standards & Policies Manual Section 5-1.202.</p> <p><u>Please note:</u> Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City’s Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource.</p>	<p><i>Revised TIMA to include intersections.</i></p>
<p>62. The submitted TIMA indicates that the site is intended to be a “bicycle centric development” and has a “goal of becoming a valley-wide hub for bicycling.” Some aspects of the proposed site, adjacent roadways conflict with this goal. Please consider the following components of the plan as they relate to bicycle circulation:</p> <p><u>DSPM Section 5-1705.</u></p> <ul style="list-style-type: none"> a. Angled parking shown on site plan is less conducive to bikes than the existing parallel parking. Consider adding bike lanes. b. The eastbound bike lane on Camelback Road terminates east of Driveway 1 prior to Hayden Road as it becomes a right turn lane (with sharrow). Consider widening Camelback Road to provide a dedicated bike lane and a wider sidewalk meeting current standards. c. It may be appropriate to construct a multi-use path from the east side of Driveway A across the wash to connect to the existing underpass path on the west side of Hayden Road. d. Align the future Paseo of Phase 2 78th Street with the Phase 1 Paseo and consolidate crosswalks. Evaluate crossing treatments with at least 600-foot 	<ul style="list-style-type: none"> <i>a) There is a shared use path that will be provided for bicycle users that are not comfortable mixing with vehicles.</i> <i>b) Included an alternative connection.</i> <i>c) Will include evaluation of a connection.</i> <i>d) The Phase 2 Paseo alignment is not included at this time. Crossing treatments were evaluated and included in the TIMA discussion.</i> <i>e) The Phase 2 Paseo alignment is not included at this time. A future pedestrian and bicycle connection will be provided along the southern edge of Phase 2 from 78th Street to Parkway as shown on Site Plan and updated circulation exhibits.</i>

Comment	Applicant Response
<p>spacing from other crosswalks.</p> <p>e. Align the future Paseo of Phase 2 at Parkway Avenue Montecito Avenue. Montecito Avenue provides a signalized crossing at Miller Road. Evaluate crossing treatments.</p>	
<p>63. The proposed site plan depicts off-site changes that are not discussed in the TIMA, such as paths on city owned land, and modification to the intersection of 78th Street and Glenrosa Avenue. Proposals to change offsite infrastructure should be clearly stated in the TIMA, and any transportation impacts evaluated if applicable, in accordance with the Design Standards & Policies Manual Section 5-1.800. Please also include the proposed cross section of 78th Street.</p>	<p><i>Site Plan revised to remove offsite angled parking on 78th Street south of the property line and improvements to 78th/Glenrosa. The Indian Bend Wash paths will continue to be coordinated with the City as discussed.</i></p> <p><i>Included discussion of offsite improvement responsibility and impacts in TIMA.</i></p>
<p>64. Please revise the TIMA, Page 7, Right Turn lane Warrant (and other locations) to use Scottsdale's criteria found in DSPM 5-3.123 E (Auxiliary Lanes) and DSPM 5-3.206 (Deceleration Lanes), rather than MCDOT criteria. Current projections would appear to warrant the turn lane at Driveway A.</p>	<p><i>Revised TIMA per Scottsdale's criteria.</i></p>
<p>65. Please revise the TIMA, Page 19 and 20, Collision History - in your review of collisions, to include recommendations for Camelback Road and Miller Road (potentially high angle-type collisions) or Hayden Road and Camelback Road (collision rate over 1 per million entering vehicles)</p>	<p><i>Revised TIMA to include recommendations for Camelback/Miller and Camelback/Hayden</i></p>
<p>66. Please revise TIMA, Page 31 inlay and associated narrative. to clarify whether the text and analysis is suggesting that there will be demand for public parking (not resident or retail/restaurant patrons) to enjoy the public amenities/wash area. If so, this should be considered for parking needs and potential consideration for easement(s) for access. The inlay also indicates improvements on city owned land. DSPM 5-1.704.B</p>	<p><i>Revised TIMA to include parking for public amenities.</i></p>
<p>67. Please revise TIMA Pages 33 & 34 . to clarify the 25% mode choice reduction, which is unusually large. Please justify the reduction with data to support it. Are shops & eateries along path of green belt? DSPM 5-1.502.B.</p>	<p><i>Revised TIMA to include internal capture and no mode choice reduction.</i></p>
Fire:	
<p>68. Please note: Divided entrances and drive thru bypass lanes shall be 20' wide min, in accordance with the Design Standards & Policies Manual Section 2-1.303(2).</p>	<p><i>Sec.V. revised.</i></p> <p><i>See revised 'Fire Lane Exhibit' graphic included in development plan.</i></p>
<p>69. Please revise the development plan to demonstrate fire lane surface will support 83,000 lbs. GVW to include any bridge/culvert crossing, in accordance with the Design Standards & Policies Manual Section 2-1.303(3).</p>	<p><i>Sec.V. revised.</i></p> <p><i>See note added to revised 'Fire Lane Exhibit' graphic included in development plan.</i></p>
<p>70. Please revise the development plan to demonstrate COMMERCIAL turning radii (25' inner/49' Outside /55' Bucket Swing), in accordance with the Design Standards & Policies Manual Section 2-1.303(5).</p>	<p><i>Sec.V. revised.</i></p> <p><i>See revised 'Fire Lane Exhibit' graphic included in development plan.</i></p>
<p>71. Please revise the development plan to provide turn-around for emergency vehicles at end of dead-end over 300', in accordance with the Design Standards &</p>	<p><i>Sec.V. revised.</i></p> <p><i>N/A. We have no dead-end fire lanes.</i></p>

Comment	Applicant Response
Policies Manual Section 2-1.303(8).	
72. Please revise the development plan to demonstrate the location of the Fire Riser room, in accordance with the Design Standards & Policies Manual Section 6-1.504(1).	<i>Sec.V. revised. See revised 'Fire Lane Exhibit' graphic included in development plan.</i>
Circulation:	
73. Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource.	<i>Acknowledged. The project will include permeable paving and incorporate water harvesting techniques where applicable.</i>
74. Please revise the development plan to include construction of an eastbound right-turn lane on Camelback Road approaching 78th Street, in accordance with the Design Standards & Policies Manual Section 5-3.206.	<i>Ok, with Phase 2.</i>
75. Please revise the development plan to include construction of an eastbound right-turn lane on Camelback Road approaching the proposed site driveway, in accordance with the Design Standards & Policies Manual Section 5-3.206.	<i>Sec.V. revised. See revised 'Site Plan' and 'Vehicular Circulation Plan' graphics included in development plan. Included EB right turn lane in TIMA.</i>
76. Please revise the development plan to include construction of a westbound right-turn lane on Indian School Road approaching 78th Street, in accordance with the Design Standards & Policies Manual Section 5-3.206.	<i>City Transportation is no longer requiring this WB right turn lane.</i>
77. Please revise the development plan to include construction of a minimum 8-foot wide sidewalk along the site's 78th Street frontage, unless bike lanes are provided on-street, in accordance with the Design Standards & Policies Manual Section 5-3.110.	<i>Sec.V. revised. See revised 'Site Plan' graphic included in development plan.</i>
78. Please revise the development plan to include construction of a minimum 8-foot wide sidewalk along the site's Camelback Road frontage, separated from the back of curb where possible, in accordance with the Design Standards & Policies Manual Section 5-3.110.	<i>Sec.V. revised. See revised 'Site Plan' graphic included in development plan.</i>
79. Please revise the development plan to include construction of a minimum 6-foot wide accessible pedestrian route from the main entry of the development to each abutting public/private street that provides a pedestrian sidewalk/multi-use trail, in accordance with the Design Standards & Policies Manual Section 5-3.110.	<i>Sec.V. revised. See revised 'Site Plan' graphic included in development plan. The development plans has been modified to construct a minimum of a 6' wide accessible route from the main entry of the development to each abutting public and private streets. The 'Hardscape Plan' calls out the walk widths.</i>
80. On the shaded sidewalks exhibit, please clarify what types of shade (architectural or landscape) will be provided on sidewalks for the areas identified on the plan, in accordance with the Plan & Report Requirements for Development Applications.	<i>Sec.V. Q. Revised. The shade type is shown on the Landscape Master Plan. The shade shall be tree canopy throughout the site with tree spacing and placement modified for additional coverage.</i>
81. Please revise the Phasing Plan within the development plan to include the	<i>Sec. V.D. revised.</i>

Comment	Applicant Response
public improvements along both sides of N. 78th Street, to be constructed along with Phase 1A	<i>See revised 'Phasing Exhibit' graphic included in development plan.</i>
Other:	
82. Please revise the Development Plan so that the response to the Scottsdale Sensitive Design Principles (SSDP) descriptive and explanative information is provided in the responses. Instead of rephrasing the principles, please provide brief directive responses that clarify how the principles will be implemented. Please revise the response to SSDP 2 to provide comments regarding major vistas, the response to SSDP 3 to provide comments regarding existing landscaping, and the response to SSDP 5 to provide comments regarding the public realm and the pedestrian and bicycle comments need to be relocated to support SSDP 6.	<i>The Scottsdale Sensitive Design Principles (SSDP) were included with the first submittal with complete responses not just rephrasing of the principles.</i> <i>SECTION. IV.B. SSDP 2 and SSDP 6 revised.</i>
83. Please revise the development plan to include discussion regarding improvements within the Indian Bend Wash area between the subject property and N. Hayden Road, including but not limited to desired improvements and responsibility for construction.	<i>Additional discussion has been added to the development plan regarding the proposed improvements in the Indian Bend Wash, which include removal of the barrier wall (east edge of project), integration of a multi-use path connection and turf.</i>
Site Design:	
84. The development plan (p. 127) discusses a voluntary public art contribution of \$1 per square foot of building area. Please clarify whether the owner is willing to have this contribution stipulated with the zoning approval.	<i>Yes, owner is willing to accept a stipulation. It is the developer's intent for the public art contribution to be installed/constructed on the Gentry project site.</i>
85. The development plan "Design Principles and Guidelines - Architecture" discuss "buildings should be designed according to "green" design guidelines." Please consider requiring development conformance with the International Green Construction Code (IGCC).	<i>Under consideration.</i>
Infrastructure:	
86. To help address a critical City ITS (intelligent transportation systems) need in this area, consider installing one 2-inch conduit within the Camelback Road right-of-way.	<i>Ok, will be included.</i>
Circulation:	
87. Please consider revising the development plan to align the Paseo in Phase 1 with the Paseo in Phase 2, allowing for better connectivity between the two phases of development. In addition, please provide description and graphic details of how this at grade crossing between the two phases will be designed.	<i>See revised 'Site Plan' graphic included in development plan showing new configuration of open space on Phase Two.</i>
Site:	
88. Please revise the Transitions Plan to illustrate the transition that is proposed along the south edge of Phase One and Phase Two, in accordance with the Plan & Report Requirements for Development Applications.	<i>Sec. V.E. revised.</i> <i>See additional 'Transitions Plan' graphic included in development plan.</i>
89. Please provide Conceptual Elevations that are drawn at a larger scale and without landscape in front of the buildings, in accordance with the Plan & Report Requirements for Development Applications.	<i>Sec. V.G. revised.</i> <i>See revised 'Elevations' graphics included in development plan.</i>
Building Elevations:	

Comment	Applicant Response
<p>90. The dimensions on the building elevations within the development plan are not legible. Please provide a higher quality image so that the building heights can be read within the document.</p>	<p><i>Sec. V.G. revised. See revised 'Elevations' graphics included in development plan.</i></p>
Landscape Design:	
<p>91. Please revise the typical landscape plan illustrations in the development plan to include labels and street names, as applicable, to distinguish between the different landscape concepts within the contextual character of the development and surrounding area.</p>	<p><i>Sec. V.Q. revised. A key plan has been provided for each typical landscape plan to depict the location of the illustration within Section V. Q.</i></p>
TIMA:	
<p>92. Please provide revisions and/or clarifications as necessary regarding the technical review items from the TIMA as described below:</p> <ul style="list-style-type: none"> a. Camelback Road and Hayden Road, Page 16 plus figures and analyses. The intersection currently provides only 1 westbound left turn lane, not 2 (changed in 2018). b. Page 31 inlay . Please change color of grocery or change color indicating public amenity so that they are not misinterpreted. c. Figure 9. site traffic volumes appear to not correspond with projected trips. The most prominent is ingress during AM peak hour . Tables 8 & 10 indicate 83 inbound vehicles, yet a summation of ingress vehicular volume on Figure 9 suggests 160 inbound vehicles. Verify AM & PM ins/outs and make corrections if necessary. d. Figure 10 . figure is labeled as “Year 2029 Site Traffic Volume” but the figure appears to show Phase 1 South site traffic volumes. Include all both portions of Phase 1 site traffic volumes. e. Figure 12 . show intersections 1, 7, 8 & 9. volumes appear to be reduced from Figure 11 to Figure 13 that are not shown in Figure 12. f. Figure 18 . show intersections 1, 6 & 11. volumes appear to be reduced from Figure 17 to Figure 19 that are not shown in Figure 18. g. Figure 18 . figure is labeled as “Year 2029 Existing Site Volumes” but the figure appears to show only the estimated volumes associated with Glen at Old Town Communities (not also Visconti at Camelback). Include trips from Visconti at Camelback. Additional figures may be provided in the appendix if desired. h. Some minor errors and/or typos and areas for clarification noticed during 	<ul style="list-style-type: none"> <i>a) Revised report and analysis</i> <i>b) Revised report to prevent misinterpretation</i> <i>c) Revised/corrected numbers</i> <i>d) Revised to include all Year 2029 site traffic volumes</i> <i>e) Revised/corrected numbers</i> <i>f) Revised/corrected numbers</i> <i>g) Revised to include Visconti</i> <i>f) Minor errors were correct.</i>

Comment	Applicant Response
<p>review that do not necessarily affect the analysis and/or recommendations. With the updated TIMA, please review the following:</p> <p>(1) Page 1, 1st sentence. "Parking Master Plan" written versus "Traffic Impact and Mitigation Analysis"?</p> <p>(2) Page 1, last sentence . Please clarify if this means construction of the grocery may be delayed to a later phase or if it may a different land use. Consider clarification in this location and/or other locations in TIMA</p> <p>(3) Page 17, last sentence before Bicycle Facilities . The Indian Bend Wash Greenbelt is adjacent to Hayden Road, not 1 mile east of the site. Please also indicate that the low-flow portion of the wash is on City owned land located between/adjacent to the site and Hayden Road.</p> <p>(4) Page 17, Bicycle facilities, first sentence. "between Hayden Road and Miller Road and beyond" is repeated.</p> <p>(5) Figure 7 - should the intersection 13, SBL PM peak LOS be "D" not "E"? Similarly, should the applicable bullet on page 28 be deleted?</p> <p>(6) Page 28, last bullet . missing LOS (E?)</p> <p>(7) Page 34, 1st sentence of last paragraph - "Section 0" reference error?</p> <p>(8) Figure 10 - Driveway B appears to have unusual utilization differences between the AM and PM peak hour and directions. This may be okay with given land uses, parking utilization, and trips from north sub-phase.</p>	
Revised Development Plan Book	<i>Included with resubmittal.</i>
Written Response to First Review Letter	<i>Included with resubmittal.</i>
Coordination of Resubmittal	<i>Digital resubmittal</i>

Target Date: Resubmittal to City – August 19, 2019

Item	Response
Right-of-way Dedications	
1. Dedicate a min. 45 feet of right-of-way along the site's Camelback Road frontage; 5 feet additional along the south side. Easements may be necessary to contain the sidewalk improvements.	<i>Ok.</i>
2. Dedicate a min. of 80 feet of right-of-way along the site's 78th Street frontage; 40 feet along both sides, additional 10 feet along both sides. Easements may be necessary to contain the sidewalk improvements. Will provide for Phase I (east side).	<i>Ok. East side will be dedicated as part of Phase I, when Phase II is developed, the west side will be dedicated.</i>
3. Dedicate 60 feet of right-of-way along the Montecito Avenue alignment to extend it from Parkway Avenue to 78th Street. The alignment may transition to the southern property line.	<i>The team considered this alternative, however, it is not included with the revised plan and will not be provided.</i>
Intersection Improvements	
1. Widen Hayden Road approaching Camelback Road to provide northbound dual-left turn lanes. Modify the existing traffic signal to provide a protected left -turn phase for north-south. Some widening of the north leg may be necessary to achieve this necessary width for the turn lanes.	<i>Included analysis in the TIMA evaluating this modification;</i>
2. Widen 78th Street approaching Camelback Road to provide separate left -turn, thru, and right- turn lane. This will improve the operation of the traffic signal by removing any blocking of the right-turn lane, increasing the number of right-turns on red.	<i>Included analysis in the TIMA evaluating this modification.</i>
3. Provide an eastbound right-turn lane on Camelback Road approaching 78th Street.	<i>Ok, with Phase 2.</i>
4. Increase the left-turn storage for the westbound left-turn lane on Camelback Road approaching 78th Street to a minimum length of 175 feet (conform to the accepted traffic study recommendations).	<i>Evaluated and recommended storage length in the TIMA based on anticipated traffic volumes.</i>
5. Install east-west permitted/ protected left -t urn phasing at the 78th Street and Camelback Road intersection. Modify the existing traffic signal as necessary to provide this phase.	<i>Included analysis in the TIMA evaluating this modification.</i>
6. Provide the minimum storage lengths on 78th Street for the northbound approach to Camelback Road per recommendations in the accepted traffic impact study.	<i>Evaluated and recommended storage length in the TIMA based on anticipated traffic volumes.</i>

Item	Response
7. Install a traffic signal at the 78th Street and Indian School Road intersection. Stripe the southern leg to provide separate left/ thru and right-turn lanes as recommended by the traffic impact analysis.	<i>Included analysis in the TIMA evaluating this modification.</i>
8. The site driveway on Camelback Road shall remain restricted to right-turn in, and right-turn out only. [Left turn movements will only be considered if capacity improvements are provided at the Hayden Road and Camelback Road intersection to reduce the eastbound left-turn queuing, such as widening of Camelback Road to provide three left-turn lanes.]	<i>Ok</i>
9. Add striping to Parkway Avenue approaching Camelback Road to provide separate right-turn and left/ thru lanes.	<i>Ok, with Phase 2.</i>
10. Add striping to Parkway Avenue approaching Indian School Road to provide separate right -turn and left/thru lanes.	<i>Ok, with Phase 2.</i>
11. Consider constructing a driveway connection to Hayden Road; at grade similar to the existing crossing for the Safeway shopping center north of Chaparral Road. This access will help alleviate traffic congestion on Camelback Road and Indian School Road and reduce the number of U-turns at 78th Street and Camelback Road.	<i>We reviewed this driveway connection option and will not be able to accommodate this consideration.</i>
Street Improvements	
1. Provide a detailed street cross section for the proposed 78th Street reconstruction with any Development Review Board submittal.	<i>Ok</i>
2. The minimum pavement width between the angled parking spaces along 78th Street shall be 24 feet.	<i>Ok, we comply.</i>
3. Angled parking spaces along 78th Street shall not be located within 30 feet of proposed driveways and street intersections.	<i>Ok, site plan revised.</i>
4. Provide an eastbound right-turn deceleration lane at the site driveway on Camelback Road.	<i>Ok, we will provide.</i>
5. Construct Montecito Avenue to 40 feet back of curb to back of curb with 6-foot wide sidewalks from Parkway Avenue to 78th Street.	<i>Montecito Avenue will not be a through street per response above (Right-of-way Dedications #3).</i>
6. Construct a bus bay and transit stop improvements (shelter, bench, bike rack, trash can) at the existing transit stop locations along Camelback Road just east of 78th Street. The existing stop just east of Parkway Avenue can be removed.	<i>Ok, we will comply with City requirements provided there is ample space for the transit improvements.</i>
7. Install two two-inch fiber conduits along the Camelback Road site frontage, with a 144 strands of fiber in each conduit, to improve the ITS communications along the Camelback Road corridor.	<i>Ok, we will comply.</i>

Item	Response
On-Site Circulation	
<p>1. Provide a more direct vehicular connection between 78th Street and Camelback Road through the site to reduce the number of U-turns at the intersection of Camelback Road and 78th Street. [The site plan is flawed by directing too much of the site traffic toward the Camelback Road site driveway. The only access to and from 78th Street for the eastern parking garage in the northern phase of the development is by cutting through the western parking garage. This will encourage U-turns on Camelback Road.]</p>	<p><i>The plans have been revised to accommodate this request. See 78th Street Access Diagram included with the resubmittal. Direct ground level access will be provided in a designated drive lane through the northwest building/garage to 78th Street.</i></p>
Pedestrian & Bicycle Improvements	
<p>1. Widen the sidewalk along Camelback Road to a minimum 8 feet in width, separated from the back of curb. Do not meander the sidewalk alignment. Provide detail for extending the sidewalk across the current bridge or wash to connect the sidewalk to Hayden Road and Camelback Road intersection. This may require a cantilever on the existing bridge structure.</p>	<p><i>All plans have been revised to accommodate this request.</i></p>
<p>2. Widen the sidewalk along both sides of 78th Street to a minimum 8 feet in width to provide bicycle facilities in lieu of on-street facilities.</p>	<p><i>All plans have been revised to accommodate this request.</i></p>
<p>3. Widen the sidewalk along Parkway Avenue to a minimum width of 6 feet, separated from the curb where possible.</p>	<p><i>This will be addressed with Phase 2.</i></p>
<p>4. Proposed bike paths within the site shall be 8 feet in width. Path connections to the Hayden Road path traversing through Indian Bend Wash channel shall be 10 feet in width. Cross slope of the bike path through wash should be no more than two percent and landings every 200 feet if running slope is greater than 5 percent and less than 8.33 percent. The minimum slope on the bike path should be 1 percent for drainage.</p>	<p><i>Ok. These requirements will be followed in the final design.</i></p>
<p>5. There shall be a maximum of three identified pedestrian crossings on 78th Street along the site frontage with a minimum spacing of 300 feet. No painted crosswalks shall be installed without additional traffic control or crossing enhancements subject to approval by City of Scottsdale Traffic Engineering. Enhanced crossings shall include such devices as with rectangular rapid flashing beacons or raised pedestrian crossings.</p>	<p><i>Ok, enhancements and spacing of the pedestrian crossings on 78th Street will be considered. These crossings will be installed with the west side/Phase 2 development.</i></p>
Traffic Analysis	
<p>1. Assume Phase 2 will be developed within ten years; assume land uses for the development consistent with the requested zoning; include this traffic in the buildout/2029 year analysis. An updated traffic impact study will be required when the site develops and land</p>	<p><i>Revised TIMA to include trip generation for Phase 2.</i></p>

Item	Response
uses are refined; site plan to return to City Council.	

FROM EMAIL:

COMMENT

a. Because Phase 1 and Phase 2 route to two distinctly different sewers (Hayden vs. Miller) the pool backwash rate should be a minimum of 100gpm contributing to each respective sewer system, or 50% of the total pools contributing to each respective sewer, whichever is greater. Revise demand tables and hydraulic calcs accordingly. DS&PM 7-1.201, 7-1.202

a. Phase 2 will require upsizing of the 8-inch sewer to 12-inch all the way to Indian School and Miller, about 3,100 feet. STIP

a. Recommended to conduct flow monitoring on 15" sewer south of Indian School Rd. Previous comment. DS&PM7-1.201

a. Sewer demand routing is not shown for Phase 1, without this detail both connections to Hayden Rd should be upsized to 12-inch. STIP

a. South 8" sewer connection to Hayden Rd is listed as 1.92% slope on existing line when GIS indicates around 0.5% minimum. An 8" at 0.6% and d/D 0.65 can only convey 320gpm. Verify actual slopes in existing 8" sewers to Hayden Rd.

a. All sewers within the development should be private. Not called out as such on utility plans.

a. Private sewer coordination with public water main easements not shown on utility plans.

a. Totals are incorrect for Table 1, Phase 2. Rerun calculations

a. Table 3: delta calculation is irrelevant. Proposed future infrastructure must handle proposed future flows, not delta in flows. (Tables are incorrect for Table 3, Demand Delta for Phase 2.)

a. Flow monitoring data not incorporated into sewer capacity analysis correctly. 57% of the monitored peak (57%X127gpm=54gpm) can be attributed to the development south of Gentry Phase 2. The 57% is based on units (266/266+358) with 358 units being Gentry Phase 2 current units. Thus, flows onto Indian School should be 692gpm (638 proposed plus 54 existing).

a. New service lies should be shown as 6-inch minimum on utility plan.

FROM WASTEWATER REPORT:

COMMENT

Because Phase 1 and Phase 2 route to two distinctly different sewers (Hayden vs. Miller) the pool backwash rate should be a minimum of 100gpm contributing to each respective sewer system, or 50% of the total pools contributing to each respective sewer, whichever is greater. Revise demand tables and hydraulic calcs accordingly. DS&PM 7-1.201, 7-1.202

Phase 2 will require upsizing of the 8-inch sewer to 12-inch all the way to Indian School and Miller, about 3,100 feet. ADD STIPULATION

Recommended to conduct flow monitoring on 15" sewer south of Indian School Rd. Previous comment. DS&PM7-1.201

Sewer demand routing is not shown for Phase 1, without this detail both connections to Hayden Rd should be upsized to 12-inch. ADD STIPULATION

South 8" sewer connection to Hayden Rd is listed as 1.92% slope on existing line when GIS indicates around 0.5% minimum. An 8" at 0.6% and d/D 0.65 can only convey 320gpm. Verify actual slopes in existing 8" sewers to Hayden Rd.

All sewers within the development should be private. Not called out as such on utility plans.

Private sewer coordination with public water main easements not shown on utility plans.

Totals are incorrect for Table 1, Phase 2. Rerun calculations

Table 3: delta calculation is irrelevant. Proposed future infrastructure must handle proposed future flows, not delta in flows. (Tables are incorrect for Table 3, Demand Delta for Phase 2.)

Flow monitoring data not incorporated into sewer capacity analysis correctly. 57% of the monitored peak ($57\% \times 127\text{gpm} = 54\text{gpm}$) can be attributed to the development south of Gentry Phase 2. The 57% is based on units ($266/266+358$) with 358 units being Gentry Phase 2 current units. Thus, flows onto Indian School should be 692gpm (638 proposed plus 54 existing).

New service lies should be shown as 6-inch minimum on utility plan.

Hydraulic analysis incomplete for Phase 1 and Phase 2. Include hydraulic analysis for proposed Phase 1 and show existing line slopes. Include existing slopes on Parkway Ave and Indian School lines. Include existing and proposed hydraulics on Parkwark Ave and Indian School lines. DS&PM 7-1.200

No onsite sewer slope information provided. Offsite slope information to Hayden at south connection is inconsistent with City GIS. LDillon 9/23/19

Incorporate pool backwash into proposed Phase 1 and 2 developments as noted herein and include in hydraulic analysis. DS&PM 7-1.201, 7-1.202

Applicant claims to have reduced number of pools but instead reduced the gpm from each pool by half without any supporting analysis to validate claim. EKH 09032019

Existing flows measured via direct flow measurement for Phase 2 has not been accounted for correctly in analysis or clearly shown in calcs. Either determine existing and proposed flows using only DS&PM values or utilize flow data to scale only existing flow values accordingly. DS&PM values must be used for all proposed new development. DS&PM 7-1.200

Phase 2 infrastructure improvements need to be identified and shown. Phase 2 network map is incomplete. DS&PM 7-1.200 LDillon 9/23/19, to be stipulated

A Phase 2 utility plan needs to be included. DS&PM 7-1.201

Capacity analysis of the 15" sewer south of Indian School is necessary as some tributaries of this line are extensive and collect from large developments. Flow monitoring should be conducted on Miller Road just south of 1st Street as shown below. Flows from the proposed development and other approved developments not yet constructed must also be added to this e.g. Marquee/ Optima DS&PM 7-1.200 Applicant per sewer comment response letter not willing to do this. EKH 09032019

Request flow monitoring not addressed

On proposed sewer model schematic show each proposed building as a node and show how it is connected into the system DS&PM 7-1.202

Demand determination tables are confusing and not clear.

Recommendation to upsize 8" sewer to 12" on ParkwayAve and Indian School up to Miller for Phase 2 is not substantiated with the analysis. Show relevant analysis and all calculations used to determine this. If proposed Phase 2 peak flow is 571gpm and pool backwash is 150gpm (3 pools) and existing flow is around 80gpm, this results in 801gpm. A 12" line is not adequate for this flow.

Phase 1 utility plans are very difficult to interpret. Please show proposed water in solid blue, dashed for existing, and call out size and material type. Use same format but green for sewer.

On utility plans show all lines to be abandoned should be marked with cross hatching. Note that lines should be removed where possible and only formally abandoned with City approval and per City abandonment requirements.

TRY ON THE GREEN
ER BOD COMMENTS

RESPONSE

The Hayden system already accounts for two pools (100 gpm x 2 pools x 50% = 100 gpm). The Miller System is currently accounting for one pool (100 gpm x 1 pool = 100 gpm). We will use a minimum of 100 gpm flow rate.

Noted. The main will have to be upsized to 15" based on model.

Since Ph2 is so far into the future, we can have a stipulation for future testing to be conducted on the 15" line prior to plan approval.

Note to be a stipulation. Refer to the Phase 1 Peak Flow Wastewater System Hydraulic Analysis and the provided exhibit to see how Phase 1 demands are split between the two existing 8" stubs. We will provide routing diagram (See Exhibit 5 in provided report) and calculations for Ex. Hayden connections.

1.92% is based on topo information and is now mentioned in the report and the model exhibit.

Revised.

Revised.

Revised.

Although the modeling seems to be accounting for the flows of the entire existing infrastructure as well as the entire proposed infrastructure, we will remove and adjust calculations per below direction.

358 existing units are from Phase 2, with 266 units making up all the others (total of 624 units) that utilize this sewer main in Parkway Avenue. We have a tested peak rate 127gpm. So our peak rate per dwelling units can be extrapolated to be 127gpm/624DU or 0.2035gpm/DU. 266 units (54gpm) will remain, 358 units (73gpm) are being removed by developing Phase 2. We will calculate the peak flow in the sewer system based on that info.

Revised.

RESPONSE

Calcs revised to properly account for the pool wastewater generation.

To be stipulated. This main will be upsized to 15".

To be stipulated. Flow will be monitored in the future during Phase II, per conversations with City of Scottsdale Staff.

The wastewater generation tables now designate the Node that will have generations applied to it.

1.92% is based on topo information and is now mentioned in the report and the model exhibit.

Revised. Sewer facilities are moved out of the proposed PUE.

Revised. Sewer facilities are moved out of the proposed PUE.

Revised.

Understood. Wastewater generation tables have all been updated. The wastewater generation reduction caused by the removal of existing dwelling units will be accounted for based on the flow monitoring. Refer to the Wastewater BOD report for further explanation.

Understood. Wastewater generation tables have all been updated. The wastewater generation reduction caused by the removal of existing dwelling units will be accounted for based on the flow monitoring. Refer to the Wastewater BOD report for further explanation.

Revised.

Sizes and slopes are showing on all pipes in the model now. Hydraulic calcs have been updated.

Sizes and slopes are showing on all pipes in the model now.

Calcs revised to properly account for the pool wastewater generation.

Calcs revised to properly account for the pool wastewater generation.

Understood. Wastewater generation tables have all been updated. The wastewater generation reduction caused by the removal of existing dwelling units will be accounted for based on the flow monitoring. Refer to the Wastewater BOD report for further explanation.

Comment noted as satisfied. No available site plan for Phase II.

Since Ph2 is so far into the future, we can have a stipulation for future testing to be conducted on the 15" line prior to plan approval. This is per discussions with the City of Scottsdale staff.

Since Ph2 is so far into the future, we can have a stipulation for future testing to be conducted on the 15" line prior to plan approval. This is per discussions with the City of Scottsdale staff.

On the demand tables, a column has been added that shows which node all wastewater generation goes to.

Tables have been revised for clarity

Comment noted as satisfied

Comment noted as satisfied

Comment noted as satisfied

**GENTRY ON THE GREEN
WATER BOD COMMENTS**

FROM EMAIL:

COMMENT	RESPONSE
a. The north section of phase 2 does not have water line frontages on the east or west. These will need to be added to fulfill looping requirements of the system. STIP	Noted. Phase 1 will install 8-inch water in 78th, Phase II will install 8-inch water in Parkway Ave
b. Section 4.3 states that only the delta of demand is being modeled. The modeling demand tables show the same. <u>This is not technically correct or acceptable. Infrastructure, whether proposed or existing but be proven to handle proposed demands not a delta in demands.</u>	Modeling has been revised to include the entire demand
c. Why are Phase 1 only model results and network diagram shown in the BOD? The rezoning is for both Phases, thus both phases should be modeled.	Both Phase I and Phase II results are supplied in the BOD
d. Model network incorrectly shows existing pipe P-26 completing the loop on 78 th street. This pipe does not exist.	Model corrected to match proposed water layout.
e. Existing pipes P-26 and P-7 are incorrectly shown as 8-inch in the pipe table, they are 6-inch. Model needs to be updated and rerun to reflect this.	Model corrected to match proposed water layout. Phase I will replace the 6-inch line in 78th Street
f. Pump Curve needs to be derated per DS&PM	Pump curve corrected, discussion provided in text and pump curve report provided from WaterCAD for verification
g. Modeling condition max day plus fire flow does not include the fire flow portion. Need to include concurrently.	Modeling scenarios corrected to model fire flow in accordance with Scottsdale procedures
h. Any existing waterlines need to have easements rededicated to where existing pipelines are. 14' MIN	Plans have been updated, revised easements shown and will be dedicated with the final plat or in accordance with Scottsdale's procedures
i. Fire flow determination: building construction types and square footages required to determine max fire flow per IFC. Provide all info used to determine. Model fire flow concurrently with max day flow.	Calculations provided in report tables. Model has been corrected to model fire flow in accordance with Scottsdale procedures
j. Correlate demand table (specific buildings) to specific node numbers on network diagram. The model node demands do not correlate with the demand table one to one. Previous comment.	Demand table correlated with the model nodes.
k. Utility plan should indicate that water lines are not within 10-ft of a building or structure.	water lines that were close to buildings have been removed and placed in adjacent streets. No water lines are within 10ft of a building
l. Meters or meter sizing not called out on utility plan.	Meter locations shown on the plans, meters are assumed to be a 4" meter with a 10'-6" x 5'-0" vault
m. The demand nodes associated with Phase 2 are not modeled correctly. The system to Parkway Avenue should be modeled and the location of the Phase 2 demands located within the pipe network.	model corrected, phase 2 is modeled as a single node, elevated to 40' above ground elevation. The proposed water lines are modeled in the model

FROM WATER REPORT:

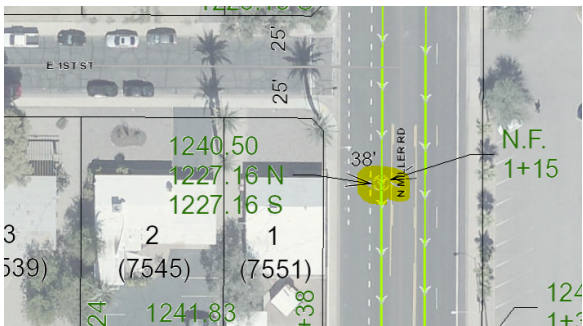
COMMENT	RESPONSE
1. Developers are required to install at their expense, all improvements necessary to provide waterservice to their development. This includes any water mains, booster pump stations, pressurereducing stations, surge tanks, valves and appurtenances, or other facilities, and the payment of allrequired fees. Refer to the Scottsdale Revised Code (SRC), Section 49-73.	noted
2. Page 4 of BOD – Fire flow is determined using the minimum requirement of 1500 gpm. Analysisneeds to be performed to determine if this is greater than what is specified in IFC 2018 based on thetotal square footage of the buildings on site and the construction type of these buildings.	Revised Calculations and documentation
4. Page 4 of BOD – An analysis needs to be performed to determine the pressure at the highestfinished floor based on the minimum pressure at the connection point with the reduction for backflow preventer and elevation. Per DS&PM 6-1.406, if this pressure is less than 50 psi then thebuilding may need a booster pump.	Pressures at elevation are below the minimum service pressure and may require booster pumps, design to be finalized during final design
5. Page 50 of BOD – Hydrant flow test needs to be adjusted based on DS&PM 2018 section 6-1.405.B. Then based on the updated curve the model needs to be updated.	Hydrant Test results revised

6. Page 3 of BOD – Exhibit 2 is not correctly referenced.	Revised.
7. Page 6 of BOD – Check grammar.	Corrected
8. Page 13 of BOD – Verify size proposed water service meter per DS&PM 2018 section 6.1416. It appears a 4-in meter will be required. A 4-in meter requires a vault per City detail 2345 which is not shown in the plans.	4-inch meter is assumed. Plan is conceptual at this point. 4-inch meter vault is assumed.
9. Page 13 of BOD – Fix callout of proposed fire hydrant.	Revised.
10. Page 13 of BOD – Per Scottsdale DS&PM 2018 section 6-1.402, the water shall not be located within 10-ft of a building or retaining wall.	Layout revised
12. Page 14 of BOD – Make cross hatching more distinct for utilities that planned to be removed. Apply not to all sheets.	Layout revised
13. Page 15 of BOD – Per Scottsdale DS&PM 2018 section 6-1.402, a Public Utility Easement will be needed for the water line.	Noted, shown correctly
14. Page 16 of BOD – Verify size proposed water service meter per DS&PM 2018 section 6.1416. It appears a 4-in meter will be required. A 4-in meter requires a vault per City detail 2345 which is not shown in the plans.	4-inch meter is assumed. Plan is conceptual at this point. 4-inch meter vault is assumed.
15. Page 17 of BOD – Fix callout of proposed fire hydrant.	Revised
16. Page 18 of BOD – Per Scottsdale DS&PM 2018 section 6-1.402, a Public Utility Easement will be needed for the water line.	Noted, Easements provided.
17. Page 20 of BOD – Label building names on nodes and indicate demand from each building.	Revised
18. Page 21 of BOD – Label building names on nodes and indicate demand from each building.	Revised

Address comments below and herein and resubmit:

- 1) Hydraulic analysis incomplete for Phase 1 and Phase 2. Include hydraulic analysis for proposed Phase 1 and show existing line slopes. Include existing slopes on Parkway Ave and Indian School lines. Include existing and proposed hydraulics on Parkway Ave and Indian School lines. DS&PM 7-1.200
- 2) Incorporate pool backwash into proposed Phase 1 and 2 developments as noted herein and include in hydraulic analysis. DS&PM 7-1.201, 7-1.202
- 3) Existing flows measured via direct flow measurement for Phase 2 has not been accounted for correctly in analysis or clearly shown in calcs. Either determine existing and proposed flows using only DS&PM values or utilize flow data to scale only existing flow values accordingly. DS&PM values must be used for all proposed new development. DS&PM 7-1.200
- 4) Phase 2 infrastructure improvements need to be identified and shown. Phase 2 network map is incomplete. DS&PM 7-1.200
- 5) Demand determination tables are confusing and not clear.
- 6) Recommendation to upsize 8" sewer to 12" on Parkway Ave and Indian School up to Miller for Phase 2 is not substantiated with the analysis. Show relevant analysis and all calculations used to determine this. If proposed Phase 2 peak flow is 571gpm and pool backwash is 150gpm (3 pools) and existing flow is around 80gpm, this results in 801gpm. A 12" line is not adequate for this flow.
- 7) Phase 1 utility plans are very difficult to interpret. Please show proposed water in solid blue, dashed for existing, and call out size and material type. Use same format but green for sewer.
- 8) A Phase 2 utility plan needs to be included. DS&PM 7-1.201
- 9) Capacity analysis of the 15" sewer south of Indian School is necessary as some tributaries of this line are extensive and collect from large developments. Flow monitoring should be conducted on Miller Road just south of 1st Street as shown below. Flows from the proposed development and other approved developments not yet constructed must also be added to this e.g. Marquee/Optima DS&PM 7-1.200
- 10) On proposed sewer model schematic show each proposed building as a node and show how it is connected into the system DS&PM 7-1.202
- 11) On utility plans show all lines to be abandoned should be marked with cross hatching. Note that lines should be removed where possible and only formally abandoned with City approval and per City abandonment requirements.

Necessary flow monitoring location on Miller -below



PRELIMINARY Basis of Design Report



1. PHASE 1 AND TWO ARE NOW BOTH ANALYSED. SLOPES AND LABELS ARE INCLUDED.

REVISE AND RESUBMIT

9379 E San Salvador Dr. Scottsdale, AZ 85258

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or

2. POOLS ADDED. TWO POOLS FOR PHASE 1 AND ONE POOL FOR PHASE 2.

status and fully address these items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission. For questions or clarifications contact the Water Resources

3. REVISED PHASE 2 DS&PM PROPOSED FLOWS HAVE BEEN ADDED TO THE EXISTING PEAK FLOW THAT WAS OBTAINED THROUGH THE FLOW TEST.

4. ALTHOUGH PHASE 2 WAS INCLUDED IN THE ZONING APPLICATION, THERE IS CURRENTLY NO SITE PLAN AVAILABLE.

5. REVISED FOR CLARITY.

Job No. 19001704

6. REVISED. SEE ANALYSIS. PHASE 2 HAS ONE POOL AND DEMANDS HAVE BEEN UPDATED. THE 8" IS BEING UPSIZED TO 12".

7. REVISED.

8. THERE IS NO AVAILABLE SITE PLAN FOR PHASE 2 UTILITY PLANS TO BE PRODUCED. DEMANDS ARE BASED ON CONCEPTUAL LAND USES AND DWELLING UNITS.

Prepared by:
ColRich

9. WE ARE UPSIZING THE 8" TO 12" DOWN PARKWAY AVENUE SOUTH TO INDIAN SCHOOL AND THEN WEST ALONG INDIAN SCHOOL TO MILLER ROAD (ANTICIPATED TO TAKE PLACE DURING PHASE 2 DEVELOPMENT AND NEEDS TO BE VERIFIED AT THE TIME OF PHASE 2 DEVELOPMENT THAT IS AT LEAST 10 YEARS AWAY). WHAT IS BEING REQUESTED IS FAR FROM THE ADJACENT SYSTEM AND BEYOND THE SCOPE OF THIS DEVELOPMENT.

10. REVISED

Prepared by:
Atwell, LLC
4700 E Southern Ave
Mesa, AZ 85206

11. REVISED



June 2019

GENTRY ON THE GREEN
PRELIMINARY WASTEWATER
TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	EXISTING WASTEWATER COLLECTION SYSTEM.....	1
3.0	PROPOSED WASTEWATER SYSTEM.....	1
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4.2	PHYSICAL PARAMETERS.....	2
4.3	WASTEWATER DEMAND SCENARIOS.....	2
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APPENDICES

- A. Exhibits
- B. Wastewater Demand Calculations
- C. Wastewater System Hydraulic Analysis
- D. Wastewater Flow Test Results



REVISED TO MATCH
CURRENT SITE PLAN

These values do not reflect what is show in the Appendix tables. Inconsistent throughout. Clarify final values throughout.

1.0 INTRODUCTION

The Gentry on the Green development (the "Project"), is a proposed multi-use development that includes residential and commercial uses. The Project's site is currently developed as three apartment complexes. The Project is located in the southeast quarter of Section 23, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Scottsdale, Arizona (See Vicinity Map in Appendix A). The wastewater infrastructure that will support this project is multiple sewer mains surrounding the project site, See Appendix A Quarter Section map for the existing sewer lines. The Project is approximately 42 acres and includes 1,868 dwelling units, 207,000 square feet of commercial development, a healthcare facility and a hotel.

2.0 EXISTING WASTEWATER COLLECTION SYSTEM

The Project is located within the service area boundary of the City of Scottsdale. Sewer mains in operation exist within the Project boundary. Also, an 8-inch sewer main exists on Parkway Avenue and a 30-inch sewer main along the Hayden Road alignment. Manhole flow test results are available for the manhole on the intersection of Parkway Avenue and Indian School Road, which connects to the 8-inch sewer main on Parkway Avenue. The manhole flow test results were used to determine available capacity in the 8-inch sewer main that would primarily serve Phase II of this project and found that this line was near existing capacity.

REVISED.

expand on this. Analysis?

When was this testing done and by who?

3.0 PROPOSED WASTEWATER SYSTEM

REVISED TO EXPLAIN
TIME OF TEST

The design of the proposed wastewater collection system is based on Bulletin 11 (ADEQ) and the City of Scottsdale Design Standards & Policies Manual and sound engineering principles. The proposed wastewater collection system is designed in accordance with the City of Scottsdale's design standards:

- High Density Residential average day demand is 140 gallons per capita per day with a peaking factor of 4.5. Residential density is assumed as 2.2 persons per unit.
- Commercial and Retail average day demand is 0.5 gallons per day per sq. ft. with a peaking factor of 3.
- Office average day demand is 0.4 gallons per day per sq. ft. with a peaking factor of 3.
- Restaurant average day demand is 1.2 gallons per day per sq. ft with a peaking factor of 6.

- Hotel average day demand is 380 gallons per day per room with a peaking factor of 4.5.]

REVISED. SEE ANALYSIS

Why assumed if flow testing done?

4.0 HYDRAULIC MODEL

An Excel spreadsheet was used to size the new wastewater collection system for typical the peak day demand for the project site. See Appendix C for results.

evaluate, show how it will work

4.1 BOUNDARY CONDITIONS

The wastewater outfall for the Phase I project site is a main in the Hayden Road alignment. This main has r Two 8 inch sewer mains that serve the phase I porti to connect to the Hayden Road main.

WHAT IS BEING REQUESTED IS OUT OF SCOPE. IN ADDITION, WE ARE NOT CHANGING THE CONNECTION SEWER PIPES INTO THE 39" SEWER MAIN. WE ARE MAINTAINING THE EXISTING SEWER PIPES CONNECITON TO THE 39" SEWER PIPE IN HAYDEN ROAD.

Needs to be upsized to Miller Rd. and Indian School Rd intersection per next page. Indian School Rd sewer is 8-inch to Miller.

The outfall for a portion of the phase II site is the existing 8 inch sewer main in Parkway Avenue that outfalls to a 12 inch sewer main in Indian School Road and Miller Road. This 8 inch sewer main was evaluated using a flow test over two weekends. This sewer is assumed to be near maximum capacity based on the flow test results, therefore, it is anticipated that the sewer main will need to be upsized to the Indian School Road main connection to serve phase II.]

REVISED. UPSIZING TO MILLER RD. & INDIAN SCHOOL RD.

4.2 PHYSICAL PARAMETERS

REVISED. NODE PROVIDED FOR EACH PROPOSED PHASE 1 BUILDING.

Physical parameters used in the hydraulic analysis are summarized in Appendix B. Proposed pipe sizes used in this model are 8-inch or 12-inch in diameter. Nodes defined in the schematic (See Appendix A) are placed at anticipated extents of service line locations. Residential services are excluded from the current analysis.]

Not clear, individual service lines excluded?

4.3 WASTEWATER DEMAND SCENARIOS

The peak day demand was used to determine the required wastewater main sizes to serve this project.

The Excel spreadsheet in Appendix C shows the results o the hydraulic analysis for Phase I of the site.]

REVISED

4.4 ANALYSIS RESULTS

The results of the wastewater analysis show that the Phase I portion of the site will discharge into two existing 8 inch sewer mains connected to the 39-inch wastewater main in Hayden Road. Phase II will be served by a 12 inch main that will replace an existing 8 inch main in Parkway Avenue.]

Conclusion that a single 12-inch line will be sufficient for Phase 2 are not substantiated herein. Show complete calcs and analysis.

REVISED. UPSIZING TO MILLER RD. & INDIAN SCHOOL RD.

extending to Indian School to Miller

REVISED. SEE ANALYSIS

5.0 CONCLUSION

The Phase 1 portion of the site can utilize two existing 8-inch sewer connection that cross Indian Bend Wash low flow channel and enters a 39-inch sewer main in Hayden Road.

Phase II will require upsizing an existing 8-inch sewer main to a 12-inch main in Parkway Avenue to the Indian School Road and Miller Road intersection. The Phase II demands are based off of the highest demand scenario for the land use matrix currently available and will be updated at Final BOD.

To Miller
REVISED.

Note that upsizing is distinctly different than installing a parallel sewer. Water Resources requires upsizing/replacement unless not technically possible to do so.

REVISED. UPSIZING TO MILLER RD. & INDIAN SCHOOL RD.

Conclusion that a single 12-inch line will be sufficient for Phase 2 are not substantiated herein. Show complete calcs and analysis.

REVISED. SEE ANALYSIS

APPENDIX A
EXHIBITS



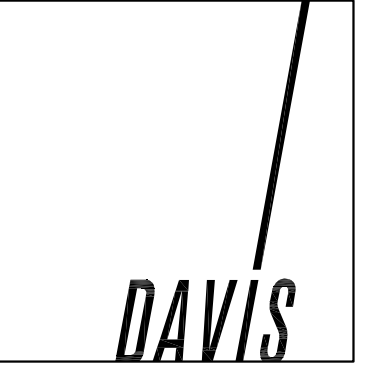
Phase Two
 Site Area: 14.97 gross acres

Phase One
 Site Area: 26.53 gross acres
 Residential Unit Total: 1,241 units
 Total Non-Residential Area: 21,000sf
 Total Retail Area: 45,000sf
 Total Retail Patio Area: 2,800sf
 Total Non-Residential / Retail Area: 67,800sf
 Total Parking Required: 2,057 spaces [per zoning ordinance]
 Total Parking Provided: 2,240 spaces

Alternate Site Plan



18160- 5/1/19



GENTRY ON THE GREEN- Scottsdale, Arizona

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Phase Two

Phase One

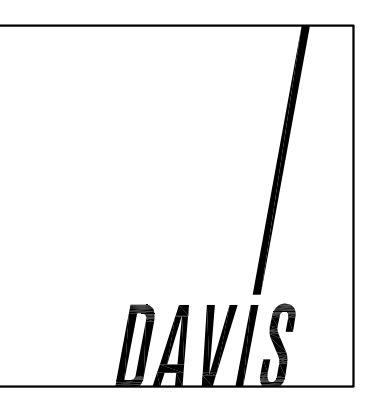
- Phase 1A
- Phase 1B
- Phase 1C
- Phase 1D
- Phase 1E
- The Paseo

Phasing Exhibit

18160- 5/1/19

GENTRY ON THE GREEN- Scottsdale, Arizona

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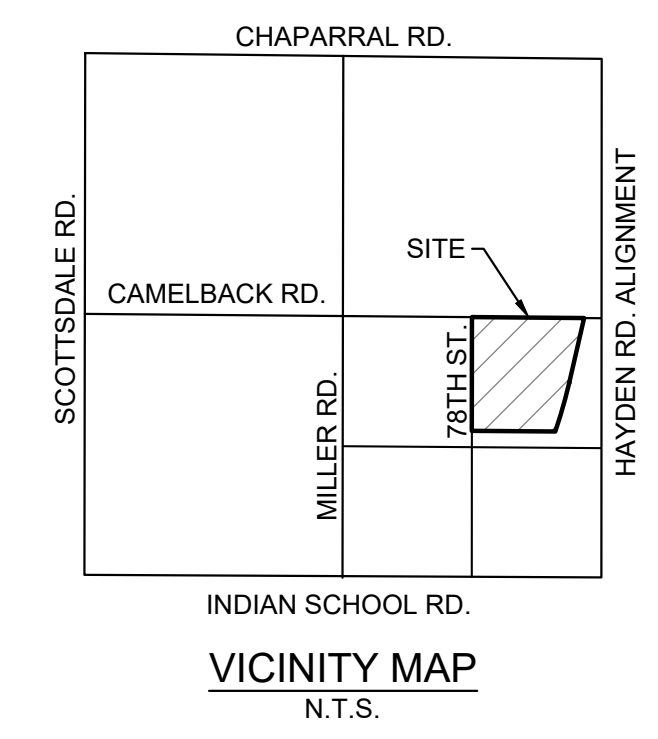
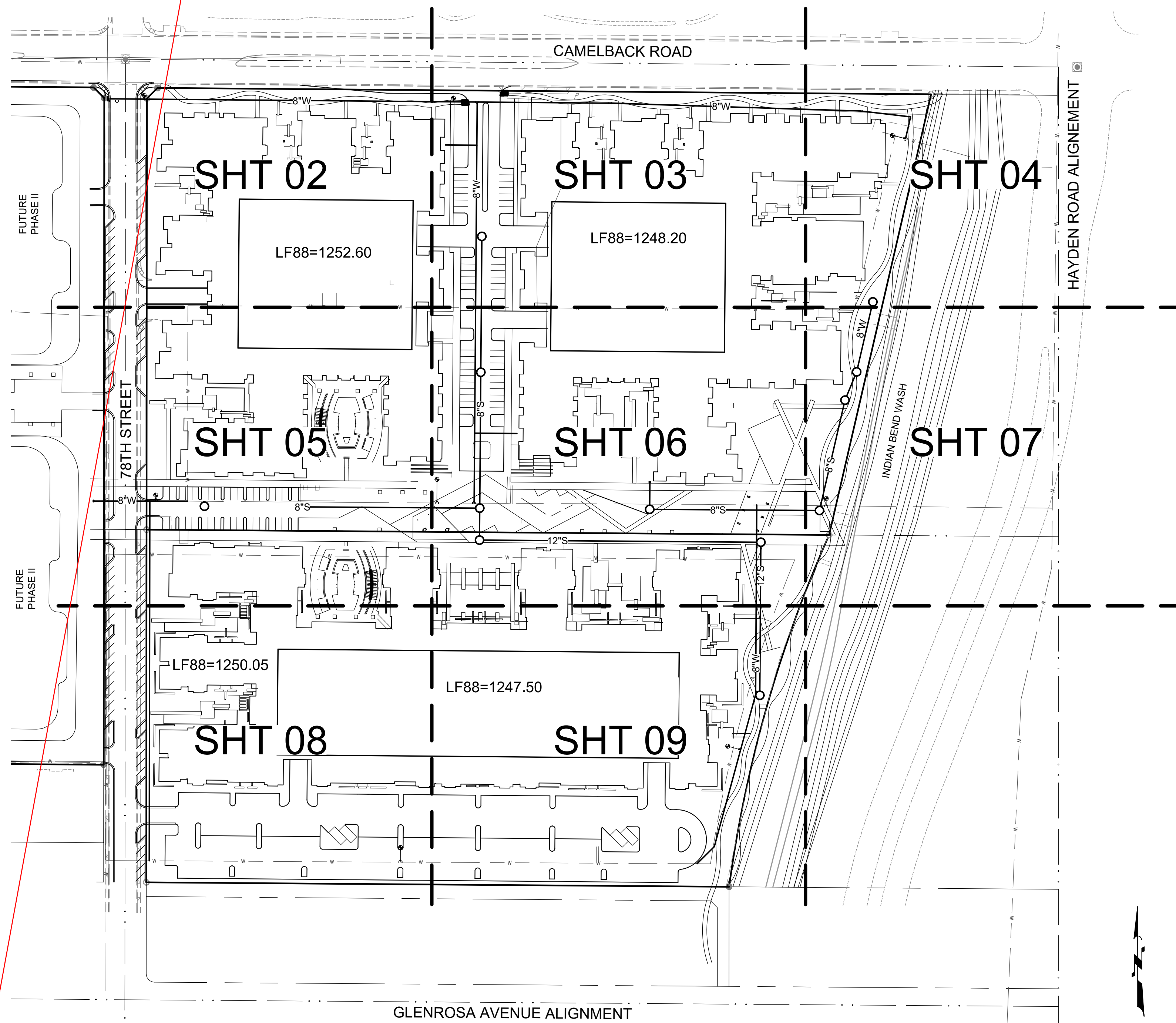


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LEGEND

- | | | | |
|--|----------------------------------|-------|-------------------------|
| | MATCHLINE | EX. | EXISTING |
| | BOUNDARY LINE | ELEC | ELECTRIC |
| | LOT LINE | BFP | BACKFLOW PREVENTION |
| | CENTER LINE | G | GAS |
| | CAP SURVEY MARKER | WTR | WATER |
| | EASEMENT | SWR | SEWER |
| | RIGHT-OF-WAY | P | PAVEMENT |
| | EXISTING CONTOUR | R/W | RIGHT-OF-WAY |
| | PROPOSED CONTOUR | CL | CENTER LINE |
| | RETAINING WALL | B/C | BACK OF CURB |
| | WATER LINE | S/W | SIDEWALK |
| | FIRE HYDRANT | C&G | CURB & GUTTER |
| | WATER VALVE | E/P | EDGE OF PAVEMENT |
| | AIR RELEASE VALVE | PUE | PUBLIC UTILITY EASEMENT |
| | WATER METER BOX | CB | CATCH BASIN |
| | REDUCER | MH | SEWER MANHOLE |
| | SEWER LINE | SD | STORM DRAIN |
| | SEWER MANHOLE | SD MH | STORM DRAIN MANHOLE |
| | FLOW DIRECTION | | |
| | GRADE BREAK | | |
| | STREET SIGN POST | | |
| | STREET LIGHTS | | |
| | DRYWELL | | |
| | STORM DRAIN | | |
| | EXISTING GAS MANHOLE | | |
| | EXISTING SANITARY SEWER MANHOLE | | |
| | EXISTING ELECTRICAL PULL BOX | | |
| | EXISTING TELEPHONE PEDISTAL | | |
| | EXISTING GUY WIRE | | |
| | EXISTING POWER POLE | | |
| | EX. W — EXISTING WATER | | |
| | EX. S — EXISTING SEWER | | |
| | EX. G — EXISTING GAS | | |
| | OHE — EXISTING OVERHEAD ELECTRIC | | |

CONCEPTUAL WATER & SEWER PLAN FOR PHASE I OF GENTRY ON THE GREEN SCOTTSDALE, ARIZONA



OWNER/DEVELOPER
COLRICH
444 WEST BEACH STREET, STE. 300
SAN DIEGO, CA 92101
PHONE: 858-490-2300
CONTACT: MATTHEW BATEMAN
EMAIL:

ENGINEER
ATWELL
4700 E. SOUTHERN AVENUE
MESA, AZ 85206
PHONE: 480-218-8831
CONTACT: RAMZI GEORGES
EMAIL: rgeorges@atwell-group.com

SHEET INDEX

SHEET No.	DESCRIPTION
01	COVER SHEET
02	WATER & SEWER PLAN
03	WATER & SEWER PLAN
04	WATER & SEWER PLAN
05	WATER & SEWER PLAN
06	WATER & SEWER PLAN
07	WATER & SEWER PLAN
08	WATER & SEWER PLAN
09	WATER & SEWER PLAN

KEY MAP
SCALE: 1" = 100'

Need at least conceptual utility plans for Phase 2 also

A SITE PLAN DOES NOT EXIST FOR PHASE II. AT THIS POINT IN TIME, THERE ARE ONLY PROJECTED LAND USES, SQUARE FOOTAGES, AND DWELLING UNIT COUNTS THAT ARE SUBJECT TO CHANGE.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSURE ANY RESPONSIBILITY FOR SAFETY OF THE WORK OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

ATWELL
www.atwell-group.com
866.850.4200
4700 E. SOUTHERN AVENUE
MESA, AZ 85206
480.218.8831

COVER SHEET
CONCEPTUAL WATER & SEWER PLAN
PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA

811
Know what's below.
Call before you dig.

REVISIONS:

NO.	DESCRIPTION

Professional Engineer Seal
37287
RAMZI GEORGES
Arizona U.S.A.

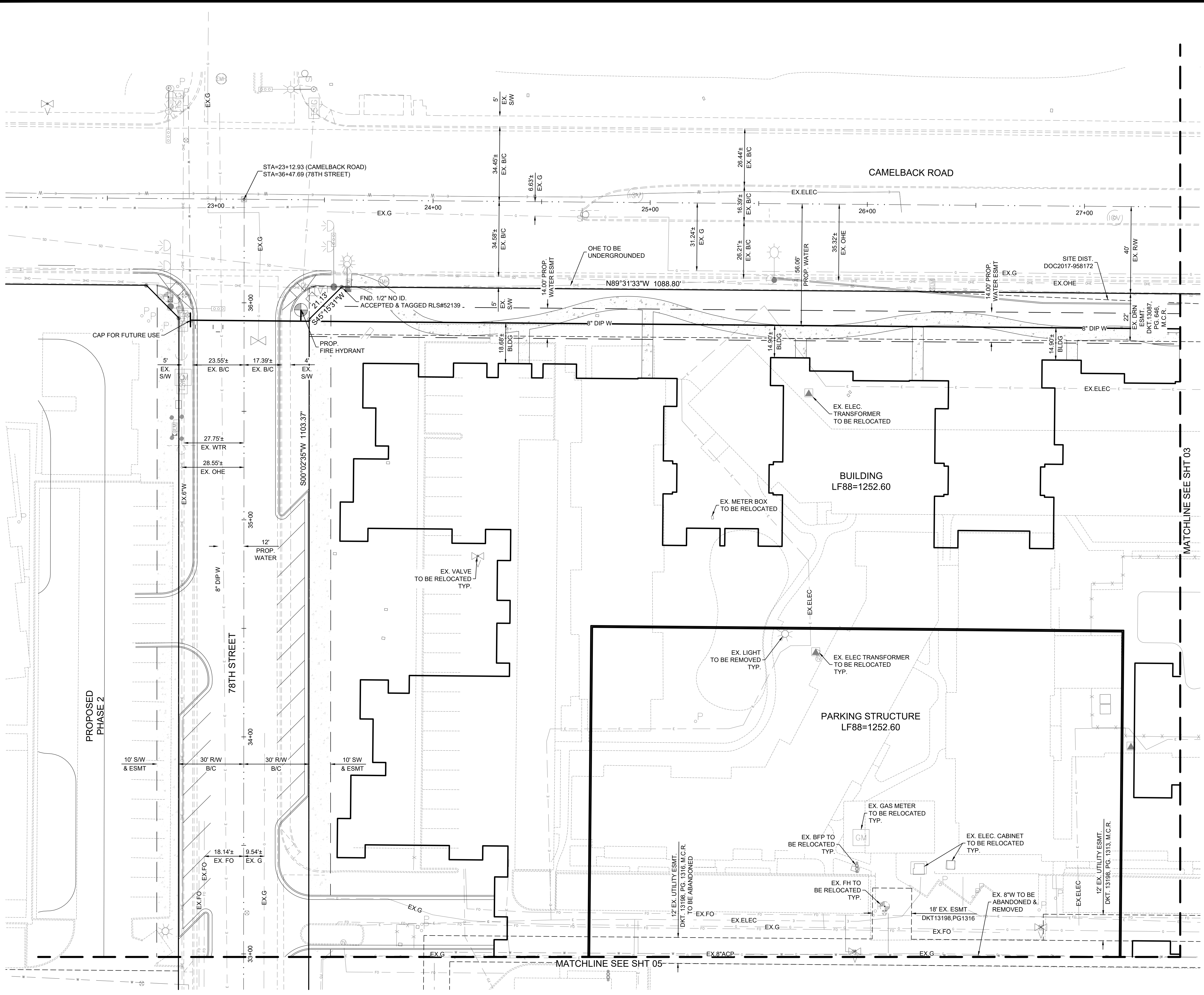
PM. R. GEORGES
DR. A. CABALLERO
JOB NO. 19001704
FILE NO. 19001704-01-CS01
01
SHEET NO. 01 OF 09

PROJECT NUMBER

s:\19001704 - vicinity-gentry-on-the-green\dwg\plans\sewer\concept\water & sewer\19001704-01-cs01.dwg Plotdate: 04/20/19

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11/19/2019 11:04:11 AM - vicente.garcia@atwellgroup.com & sewer119001704-02.rvt - dwg PlotDate: 6/14/2019



NOTE:
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CONCEPTUAL WATER & SEWER PLAN
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SCOTTSDALE, ARIZONA



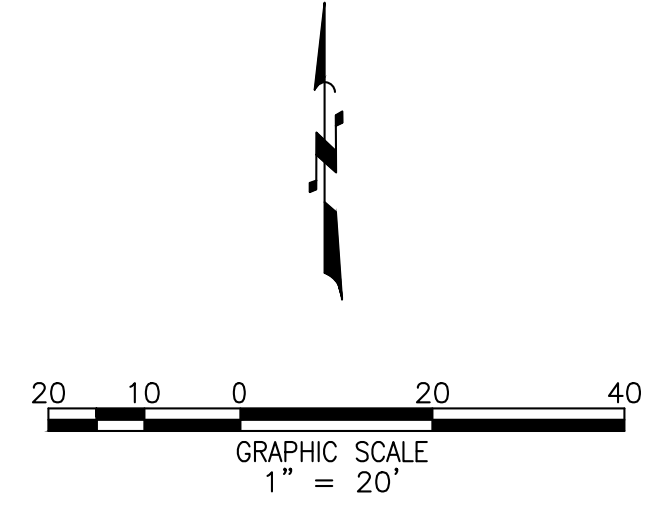
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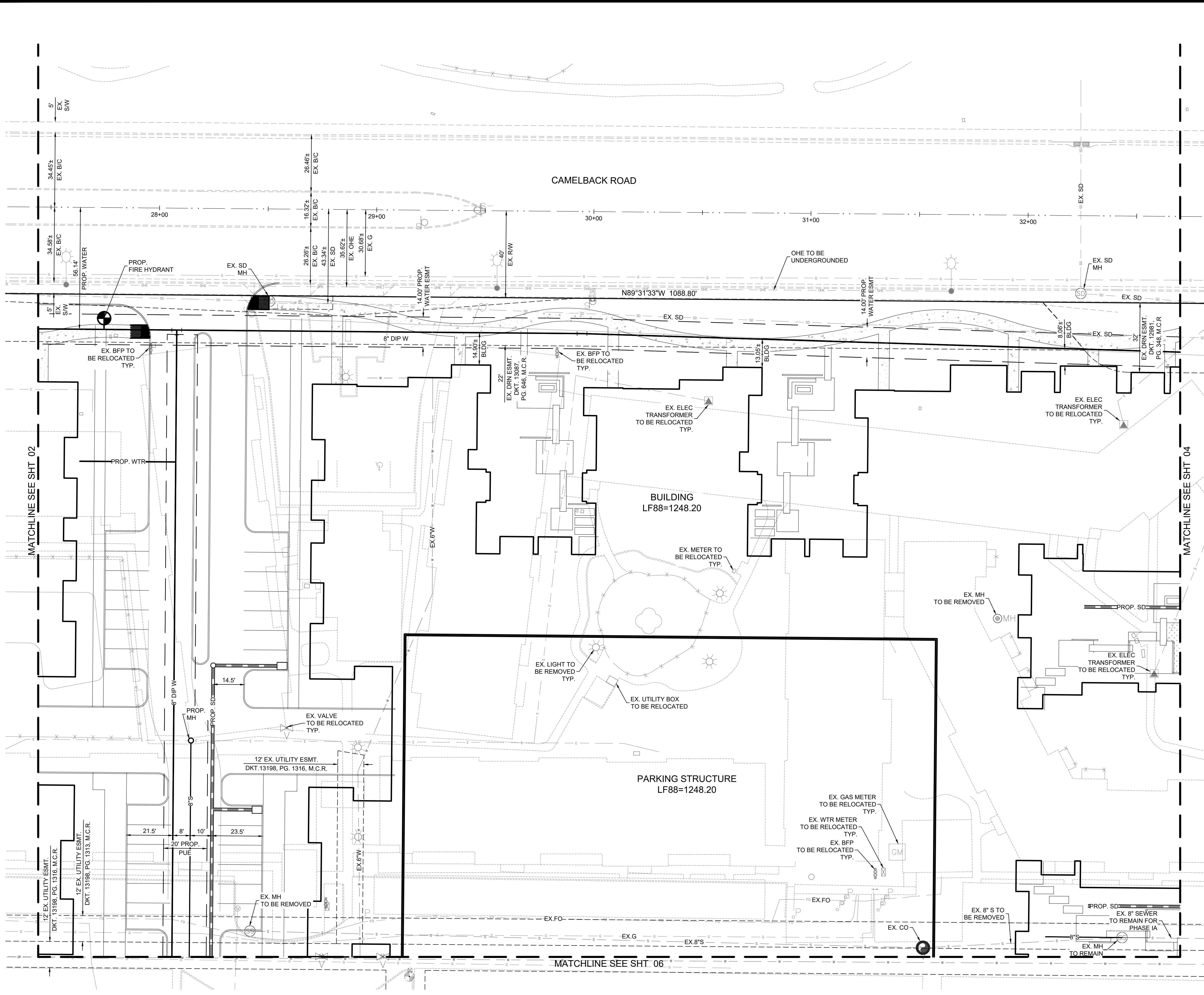


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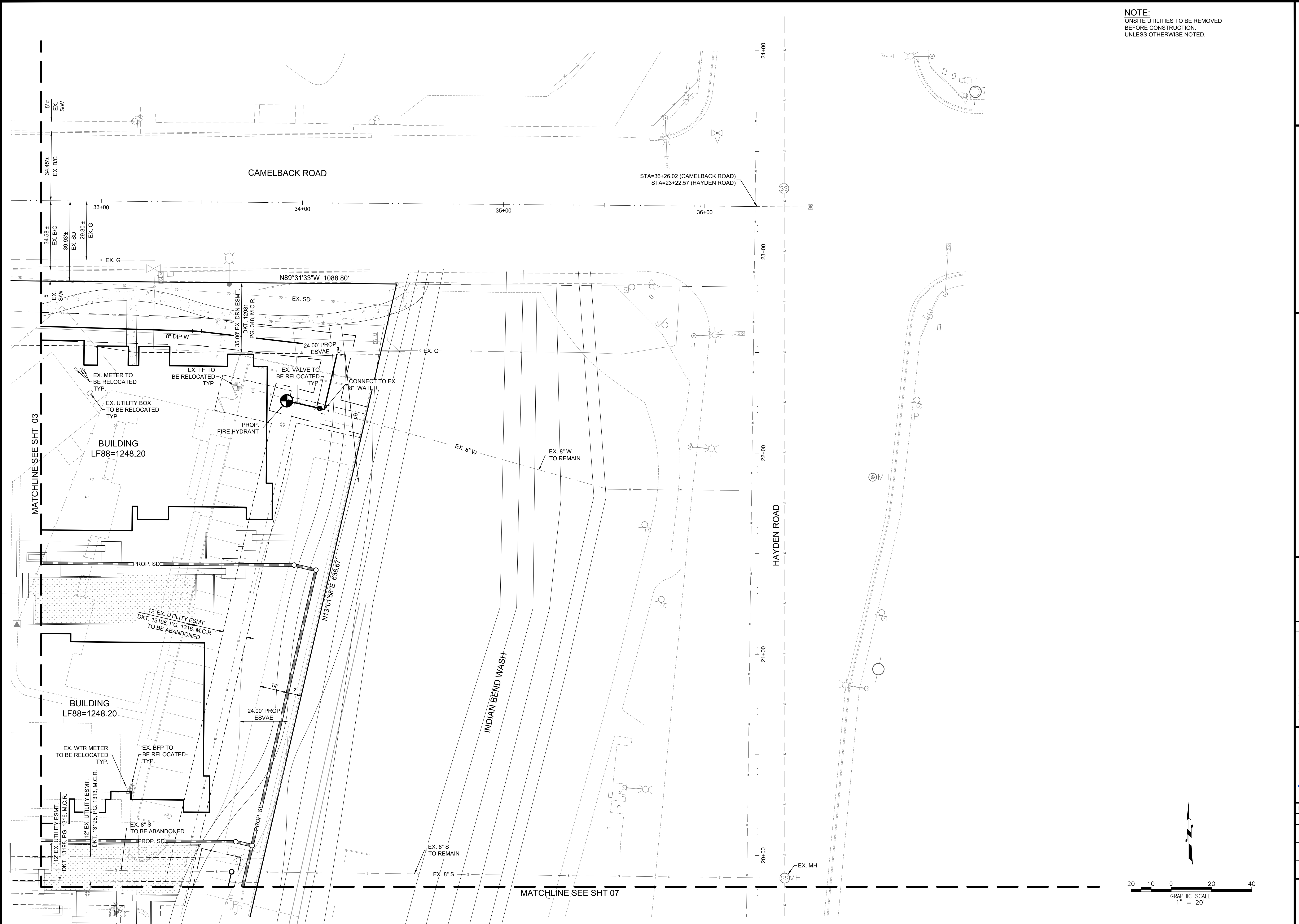
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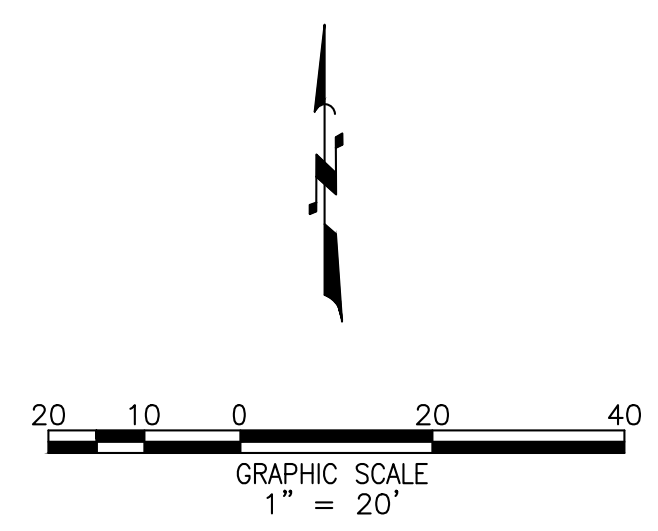
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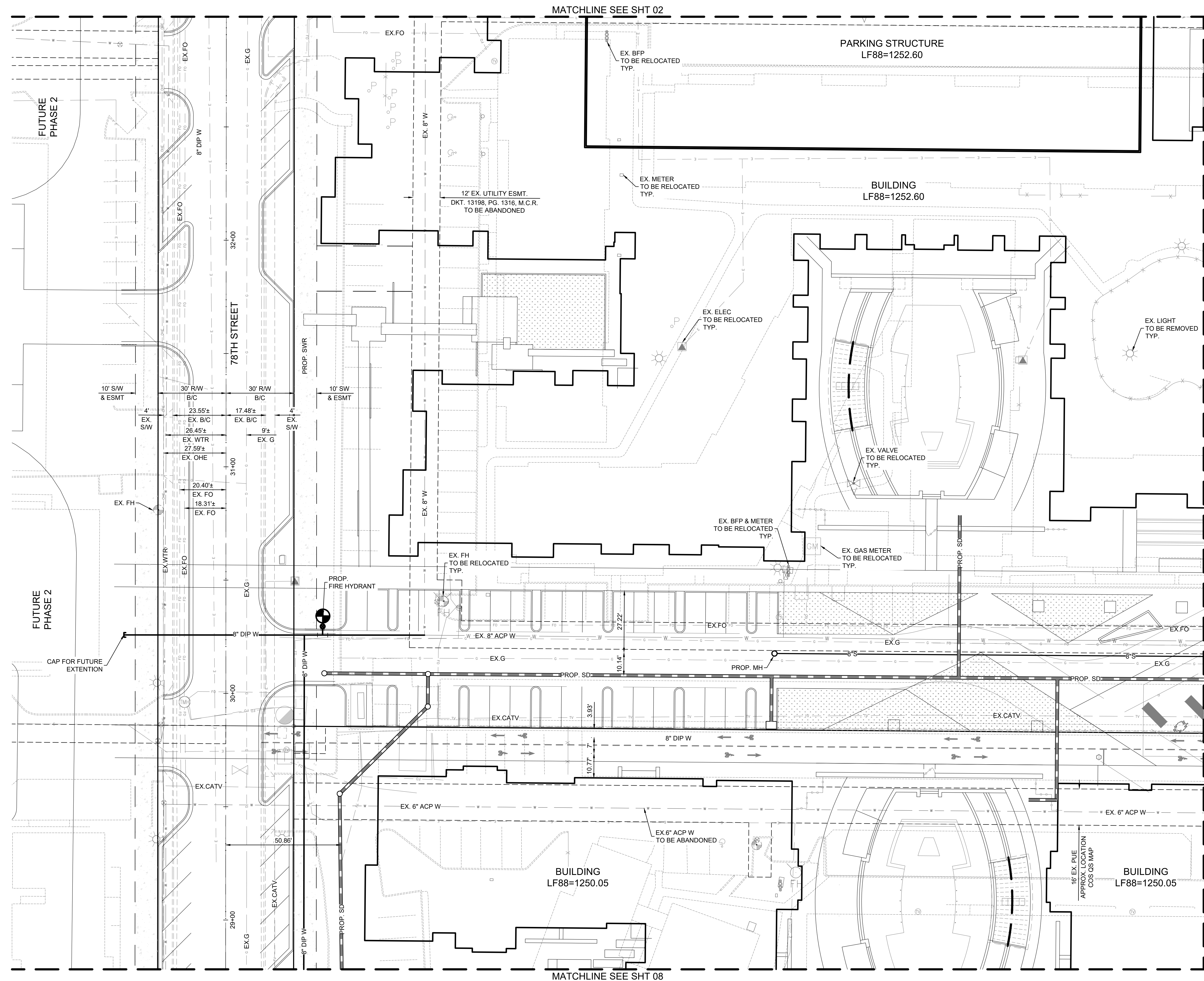
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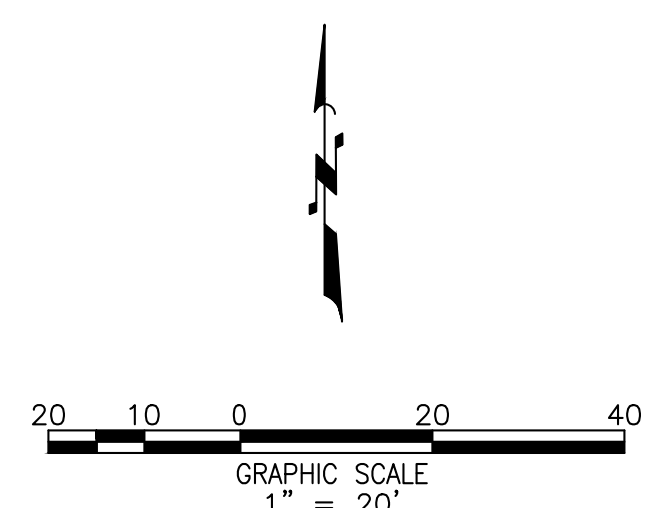


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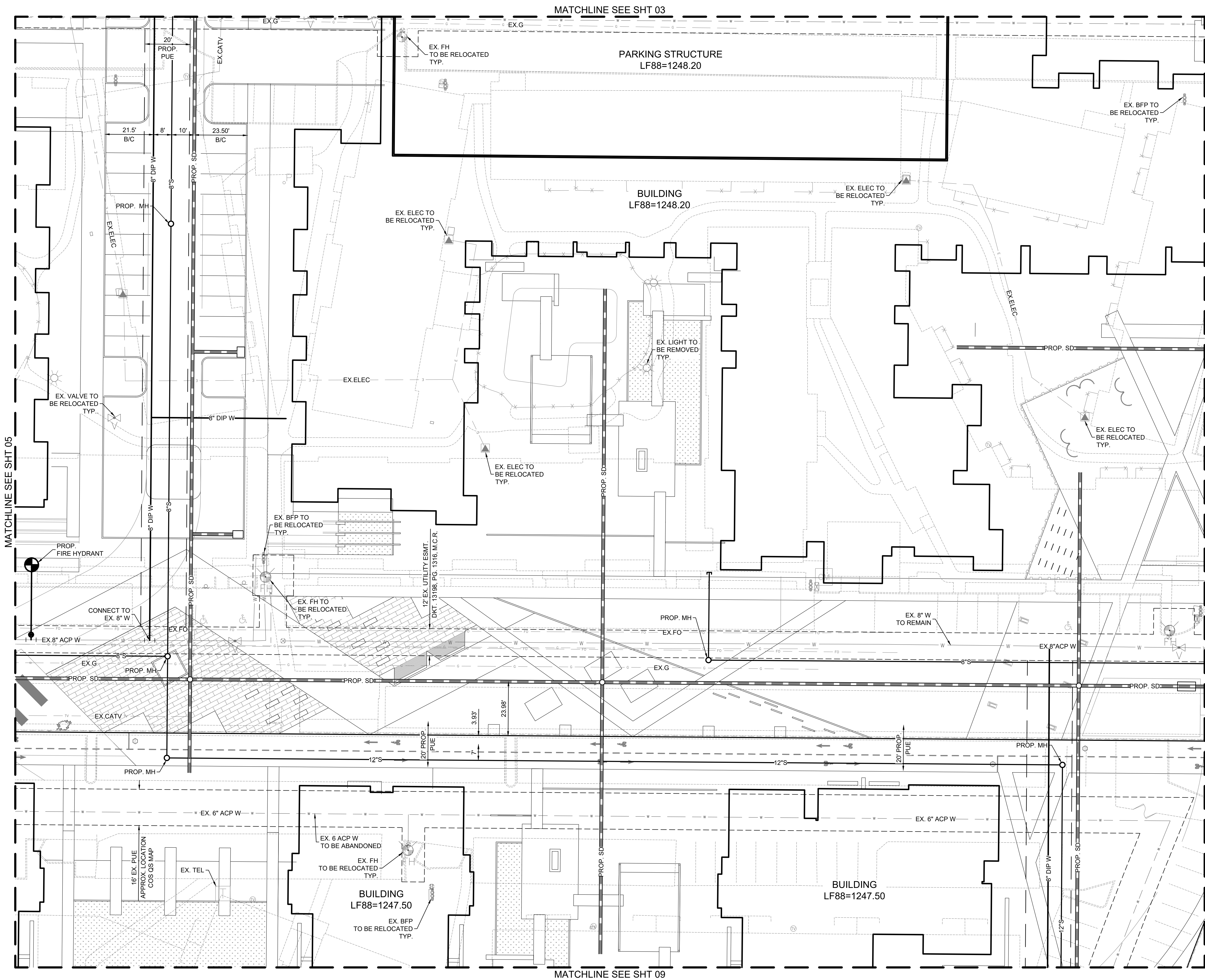


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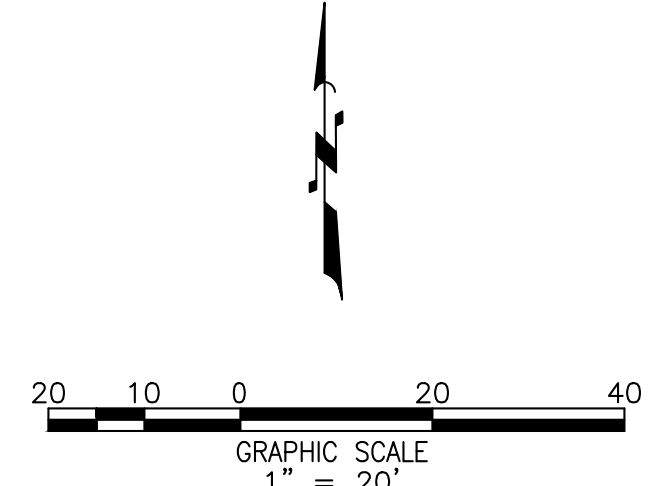
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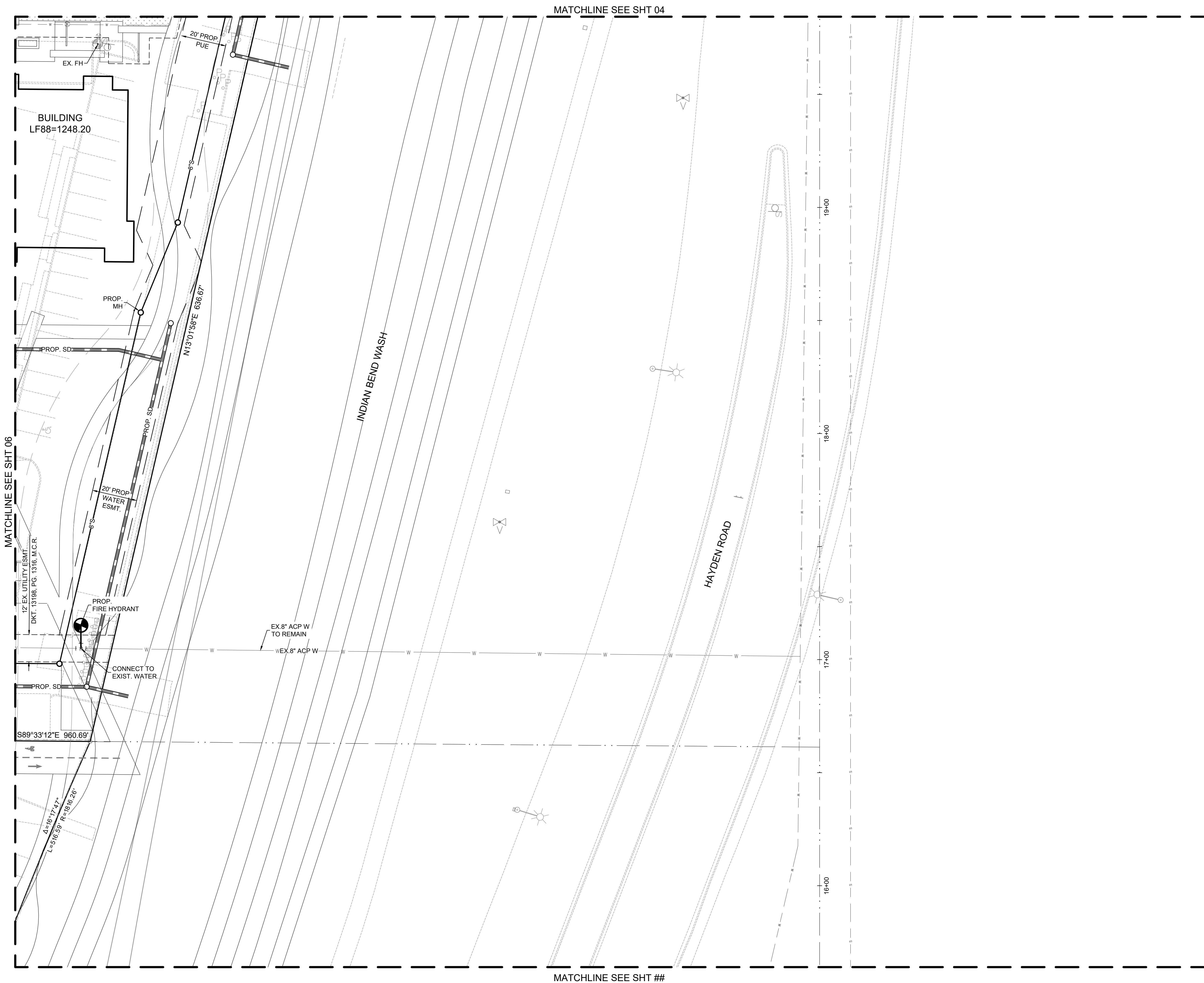


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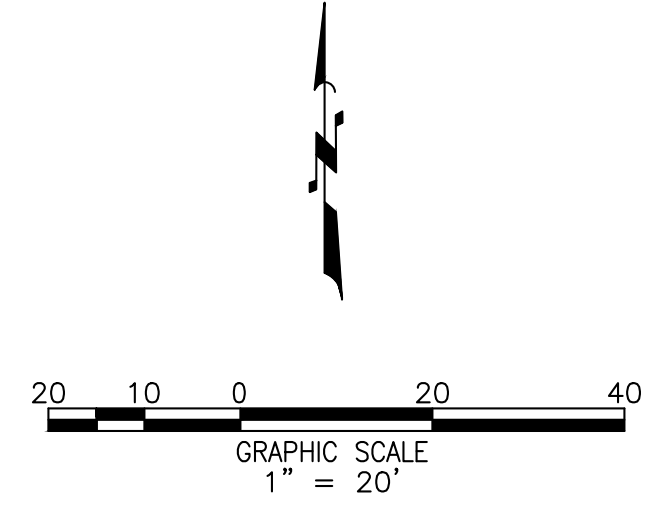
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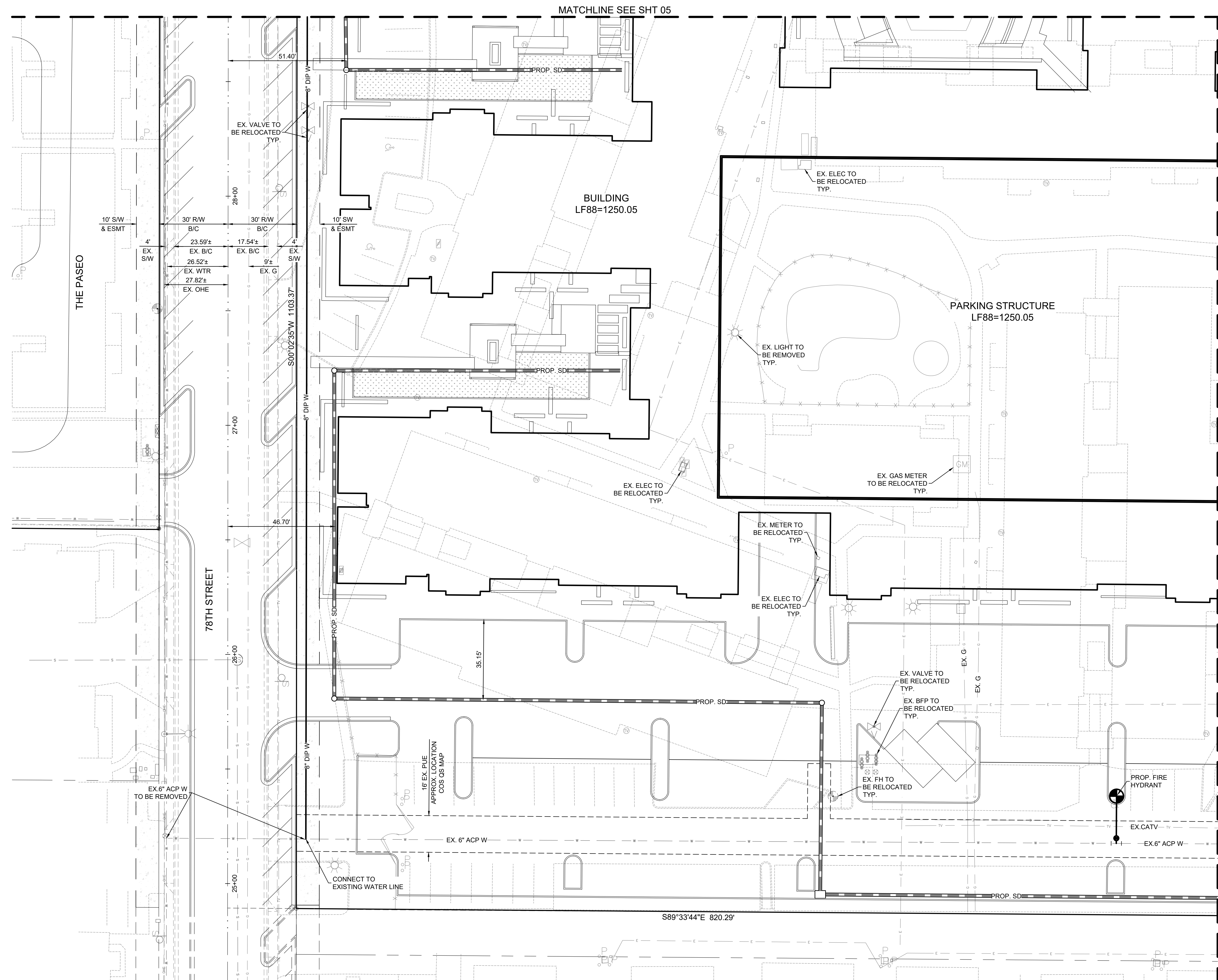
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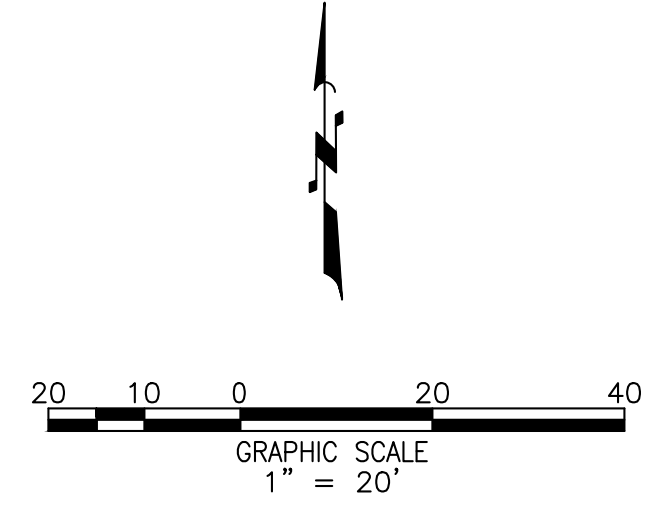
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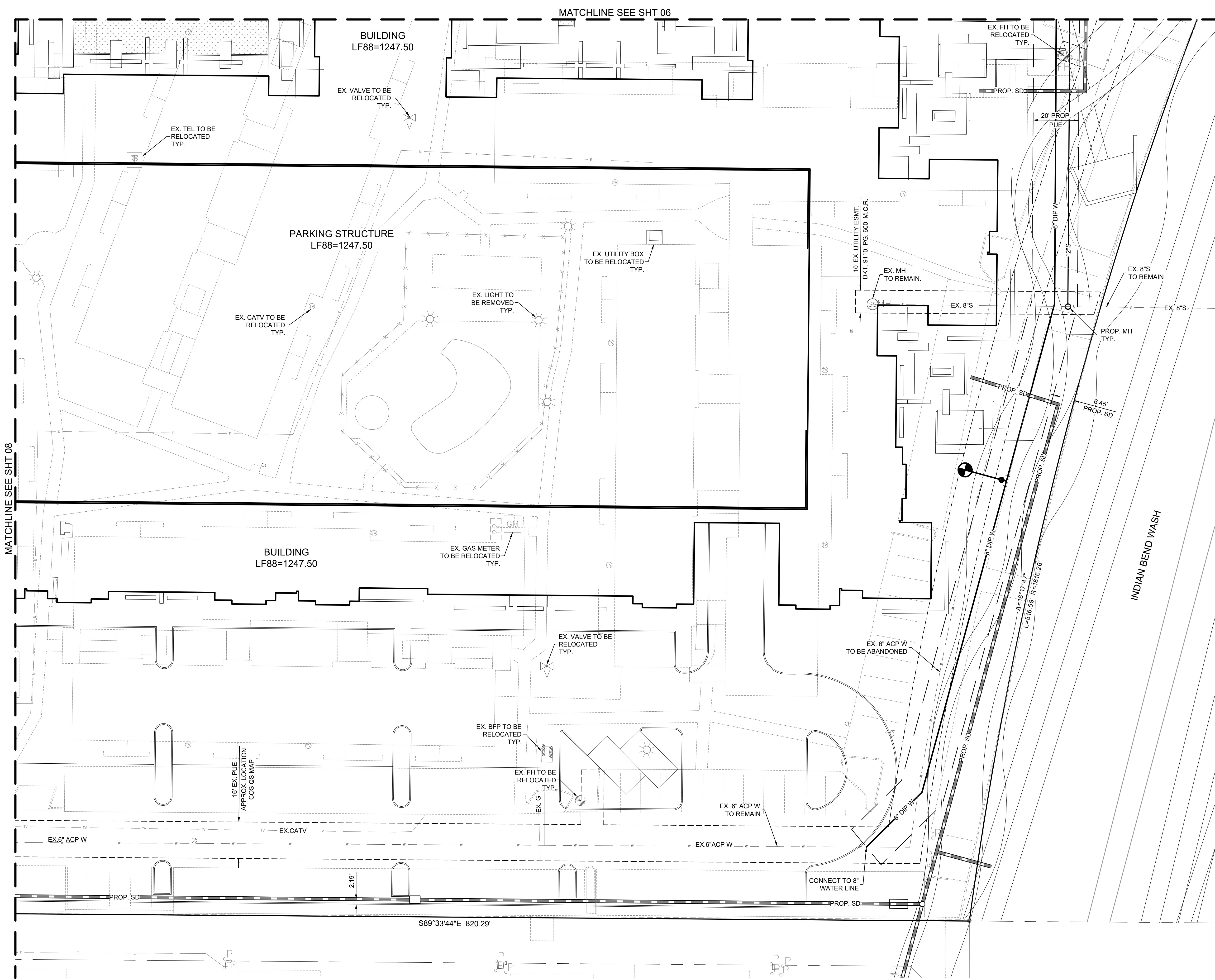
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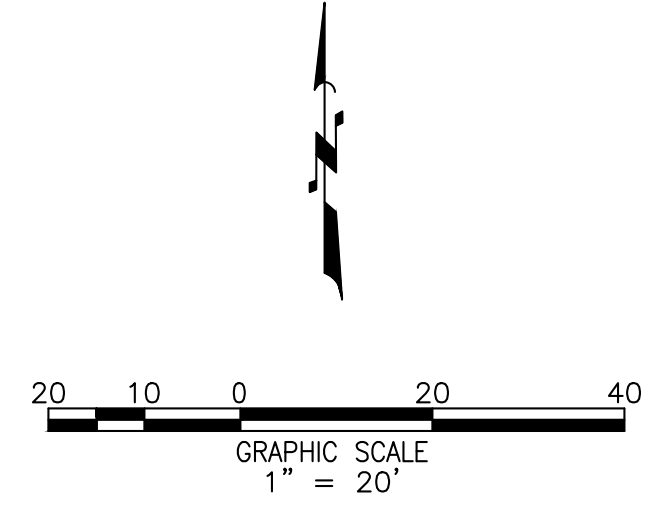
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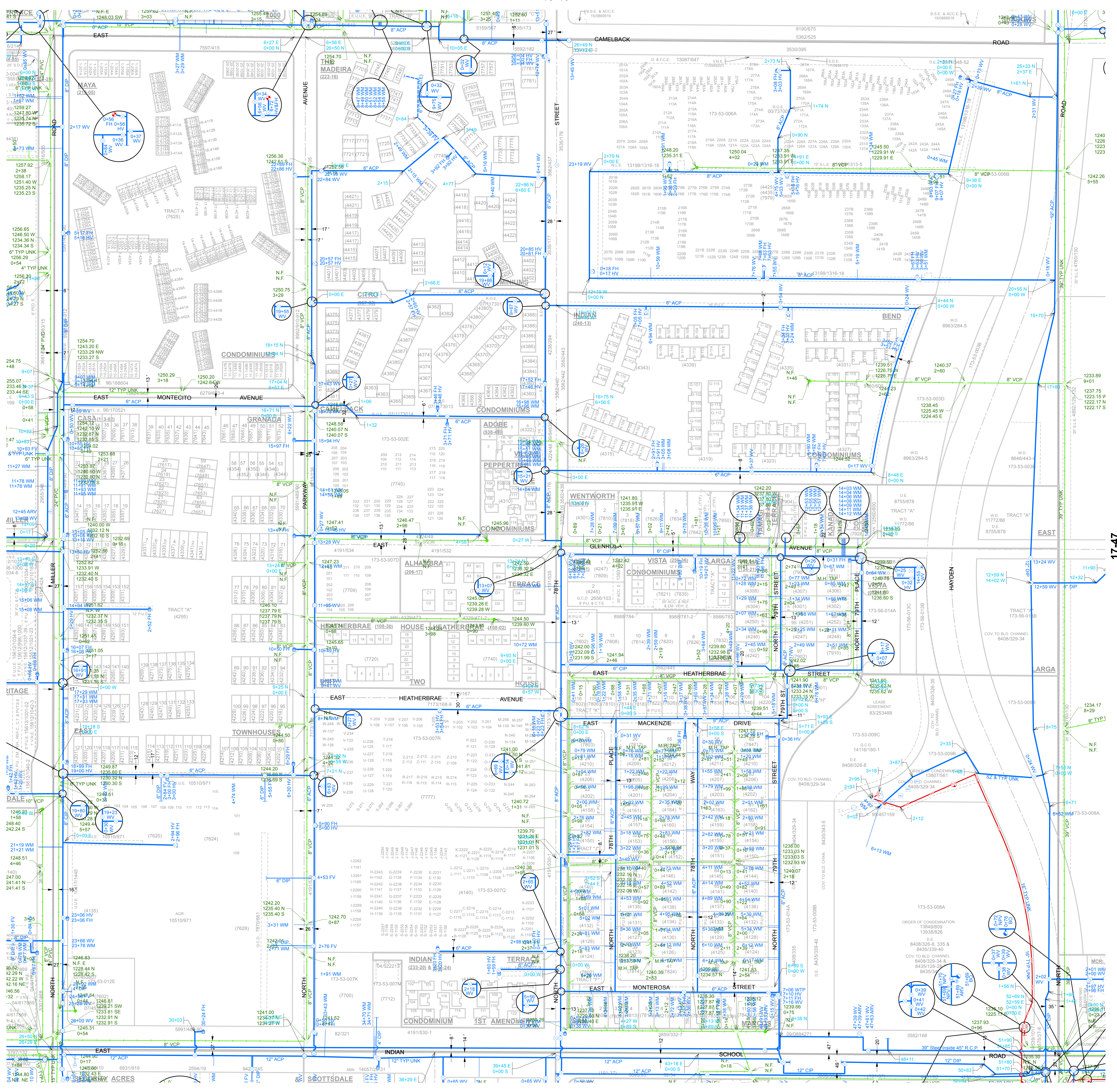
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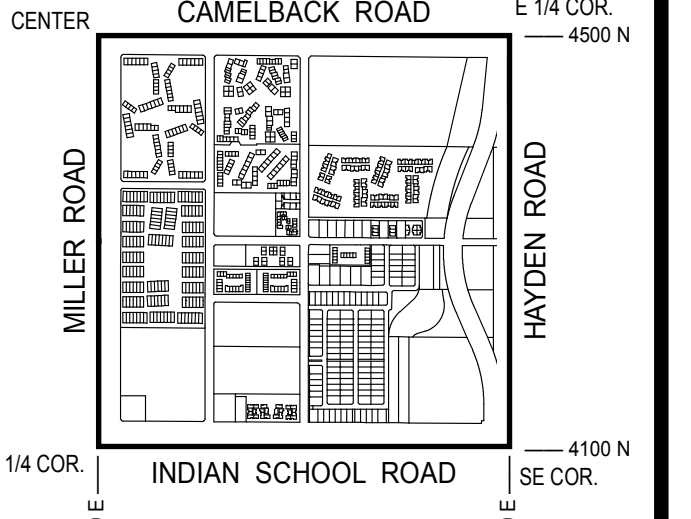


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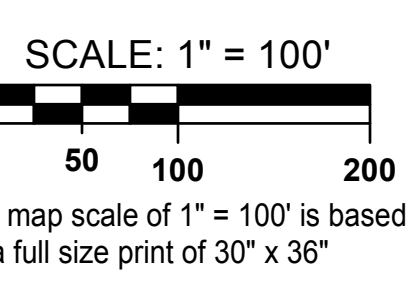
LEGEND:

- Water Valve
- Non-potable Water Valve
- Fire Hydrant
- Water Blowoff
- Water Main Reducer
- Water Sample Station
- Water Air Release Valve
- Non-potable Water Air Release Valve
- Water Pressure Reducing Valve
- Water Vault
- Water Manhole
- Non-Potable Water Manhole
- Water Pump
- Water Main
- Non-Potable Water Main
- Fire Line
- Water Service
- Non-Scottsdale Water Main
- Sewer Manhole
- Sewer Cleanout
- Sewer Lift Station
- Sewer Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force
- Non-Scottsdale Sewer Main
- Sewer Service

VICINITY MAP



NORTH



WATER & SEWER
 QUARTER SECTION MAP
17-46
 SE 1/4 SEC. 23 T2N R4E

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APPENDIX B
WASTEWATER DEMAND CALCULATIONS



add pool backwash
for HDR

TABLE 1 Proposed Wastewater Demand Table				
Phase 1				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	1241 DUs	140	173,700	781,700
Restaurant	10,000 sq. ft.	1.2	12,000	72,000
Commercial	35,000 sq. ft.	0.5	17,500	52,500
Demand			203,200	906,200
Phase 2				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	270 DUs	140.0	37,800	170,100
Healthcare ⁽⁴⁾	200 beds	250	50,000	225,000
Hotel	250 rooms	380.0	95,000	427,500
Demand			182,800	822,600
Total Demand			386,000	1,728,800

629gpm

571gpm

Notes:

1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual

2) Peaking Factors:

Land Use	Peaking Factor
HDR/ Healthcare	4.5
Commercial/ Retail/ Office	3.0
Restaurant	6.0
Hotel	4.5



GPM AND MGD COLUMNS HAVE BEEN ADDED. DEMANDS ARE BROKEN DOWN FOR EACH RESIDENTIAL BUILDING. ALL DEMANDS HAVE BEEN REVISED.

4) Demand based on Arizona Administrative Code Title 18 Chapter 9 Unit Design Flows for wastewater

add all relevant pool backwash at 100gpm each pool, if multiple pools use following equation:

no. of pools contributing to common sewer X 100gpm/ea X 50% = total flow contributed to sewer

100 GPM/EACH POOL * %50 HAS NOW BEEN APPLIED TO THE DEMAND TABLE.



Noe higher than
monitored flow

TABLE 2 Phase 2 Existing Sewage Demand Table				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	354 DUs	140	49,600	223,200
Total Demand			49,600	223,200

155gpm

Notes:

1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual

2) Peaking Factors:

Land Use	Peaking Factor
HDR	4.5
Commercial/ Retail/ Office	3.0
Restaurant	6.0
Hotel	4.5



existing units in Phase 2 location, need to also account for other demands coming onto Parkway Ave. in overall analysis

REVISED TO SHOW ONE PROPOSED DEMAND TABLE AND ONE EXISTING DEMAND TABLE

SEWER FLOW TEST WAS PERFORMED FOR 8" SEWER PIPE IN PARKWAY DRIVE. THIS TEST ACCOUNTS FOR THE OTHER EXISTING DEMANDS FROM PARKWAY.

purpose of table not clear

REVISED TO SHOW ONE PROPOSED DEMAND TABLE AND ONE EXISTING DEMAND TABLE

Gentry on the Green
Wastewater Demand Estimates

Prepared by: M. Mendez
5/20/2019



TABLE 3				
Wastewater Demand Table				
Proposed Phase 1A				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	303 DUs	140	42,400	190,800
Commercial	17,100 sq. ft.	0.5	8,600	25,800
Demand			51,000	216,600
Existing Demand Phase 1B				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	172 DUs	140.0	24,100	108,500
Demand			24,100	108,500
Total Demand			75,100	325,100

Notes:

- 1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual
- 2) Peaking Factors:

Land Use	Peaking Factor
HDR/ Healthcare	4.5
Commercial/ Retail/ Office	3.0
Restaurant	6.0
Hotel	4.5

Why different than
Table 1?? Not clear

REVISED TO SHOW ONE
PROPOSED DEMAND TABLE AND
ONE EXISTING DEMAND TABLE

Gentry on the Green
Wastewater Demand Estimates

Prepared by: M. Mendez
6/3/2019



TABLE 4 Wastewater Demand Table				
Phase 1A and 1B				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	677 DUs	140	94,800	426,600
Commercial	17,100 sq. ft.	0.5	8,600	25,800
Demand			103,400	452,400
Phase 1D				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	556 DUs	140.0	77,800	350,100
Commercial	16,500 sq. ft.	0.5	8,300	24,900
Demand			86,100	375,000
Phase 2				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	270 DUs	140.0	37,800	170,100
Healthcare ⁽⁴⁾	200 sq. ft.	250.0	50,000	225,000
Hotel	250 beds	380	95,000	427,500
Demand			182,800	822,600
Total Demand			372,300	1,650,000

Notes:

- 1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual
- 2) Peaking Factors:

Land Use	Peaking Factor
HDR/ Healthcare	4.5
Commercial/ Retail/ Office	3.0
Restaurant	6.0
Hotel	4.5

- 4) Demand based on Arizona Administrative Code Title 18 Chapter 9 Unit Design Flows for wastewater



TABLE 5 Proposed Wastewater Demand Table				
Proposed Phase 2				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	270 DUs	140	37,800	170,100
Healthcare ⁽⁴⁾	200 beds	250.0	50,000	225,000
Hotel	250 rooms	380.0	95,000	427,500
New Demand			182,800	822,600
Existing Demand Phase 2				
Land Use	Unit (Area or Dwelling Units)	Demand (gpd per unit)	Demand (gpd)	Peak Flow (gpd)
HDR	354 DUs	140.0	49,600	223,200
Demand Eliminated			49,600	223,200
Demand Difference⁽⁵⁾			232,400	599,400

416gpm

TABLES AND DEMANDS
REVISED. MGD COLUMN
ADDED.

Notes:

- 1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual
- 2) Peaking Factors:

Land Use	Peaking Factor
HDR/ Healthcare	4.5
Commercial/ Retail/ Office	3.0
Restaurant	6.0
Hotel	4.5

- 4) Demand based on Arizona Administrative Code Title 18 Chapter 9 Unit Design Flows for wastewater
- 5) Used to calculate additional load and check capacity of sewer line in Parkway Avenue

REVISED. NOTE REMOVED. SEE
UPDATED ANALYSIS OF PHASE
2 SEWER.

Purpose

APPENDIX C
WASTEWATER SYSTEM HYDRAULIC ANALYSIS

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Show each proposed building as a node and show how it is connected into the system

EXHIBIT REVISED AND UPDATED TO SHOW EACH PROPOSED BUILDING AS A NODE. LABELS, SLOPES, AND PIPE NAMES HAVE BEEN ADDED. SEE ANALYSIS FOR PHASE 1 AND PHASE 2.

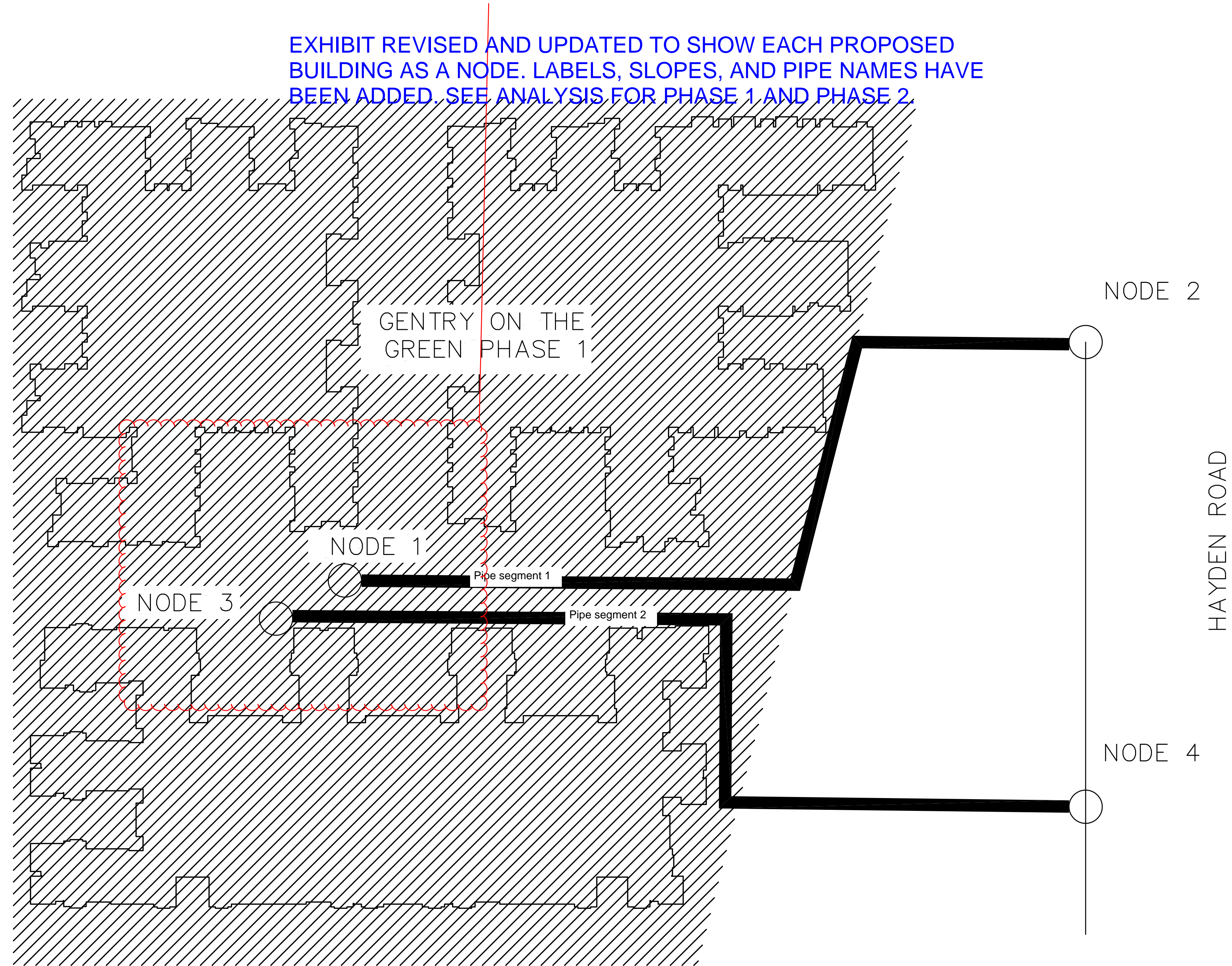


EXHIBIT REVISED AND UPDATED TO SHOW PHASE 2, WHICH INCLUDES THE UPSIZING OF THE PIPE TO THE INTERSECTION OF MILLER ROAD AND INDIAN SCHOOL ROAD.

Where is analysis for this section?? Needs to extend to Miller.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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 MESA, AZ 85206

EXHIBIT 5: FULL BUILD OUT SEWER
 PROJECT:
 GENTRY ON THE GREEN
 CITY OF SCOTTSDALE, ARIZONA

811
 Know what's below.
 Call before you dig.

REVISIONS:

PM. R. GEORGES
 DR. M. MENDEZ
 JOB NO. 19001704
 FILE NO.

NODES AND PIPE LABELS HAVE ALL BEEN REVISED. SEE NEW ANALYSIS TABLES FOR PHASE 1 AND PHASE 2.



Nodes do not align with previous page figure

313 and 260gpm respectively, what is the relevance and source of these flows? Phase 2 flows per Table 1?

DEMANDS HAVE BEEN REVISED AND BROKEN DOWN BY BUILDING. EACH BUILDING HAS AN ASSIGNED NODE. THE DEMANDS FOR RETAIL, COMMERCIAL, AND RESTAURANT SQUARE FOOTAGES ARE EQUALLY DISTRIBUTED ACROSS THE 4 PROPOSED PHASE 1 BUILDINGS. A SEPARATE PHASE 2 ANALYSIS TABLE HAS ALSO BEEN PRODUCED.

state source

Prepared by: Atwell
Date: 6/30/2019
EXISTING 8" SEWER LINES CROSSING THE WASH ON THE EAST SIDE OF THE SITE ARE EXISTING. EXISTING SLOPES HAVE BEEN COMPARED TO THE MINIMUM SLOPE TABLE BELOW THE REST OF THE DESIGN SLOPES.

Wastewater System Hydraulic Analysis																
Pipes			Estimated Flow		Pipe Sizing								Performance			
Pipe Segment	Upstream Node	Downstream Node	Peak Flow (mgd)	Flow (cfs)	Pipe Dia. (in.)	Mannings "n"	Design Slope (ft/ft)	K	Central Angle θ (degrees)	Depth to Diameter h/D	Flow Area (ft ²)	Flow Velocity (ft/s)	Pipe Capacity (mgd)	Depth to Dia. ⁽²⁾ Check	Max Velocity ⁽¹⁾ Check	Capacity Check
1	1	2	0.452	0.70	8	0.013	0.00580	0.237	3.7390	0.647	0.239	2.93	1.233	OK	OK	OK
2	3	4	0.375	0.58	8	0.013	0.00520	0.208	3.5301	0.597	0.217	2.67	1.300	OK	OK	OK

1. Maximum velocity allowed = 10 ft/s
2. Maximum depth over diameter ratio = "OK" if ratio less than 0.65.

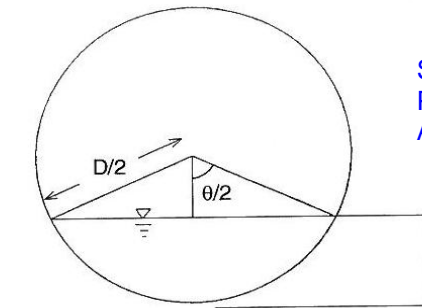
$$Q = \frac{1.486 \cdot A \cdot R^{\frac{2}{3}} \cdot S^{\frac{1}{2}}}{n}$$

Pipe flow parameters were estimated by Saatçi equations for partially filled circular pipes (Debo and Reese, 1995):

$$K = 0.673Q \cdot n \cdot D^{-\frac{8}{3}} \cdot S^{-\frac{1}{2}}$$

$$\theta = \frac{3\pi}{2} \left[1 - \left[1 - [\pi K]^{\frac{1}{2}} \right]^{\frac{1}{2}} \right]^{\frac{1}{2}}$$

$$\frac{h}{D} = \frac{1}{2} \left[1 - \cos\left(\frac{\theta}{2}\right) \right]$$



of what segment, describe purpose of calculation in table tile

SEPARATE TABLES HAVE BEEN PRODUCED FOR PHASE 1 AND FOR PHASE 2. TITLES ARE UPDATED. ANALYSIS IS FOR PEAK FLOW.

Minimum Slopes		
Pipe Size (in)	Slope (ft/ft)	Full flow Velocity (ft/s)
8	0.0052	2.5
12	0.0030	2.5

Debo, Thomas N and Reese, Andrew J (1995). *Municipal Stormwater Management - 2nd edition*. Lewis Publishers - CRC Press LLC. Boca Raton, Florida

APPENDIX D
FLOW TEST RESULTS

Site Name	Indian School and Parkway			
Isco Quantity	Flow Rate	Min/Max	Flow Rate	Min/Max
Label	Min Flow Rate	Min/Max	Peak Flow Rate	Min/Max
Units	gpm	Date/Time	gpm	Date/Time
12/8/2018 0:00	13.229	5:34:00 AM	118.726	11:46:00 AM
12/9/2018 0:00	0	4:40:00 AM	123.401	11:40:00 AM
12/10/2018 0:00	0	5:12:00 AM	127.45	8:44:00 AM
12/11/2018 0:00	14.011	4:08:00 AM	96.859	8:14:00 AM
12/12/2018 0:00	15.171	2:20:00 AM	98.889	9:32:00 PM
12/13/2018 0:00	12.32	4:18:00 AM	94.213	7:38:00 AM
12/14/2018 0:00	10.978	3:02:00 AM	100.848	6:54:00 AM
12/15/2018 0:00	14.031	4:50:00 AM	90.339	11:12:00 AM
12/16/2018 0:00	15.467	1:22:00 AM	97.769	11:28:00 AM
12/17/2018 0:00	15.907	3:04:00 AM	102.804	10:40:00 PM
12/18/2018 0:00	0	4:32:00 PM	94.766	7:10:00 PM

Provide all supporting Data (not just roll-up), source of data, device used to collect, and map showing exactly where data was gathered i.e. manhole location

SEWER FLOW TEST LOCATION EXHIBIT IS ADDED.

need to also show
hydraulicis for
proposed line size
with proposed loading

is this min slope in Indian
School? need to show
segment slope analysis

Worksheet for Ex SS Indian School Rd Max Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Need analysis for Parkway Ave sewer
also...unless you are claiming this is the
lowest slope portion?

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.0028
Diameter	8.0
Discharge	217.00

existing measured flow is 128 gpm
so potentially available flow is 89gpm

Results	
Normal Depth	5.2
Flow Area	0.2
Wetted Perimeter	1.3
Hydraulic Radius	2.3
Top Width	0.64
Critical Depth	3.9
Percent Full	65.0
Critical Slope	0.0070
Velocity	2.01
Velocity Head	0.06
Specific Energy	0.50
Froude Number	0.578
Maximum Discharge	308.71
Discharge Full	286.98
Slope Full	0.0016
Flow Type	Subcritical

8" SEWER LINE IN PARKWAY AVENUE IS UPSIZED TO
12". ANALYSIS IS SHOWN FOR 12" PIPE.

Ok. But this is current condition
only. Max design for existing
sewer per below is 218gpm.
218-128=90gpm.

INPUT	Slope, S	0.0028
	Manning's roughness, n_{full}	0.013
	Manning's roughness is	Constant
	Diameter, D	8 in
	Relative depth, d/D	0.650

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

Flowrate =	218 gpm
Velocity =	2.02 ft/s

GVF Output Data	
Upstream Depth	0.0
Profile Description	
Profile Headloss	0.00
Average End Depth Over Rise	0.0
Normal Depth Over Rise	75.0
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	5.2
Critical Depth	3.9
Channel Slope	0.0028
Critical Slope	0.0070

MAXIMUM CAPCITY ANALYSIS IS SHOWN FOR BOTH
THE EXISTING 8" PIPE IN PHASE 2 AND THE
PROPOSED 12" PIPE IN PHASE 2.

Address comments below and herein and resubmit:

- 1) Both Phase 1 and Phase 2 must be analyzed and proposed infrastructure additions or modifications detailed. Currently only detailing Phase 1. DS&PM 6-1.202
- 2) On proposed sewer model schematic show each proposed building as a node and show how it is connected into the system
- 3) Phase 2 model network schematic is incomplete and inaccurate, does not correspond with utility plans. See markups herein. Reservoir shown feeding Phase 2 is not an accurate hydraulic modeling setup when a supply curve is also being used.
- 4) On utility plans show all lines to be abandoned should be marked with cross hatching. Note that lines should be removed where possible and only formally abandoned with City approval and per City abandonment requirements.
- 5) Phase 1 utility plans are very difficult to interpret. Please show proposed water in solid blue, dashed for existing, and call out size and material type. Use same format but green for sewer.
- 6) Proposed phase 1 and phase 2 development details, i.e. units square footage and development type need to be consistent within the water report and also correspond to the information provided in the sewer BOD.
- 7) Little to no description of the modeling process and output are provided in the conclusions section. Interpret the model output tables in the conclusions section and refer to specific tables and rows/columns of specific tables. Detail how you have proved that there are no issues. DS&PM 6-1.202, part G.
- 8) The peak hour domestic demand model scenario and results needs to be included in this preliminary design report. DS&PM 6-1.202, part G.

PRELIMINARY Basis of Design Report

NOT ACCEPTED **ACCEPTED**

CITY OF SCOTTSDALE
SCOTTSDALE, AZ 85228

1. REVISED. PHASE 1 AND 2 ARE BEING ANALYZED.

Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in

2. REVISED. SEE SEWER MODEL/REPORT

For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY Idillon **DATE** 7/24/2019

3. REVISED. MODEL NETWORK FIXED. ONLY ONE SOURCE. PUMP CURVE IS FROM HYDRANT FLOW TEST. 40' HIGHEST FINISHED FLOOR ACCOUNTED FOR.

Preliminary Water

4. REVISED. CROSS HATCHING REMOVED TO UTILITY LINES THAT ARE BEING REMOVED.

Job No. 19001704

5. REVISED. CONCEPT PLANS UPDATED. LINES SHOWN IN COLOR IN THIS REPORT.

6. SQUARE FOOTAGE AND LAND USES HAVE BEEN REVISED TO MATCH WITH THE MOST CURRENT SITE PLAN. DEMANDS HAVE BEEN UPDATED.

Prepared for:
ColRich
444 West Beach Street Ste. 300

7. ACCURATE MODEL RESULTS ARE PROVIDED. CONCLUSION AND MODELING RESULTS ARE FURTHER EXPLAINED IN MORE DETAIL IN THE REPORT.

Prepared by:
Atwell, LLC
Mesa, AZ 85206

8. REVISED. PEAK HOUR RESULTS ARE NOW INCLUDED.



June 2019

**GENTRY ON THE GREEN
PRELIMINARY WATER
TABLE OF CONTENTS**

1.0	INTRODUCTION.....	1
2.0	EXISTING WATER DISTRIBUTION SYSTEM	1
3.0	PROPOSED WATER SYSTEM	1
4.0	HYDRAULIC MODEL.....	2
4.1	BOUNDARY CONDITIONS.....	2
4.2	PHYSICAL PARAMETERS	2
4.3	WATER DEMAND SCENARIOS	3
4.4	MODELING RESULTS.....	3
5.0	CONCLUSION	3

APPENDICES

- A. Exhibits
- B. Water Demand Calculations
- C. Hydraulic Model Results for Fire Flow Test
- D. Hydraulic Model Results for MDD + FF
- E. WaterCAD Results for Peak Hour Day Demand (PHD)
- F. Fire Flow Results
- G. Fire Hydrant Testing

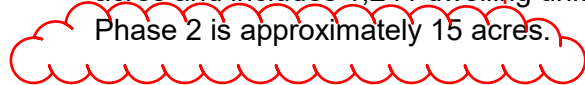




need to include demand breakdown of Phase 2. Phase 1 and 2 descriptions need to be consistent herein and with sewer BOD. **REVISED**

1.0 INTRODUCTION

The Gentry on the Green development (the "Project"), is a proposed multi-use development that includes residential and commercial use. The Project's site is currently developed as three apartment complexes. The Project is located in the southeast quarter of Section 23, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Scottsdale, Arizona (See Vicinity Map in Appendix A). The water infrastructure that will support this project is an existing 12-inch main on Hayden Road surrounding the project site, see Exhibit 2 in Appendix B for the existing water lines. The Project is approximately 42 acres and is phased into two phases (See Phasing Exhibit in Appendix A). Phase 1 is approximately 27 acres and includes 1,241 dwelling units and 43,800 square feet of commercial development. Phase 2 is approximately 15 acres.



Does not correspond with Table 1 in appendix **REVISED**

2.0 EXISTING WATER DISTRIBUTION SYSTEM

The Project is located within the service area boundary of the City of Scottsdale. 8-inch and 6-inch water mains in operation exist within the Project boundary. The northeast portion of the Project currently connects to a 12-inch DIP water main on Hayden Road. The south and the west portions of the Project connect to 6-inch mains on 78th Street and Parkway Avenue, which connect to a 12-inch AC pipe on Indian School Road.

via an 8" **REVISED**

3.0 PROPOSED WATER SYSTEM

The design of the proposed water distribution system is based on Bulletin 10 (ADEQ), the City of Scottsdale Design Standards & Policies Manual (DSPM), 2016 International Fire Code and sound engineering principles. Design requirements used are listed below:

- High Density Residential (HDR) average day demand or 0.270 gallons per minute per unit. **state derived from 2 beds per room and 250gpd/bed for sewer** **REVISED**
- Commercial and Retail average day demand is 0.00111 gallons per minute per sq. ft.
- Healthcare average day demand is 0.347 gallons per minute per room. **0.63 per DS&PM** **REVISED**
- Restaurant average day demand (ADD) is 0.002 gallons per minute per sq. ft.
- Hotel average day demand is 0.6199 gallons per minute per room.
- Open Space average day demand (ADD) is 2.49 gallons per minute per acre.
- Multi-family fire flow demand is a minimum of 1,500 gallons per minute (gpm), assuming 75% reduction of fire flow requirements per app B of fire code.

REVISED
Developed

- Maximum Day Demand (MDD) is 2 times the ADD for HDR, Commercial, Retail, Office, Healthcare and Hotel land uses.
- Maximum Day Demand is 3 times the ADD for Restaurant land uses.
- Peak Hour Demand is 3.5 times the ADD for HDR, Commercial, Retail, Office and Healthcare land uses. ✓
- Peak Hour Demand (PHDD) is 4.5 times the ADD for Hotel land uses. ✓
- Peak Hour Demand (PHDD) is 6 times the ADD for Restaurant land uses. ✓
- Minimum system pressure during MDD plus Fire Flow scenario is 30 psi ✓
- Minimum pressure at the highest finished floor during MDD plus Fire Flow is 15 psi. ✓
The tallest building is four stories tall therefore, the Maximum finished floor to ground height is assumed as ~~30 feet~~ **40ft more realistic** **REVISED**

The proposed phasing plan allows construction of phase 1A while maintaining water service to the existing apartments in phase 1B through phase 1C.

4.0 HYDRAULIC MODEL

Incorrect, model schematic shows two sources. A reservoir has no curve just an HGL. Clarify who both can be used in a valid model..

WaterCAD v8i by Bentley was used to verify that fire flow that complies with the City of Scottsdale's requirements is available for the Project. See Appendix B for results.

4.1 BOUNDARY CONDITIONS

MODEL REVISED TO USE ONE SOURCE AT THE LOCATION OF THE FLOW TEST AT THE NORTHEAST OF THE SITE.

The Water Model Layout (Exhibit 2) provides a computer-model schematic of the existing water mains. The model presented in this report has a boundary condition defined at one location. This boundary condition is modeled as a reservoir supplying water to the system through an equivalent length pipe that simulates the water system curve. Fire flow test results are corrected per the Design Standards & Policies Manual and used to develop the water system curve for this model (See Appendix C).

4.2 PHYSICAL PARAMETERS

ok...for mortar lined ductile **REVISED TO USE C=130**

Physical parameters used in the WaterCAD model include a Hazen Williams roughness factor "C" of 140 for Asbestos Cement pipe (ACP) and a roughness factor "C" of 140 for Ductile Iron pipe (DIP). Node elevations are obtained from onsite topography. Much of the 8-inch ACP is being replaced with DIP. Proposed pipe sizes used in this model are 8-inch in diameter. Residential services, fire hydrant runs and irrigation services are excluded from the model.

ok, but show where they are tying in, demand amount, and building type/details

HYDRANT LOCATIONS SHOWN ON EXHIBIT 2

4.3 WATER DEMAND SCENARIOS

A scenario (MDD + FF) applies the Maximum Day Demand for phase 1 and Fire Flow at the farthest and highest point from the source.

4.4 MODELING RESULTS

The results of the water model analysis show that the proposed water system provides adequate water supply and fire flow to the Project. Pressures within the Project are not under 30 psi during fire flow.

5.0 CONCLUSION

The proposed pipe sizes and estimated pressures are based upon the best available information at the time of this computer analysis. Some parameters are expected to be modified slightly since development in this area is dependent on timing, final design plans, and development planning. Based on the computer runs included in the Appendix, the proposed water system has pipe sizes and other water system appurtenances that will adequately supply the projected maximum day demands and required fire flows for the development. There are three existing apartment complexes on this project site that were active while the fire flow test was performed and will be replaced with new land uses. The projected water demands were not reduced for the new land uses. The hydraulics for the Phase II portion of the site will be analyzed once a site plan is available.

Expand on modeling process. Describe the model output and reference the specific table.

MODELING RESULTS ARE NOW BEING REFERENCED AND THE MODELING PROCESSED HAS BEEN FURTHER EXPLAINED IN THE REPORT.

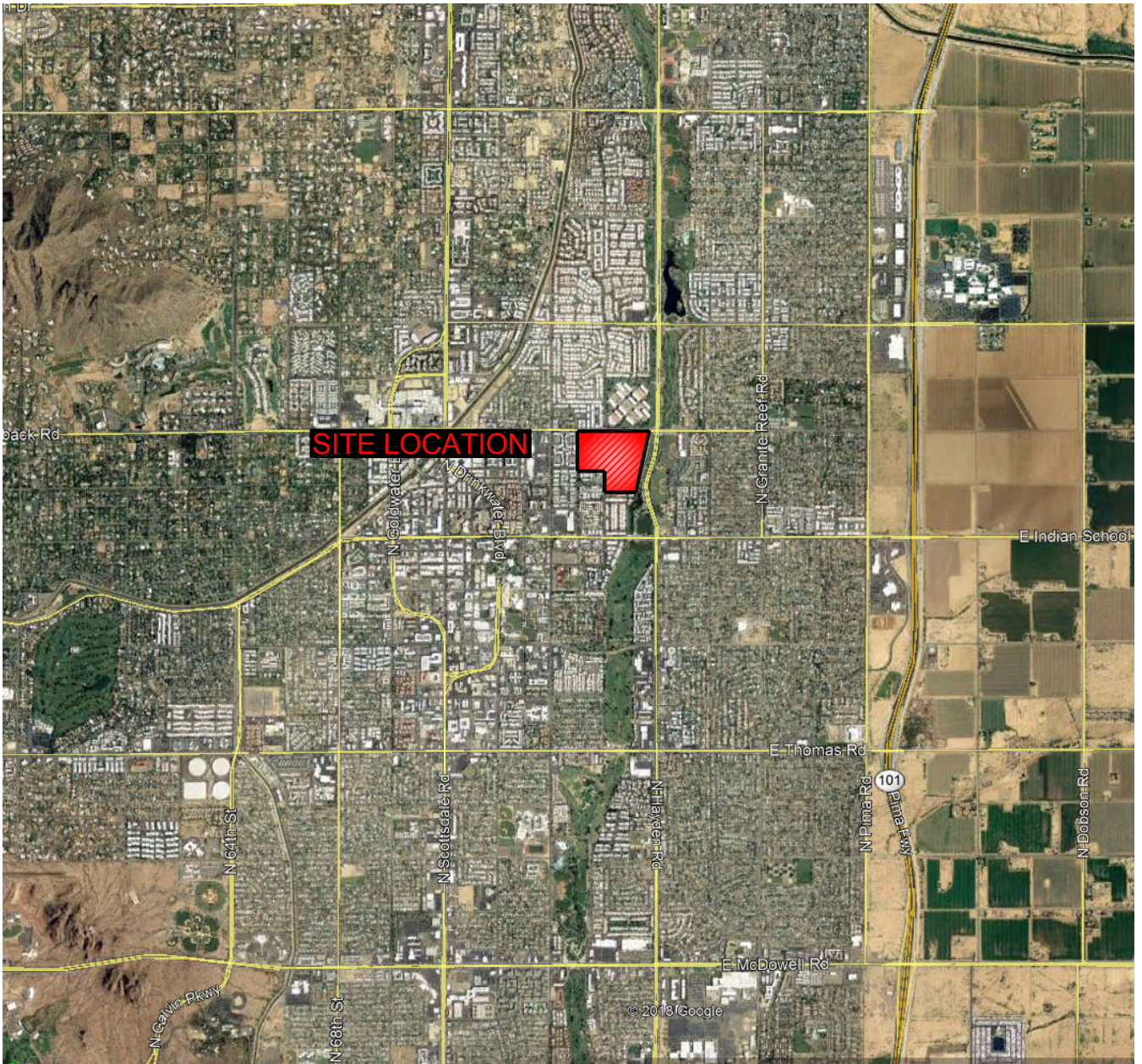
spell

need best approximation of Phase 2 and associated analysis as part of this case.

PHASE 2 ANALYSIS IS NOW INCLUDED. DEMANDS BASED ON A PROJECTED DWELLING UNITS AND LAND USES.

APPENDIX A
EXHIBITS

k:\19001704\project_documents\engineering-planning-power_and_energy\reports\water\exhibits\19001704 - exh. 1 vicinity map.dwg Saved: 5/16/2019 12:59 PM Plot date: 5/16/2019 12:59 PM



LEGEND

GENTRY ON THE GREEN



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4700 E. SOUTHERN AVENUE
MESA, AZ 85206
480.218.8851

EXHIBIT 1 - VICINITY MAP

GENTRY ON THE GREEN

SCOTTSDALE, AZ

111-ZIN-200199
086/202/199



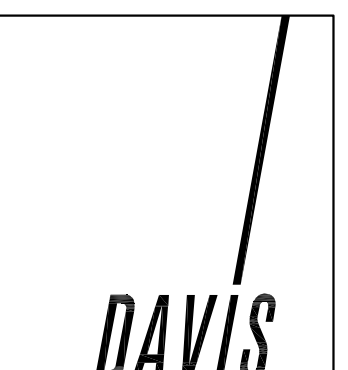
Phase Two
 Site Area: 14.97 gross acres

Phase One
 Site Area: 26.53 gross acres
 Residential Unit Total: 1,241 units
 Total Non-Residential Area: 21,000sf
 Total Retail Area: 20,000sf
 Total Retail Patio Area: 2,800sf
 Total Non-Residential / Retail Area: 43,800sf
 Total Parking Required: 1,957 spaces [per zoning ordinance]
 Total Parking Provided: 2,240 spaces

Site Plan



18160- 5/1/19



GENTRY ON THE GREEN- Scottsdale, Arizona

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Phase Two

Phase One

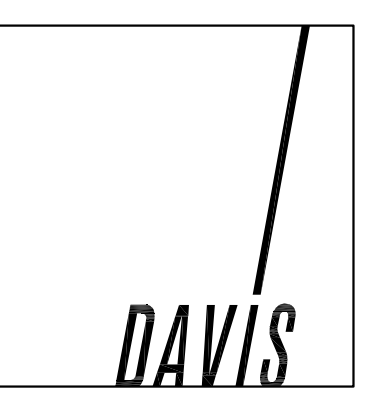
- Phase 1A
- Phase 1B
- Phase 1C
- Phase 1D
- Phase 1E
- The Paseo

Phasing Exhibit

18160- 5/1/19

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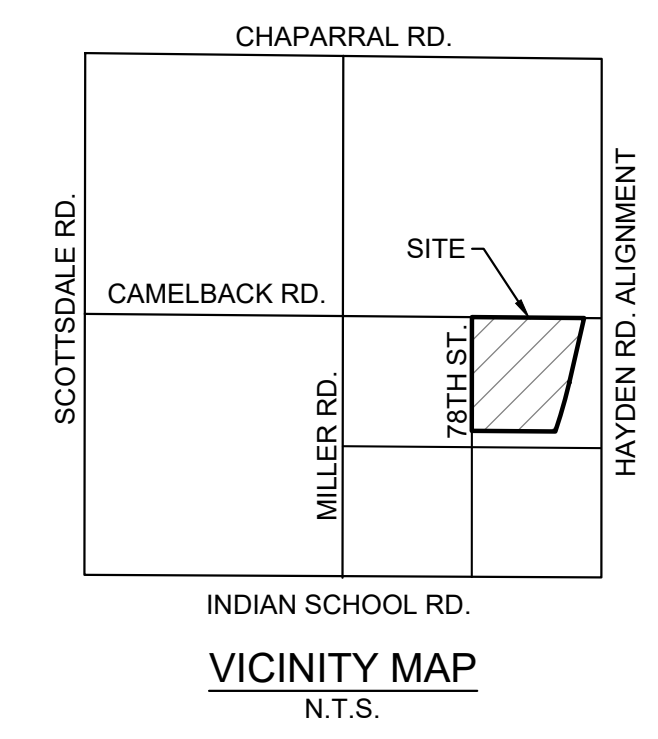
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6119001704 - vicente-glen-consaninowplan_sewer19001704-01-cs01.dwg Plotdate: 04/2019

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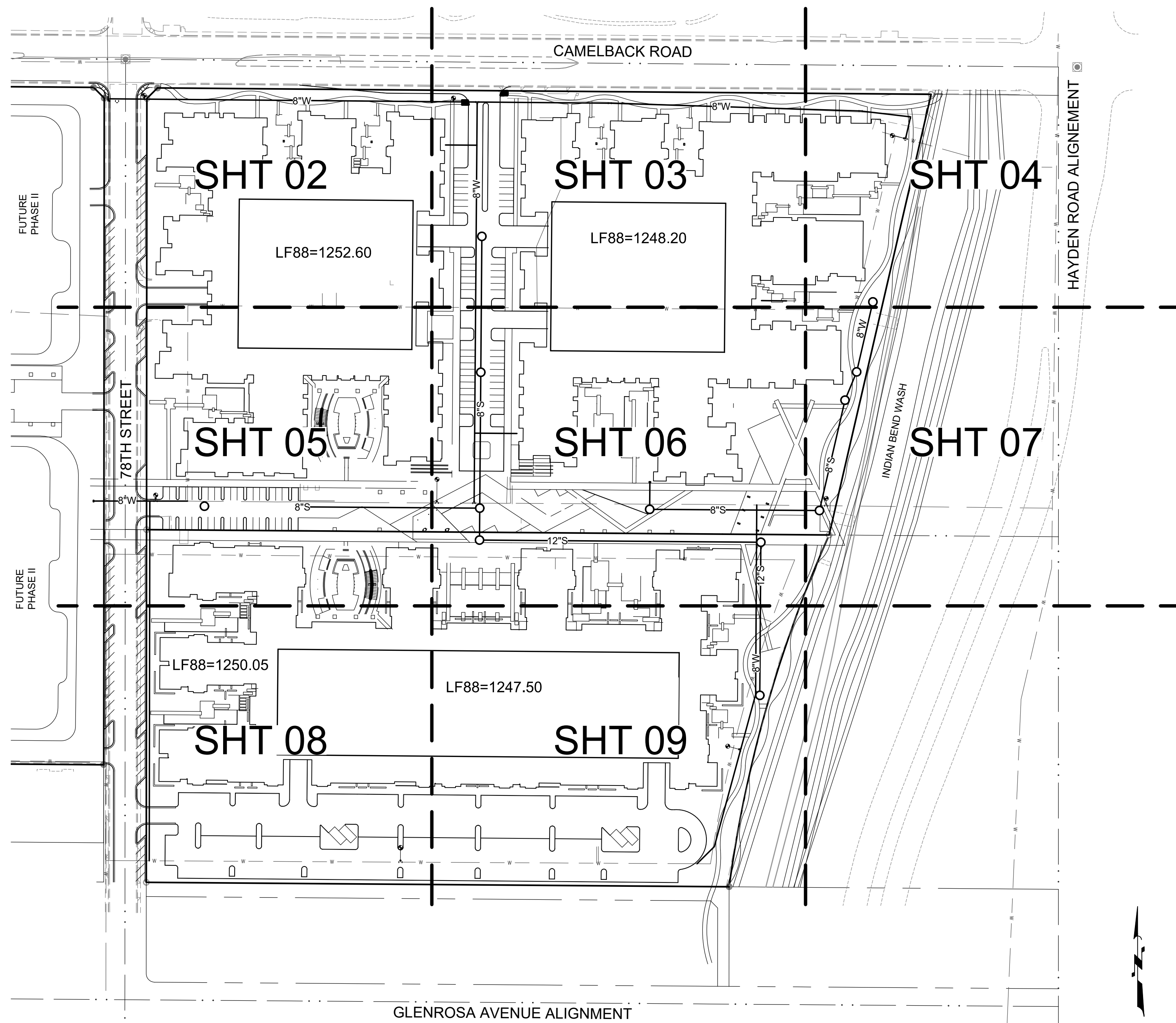
- | | | | |
|--|----------------------------------|-------|-------------------------|
| | MATCHLINE | EX. | EXISTING |
| | BOUNDARY LINE | ELEC | ELECTRIC |
| | LOT LINE | BFP | BACKFLOW PREVENTION |
| | CENTER LINE | G | GAS |
| | EASEMENT | WTR | WATER |
| | RIGHT-OF-WAY | SWR | SEWER |
| | EXISTING CONTOUR | P | PAVEMENT |
| | PROPOSED CONTOUR | R/W | RIGHT-OF-WAY |
| | RETAINING WALL | CL | CENTER LINE |
| | WATER LINE | B/C | BACK OF CURB |
| | FIRE HYDRANT | S/W | SIDEWALK |
| | WATER VALVE | C&G | CURB & GUTTER |
| | AIR RELEASE VALVE | E/P | EDGE OF PAVEMENT |
| | WATER METER BOX | PUE | PUBLIC UTILITY EASEMENT |
| | REDUCER | CB | CATCH BASIN |
| | SEWER LINE | MH | SEWER MANHOLE |
| | SEWER MANHOLE | SD | STORM DRAIN |
| | FLOW DIRECTION | SD MH | STORM DRAIN MANHOLE |
| | GRADE BREAK | | |
| | STREET SIGN POST | | |
| | STREET LIGHTS | | |
| | DRYWELL | | |
| | STORM DRAIN | | |
| | EXISTING GAS MANHOLE | | |
| | EXISTING SANITARY SEWER MANHOLE | | |
| | EXISTING ELECTRICAL PULL BOX | | |
| | EXISTING TELEPHONE PEDISTAL | | |
| | EXISTING GUY WIRE | | |
| | EXISTING POWER POLE | | |
| | EX. W — EXISTING WATER | | |
| | EX. S — EXISTING SEWER | | |
| | EX. G — EXISTING GAS | | |
| | OHE — EXISTING OVERHEAD ELECTRIC | | |

CONCEPTUAL WATER & SEWER PLAN FOR PHASE I OF GENTRY ON THE GREEN SCOTTSDALE, ARIZONA



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OWNER/DEVELOPER
COLRICH
444 WEST BEACH STREET, STE. 300
SAN DIEGO, CA 92101
PHONE: 858-490-2300
CONTACT: MATTHEW BATEMAN
EMAIL:

ENGINEER
ATWELL
4700 E. SOUTHERN AVENUE
MESA, AZ 85206
PHONE: 480-218-8831
CONTACT: RAMZI GEORGES
EMAIL: rgeorges@atwell-group.com

SHEET INDEX

SHEET No.	DESCRIPTION
01	COVER SHEET
02	WATER & SEWER PLAN
03	WATER & SEWER PLAN
04	WATER & SEWER PLAN
05	WATER & SEWER PLAN
06	WATER & SEWER PLAN
07	WATER & SEWER PLAN
08	WATER & SEWER PLAN
09	WATER & SEWER PLAN

KEY MAP
SCALE: 1" = 100'

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COVER SHEET
CONCEPTUAL WATER & SEWER PLAN
PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA

Know what's below.
Call before you dig.

REVISIONS:

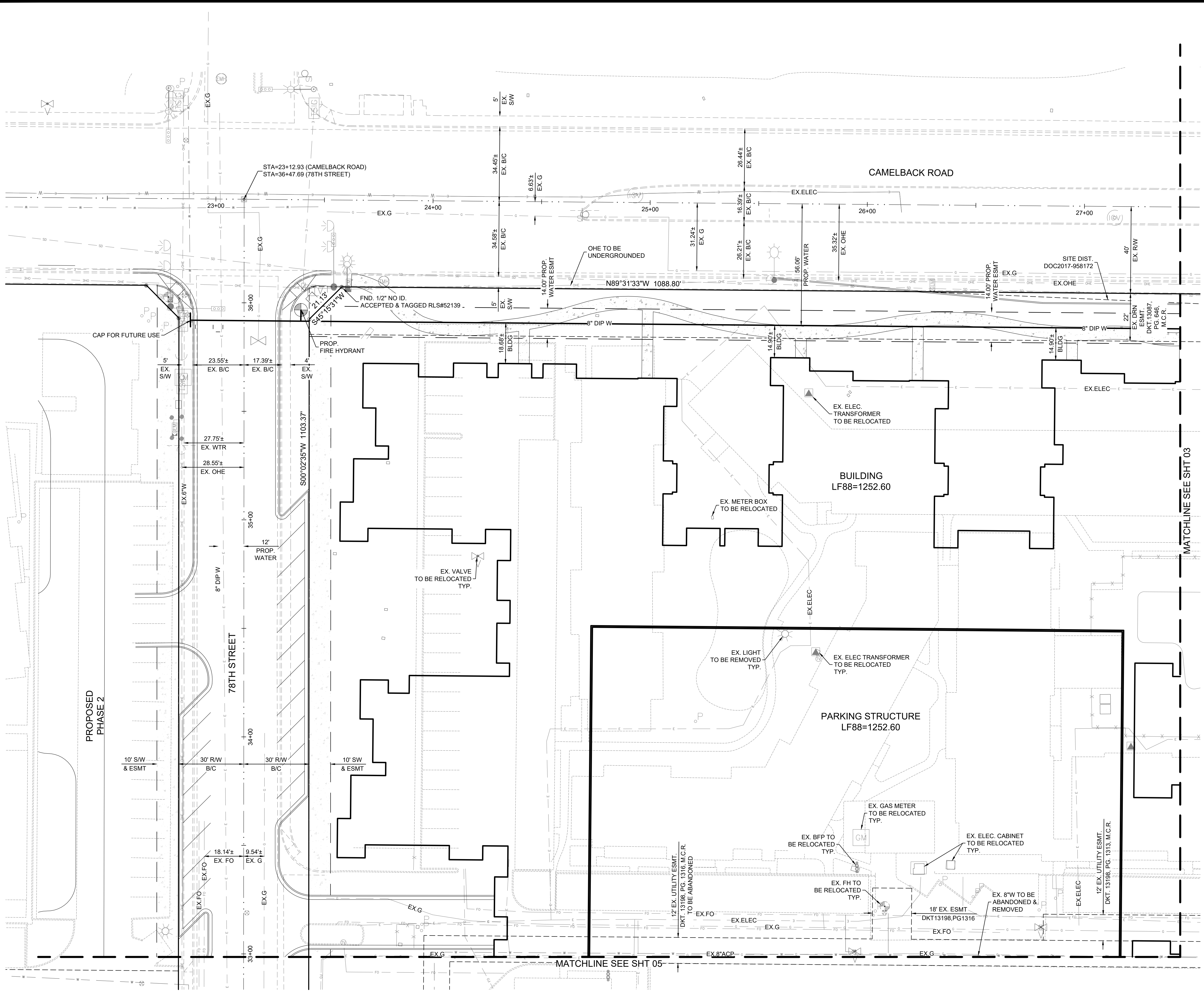
NO.	DESCRIPTION

PM. R. GEORGES
DR. A. CABALLERO
JOB NO.
19001704
FILE NO.
19001704-01-CS01
01

SHEET NO.
01 OF 09

PROJECT NUMBER

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NOTE:
ON-SITE UTILITIES TO BE REMOVED BEFORE CONSTRUCTION, UNLESS OTHERWISE NOTED.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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WATER & SEWER PLAN
CONCEPTUAL WATER & SEWER PLAN
PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA



REVISIONS:

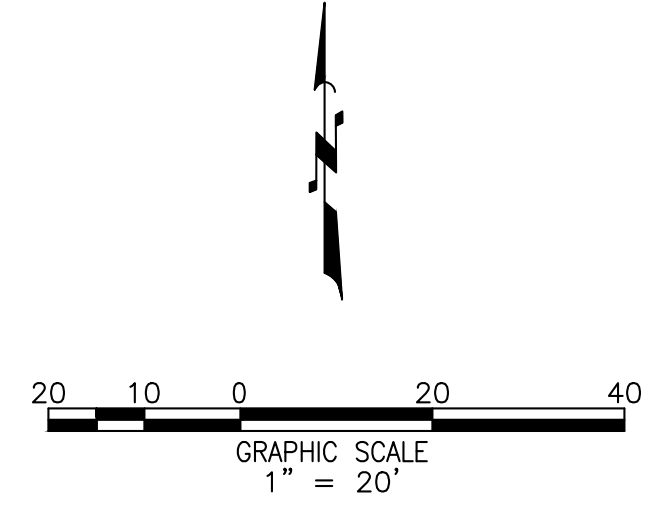
NO.	DESCRIPTION



PM. R. GEORGES
DR. A. CABALLERO
JOB NO. 19001704
FILE NO. 19001704-02-UT01
02

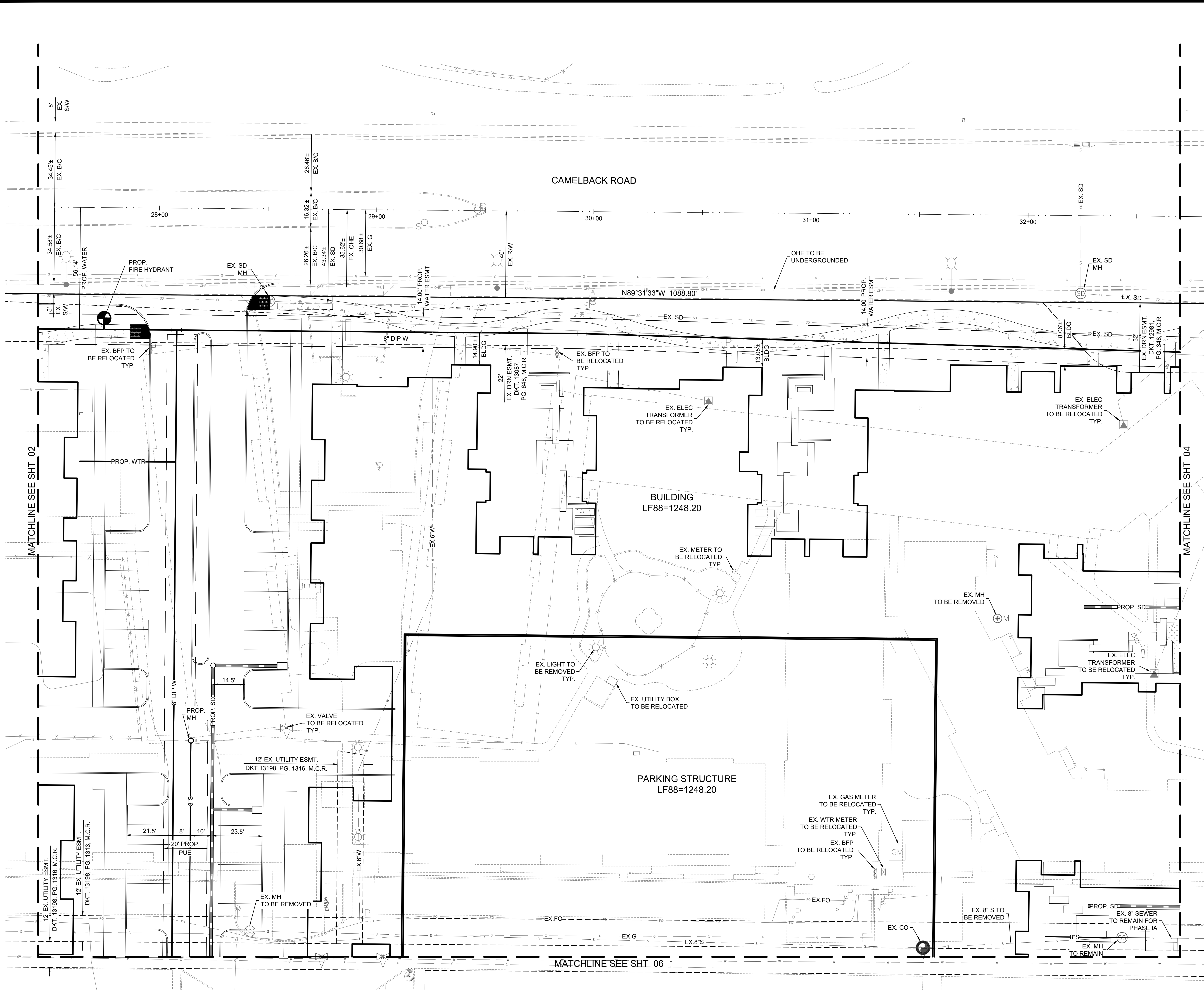
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19001704 - visconte-green-construction/water & sewer/19001704-03-ud02.dwg Plotdate: 04/20/19



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CONCEPTUAL WATER & SEWER PLAN
PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA



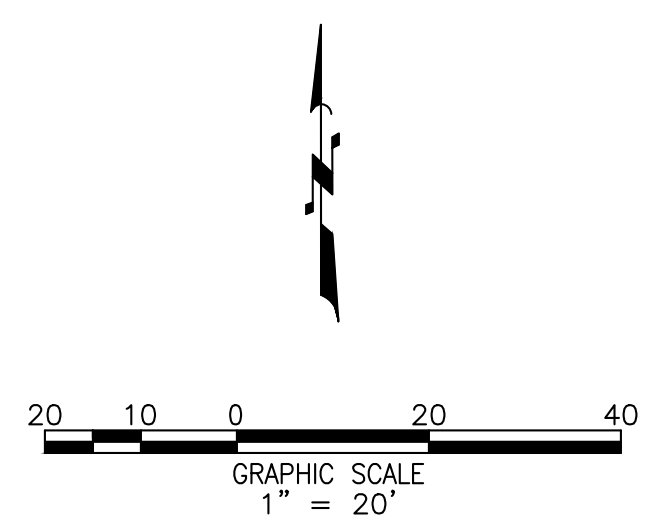
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FILE NO. 19001704-03-UT02
03

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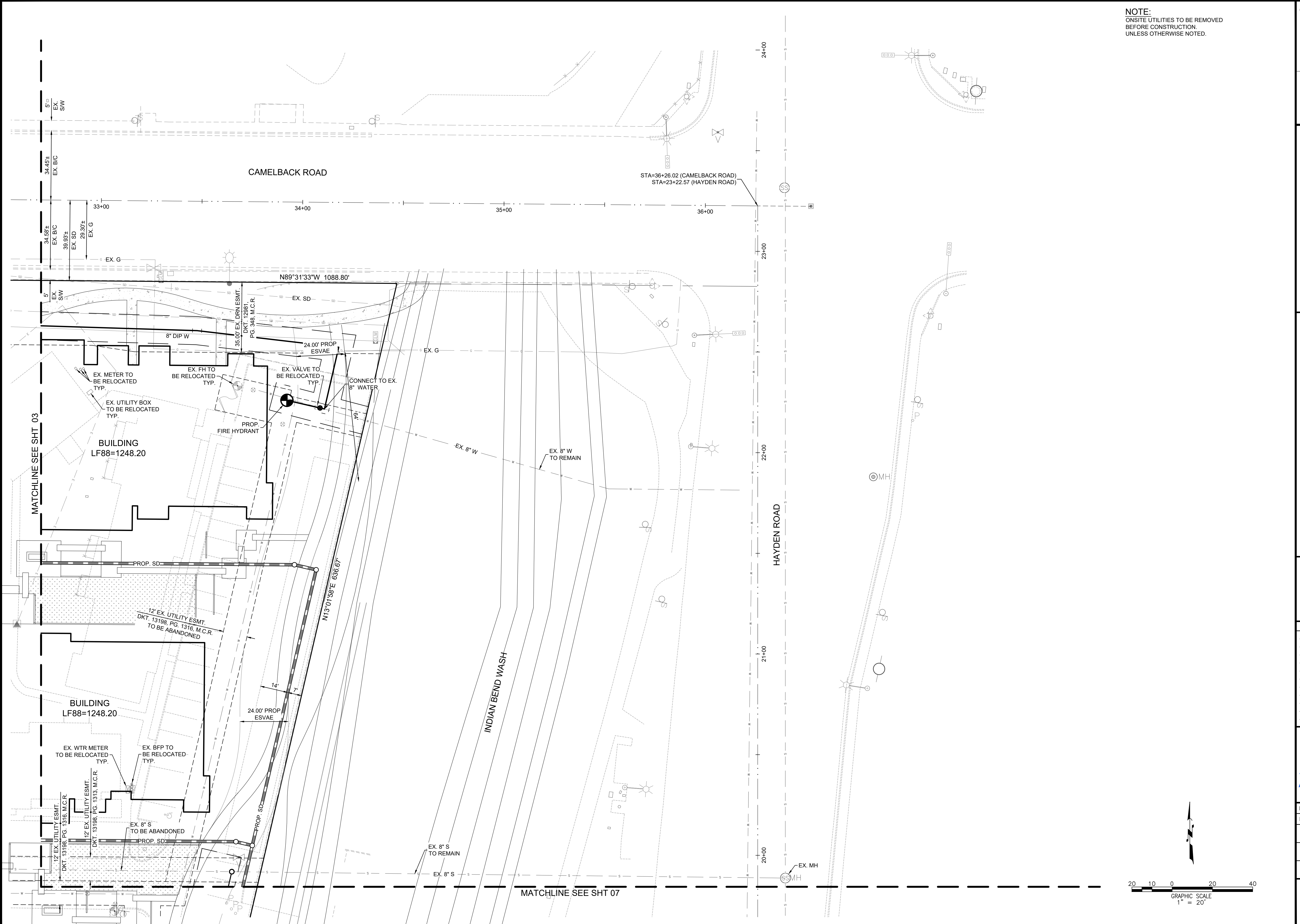
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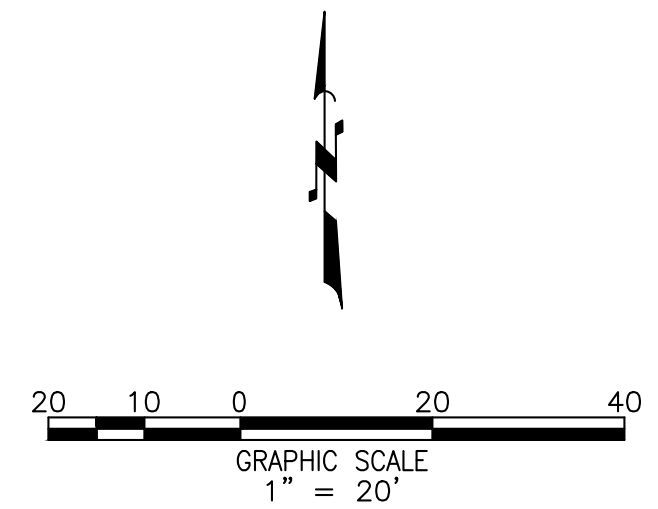
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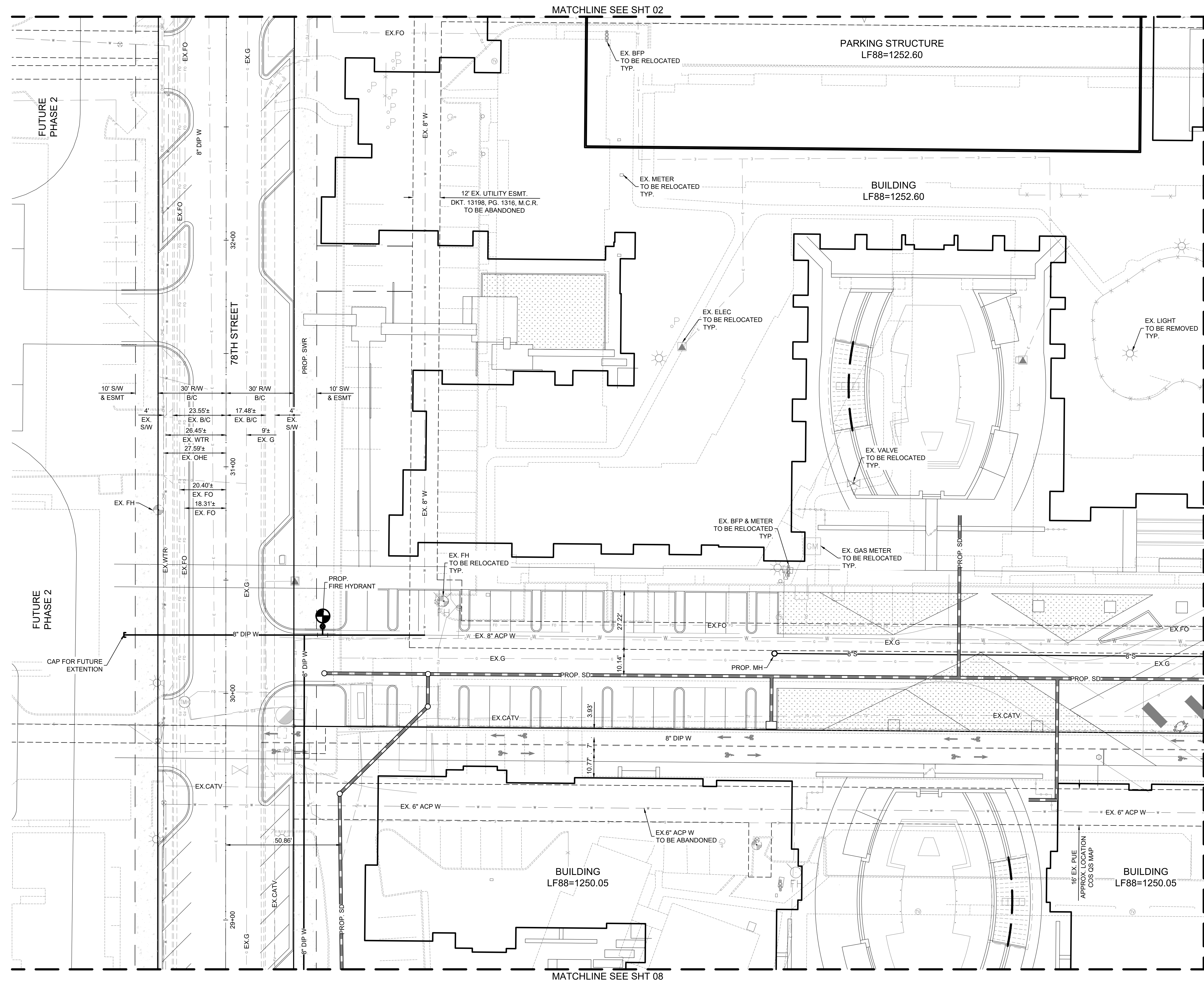
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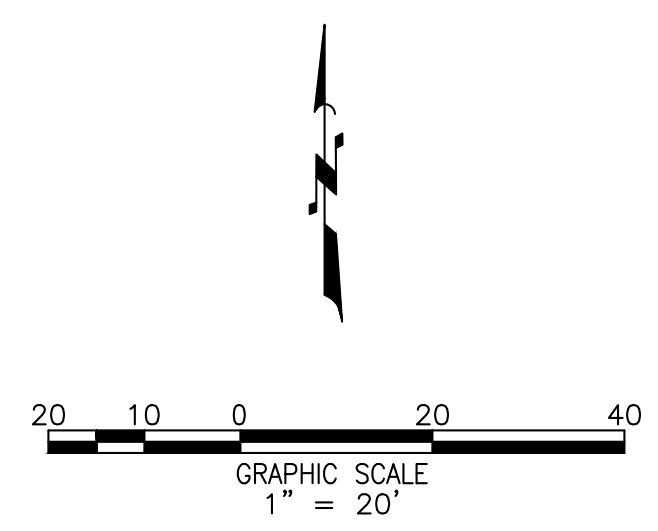


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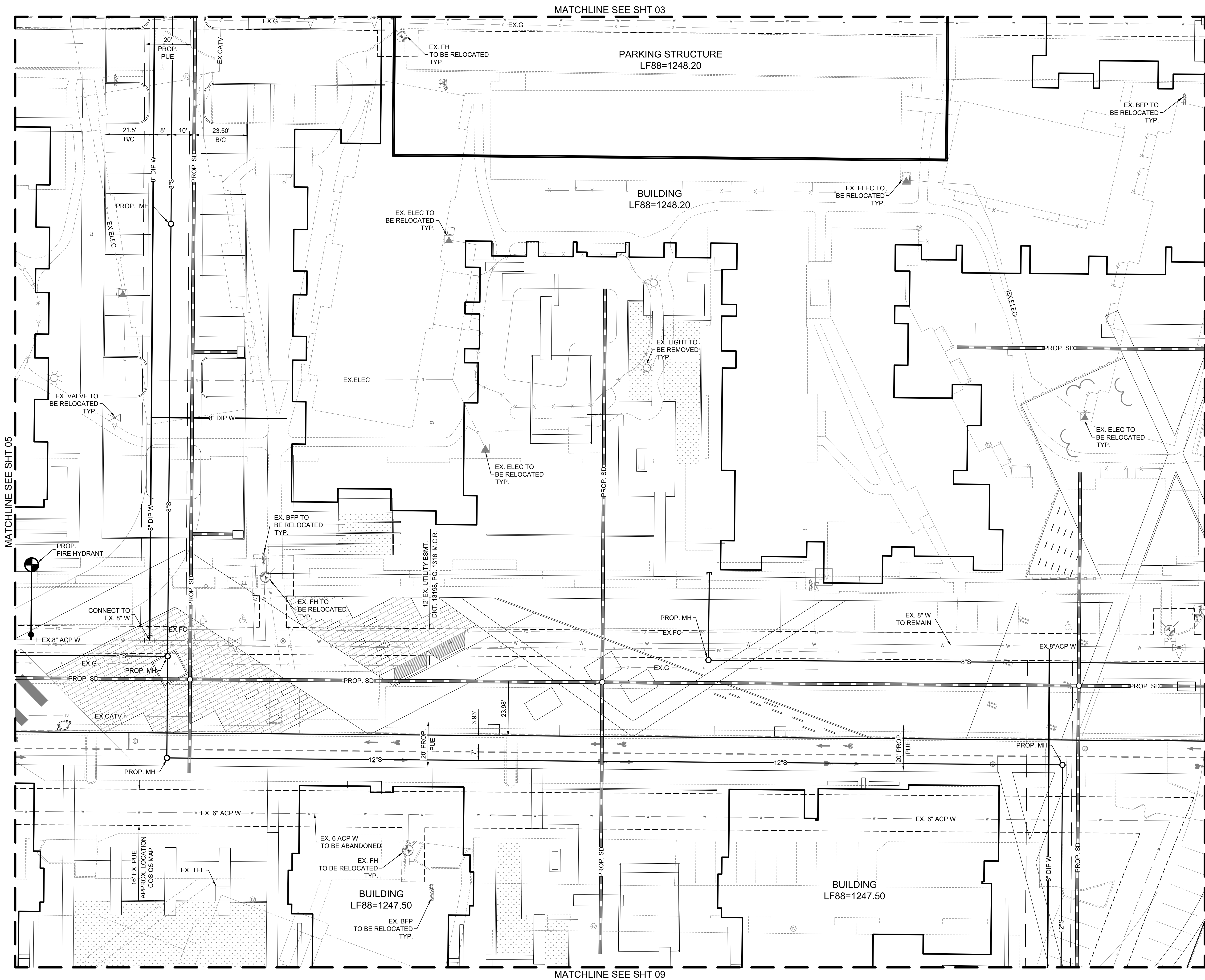
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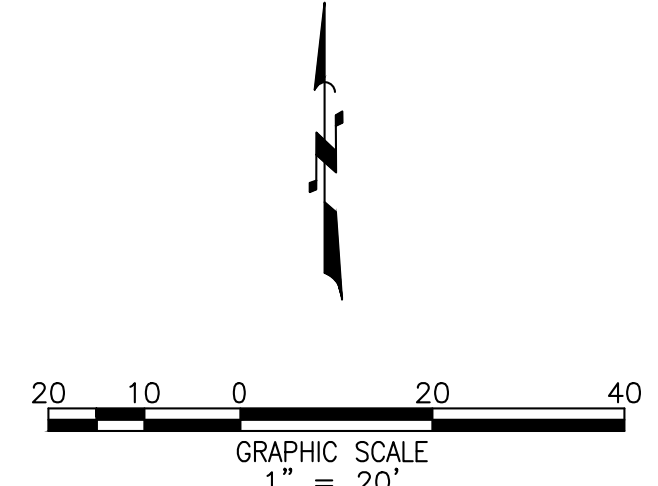


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 FILE NO. 19001704-06-UT05
06



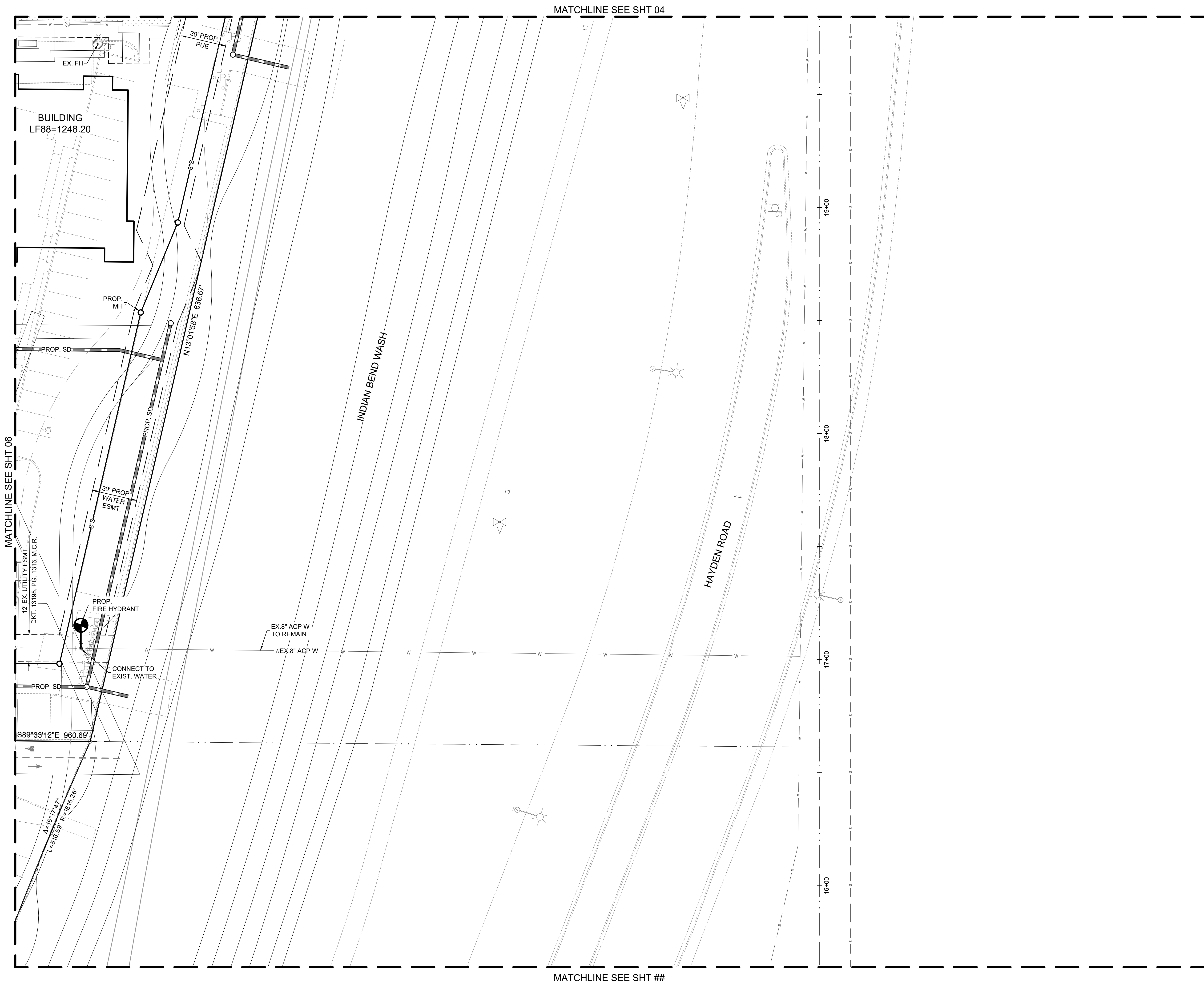
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PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA

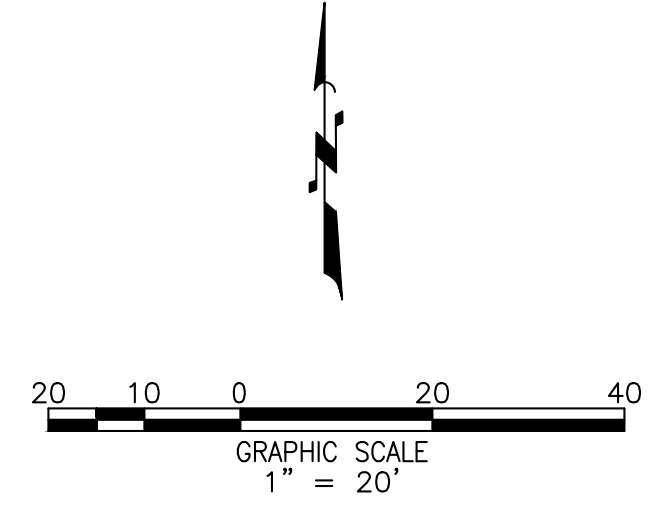
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FILE NO. 19001704-07-UT06
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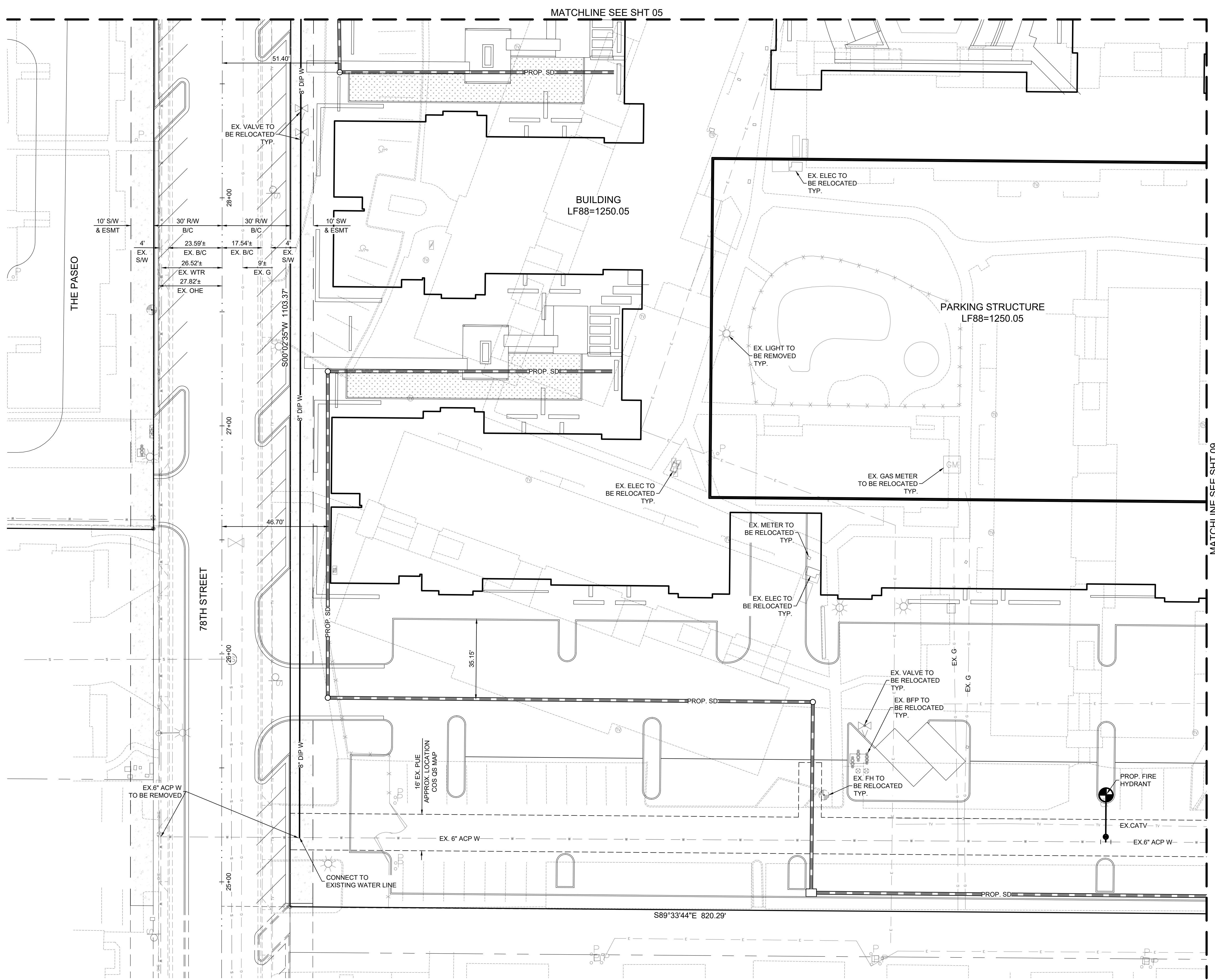


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WATER & SEWER PLAN
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PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA



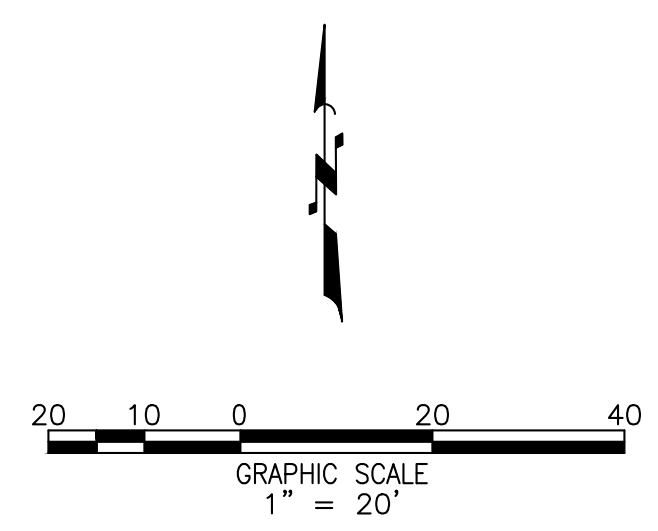
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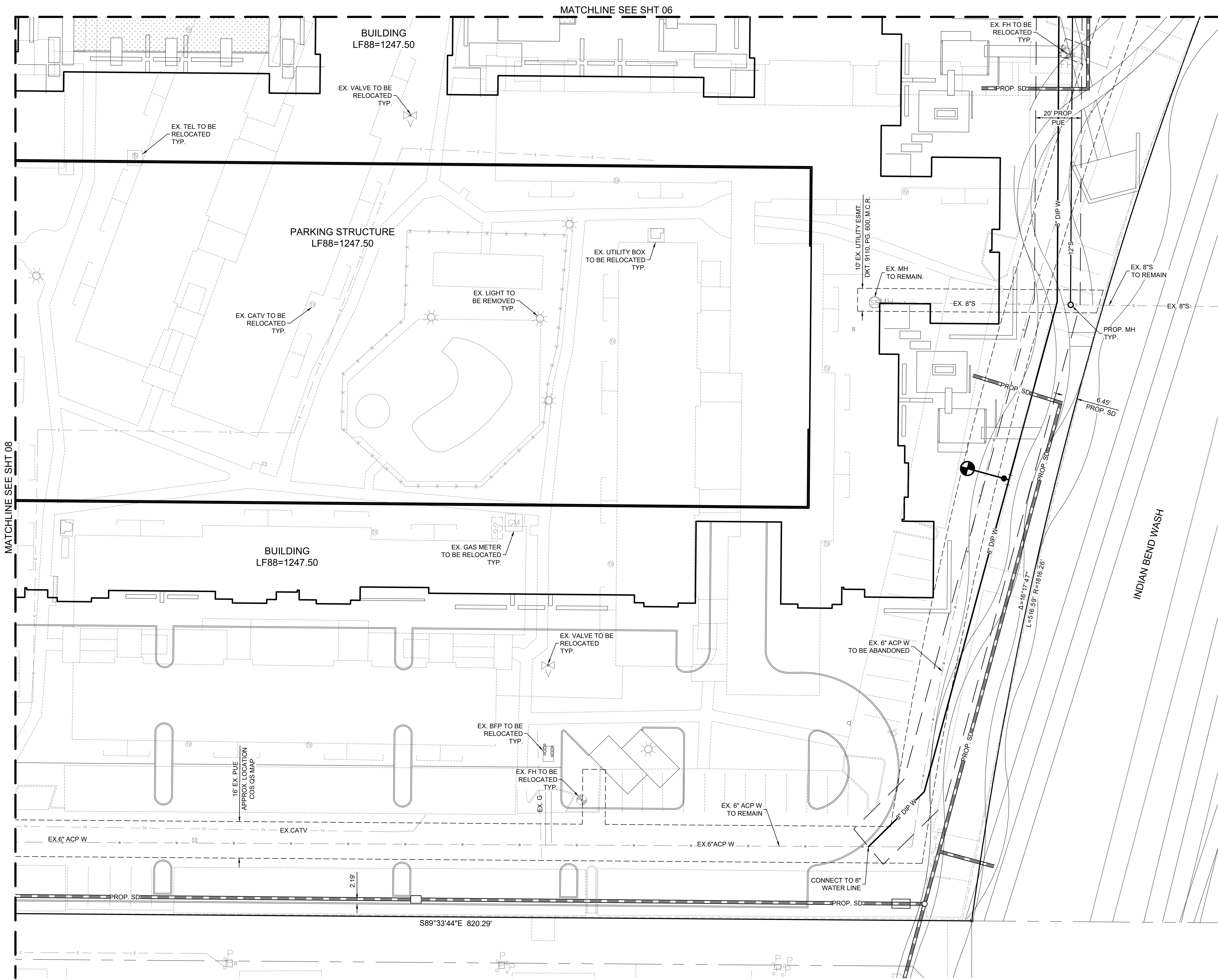
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PHASE I OF GENTRY ON THE GREEN
SCOTTSDALE, ARIZONA

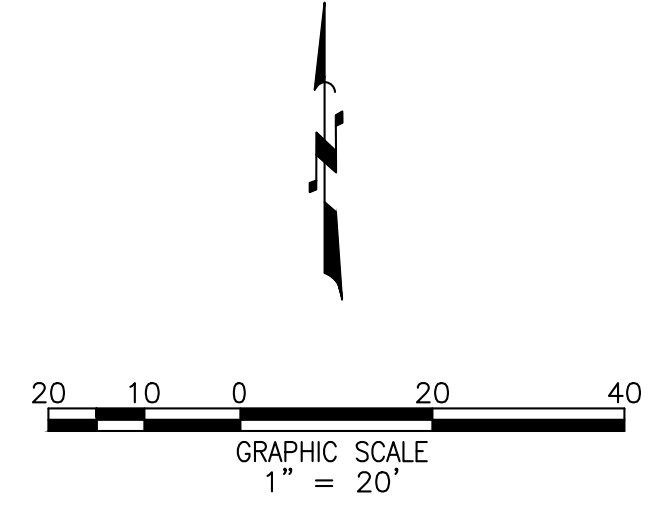


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APPENDIX B
WATER DEMAND CALCULATIONS

Need to show analysis of complete development i.e. Phase 1 and Phase 2 as it is known now



TABLE 1 Water Demand Table					
Phase 1					
Land Use	Unit (Area or Dwelling Units)	ADD (gpm per unit)	ADD (gpm)	MDD (gpm)	PHD (gpm)
HDR	1241 DUs	0.27000	335	700	1,173
Open Space	8.5 acres	2.49000	9	9	9
Restaurant	10,000 sq. ft.	0.00181	18	54	109
Commercial	35,000 sq. ft.	0.00111	39	78	136
Demand			401	841	1,426
Phase 2					
Land Use	Unit (Area or Dwelling Units)	ADD (gpm per unit)	ADD (gpm)	MDD (gpm)	PHD (gpm)
HDR	270 DUs	0.27000	73	146	255
Healthcare ⁽⁴⁾	200 beds	0.34700	69	139	243
Hotel	250 rooms	0.61990	155	310	697
Demand			297	595	1,195
Total Demand			698	1,435	2,621

Scenario	Total Demand (gpm)
Max Day + FF	2,935

Fire Flow Demand (gpm)	1,500
------------------------	-------

Notes:

1) Average Day Demand (ADD) based on City of Scottsdale Design Standards & Policies Manual

Peaking Factors

	HDR/ Commercial	Office/ Healthcare	Restaurant	Hotel
--	--------------------	-----------------------	------------	-------

2) Maximum Day Demand (MDD)= 2 2 3 2 x ADD

3) Peak Hour Demand (PHD)= 3.5 3.5 6 4.5 x ADD

4) ADD based on Arizona Administrative Code Title 18 Chapter 9 Unit Design Flows for wastewater

For Phase 1 only

APPENDIX C
HYDRAULIC MODEL RESULTS
FOR FIRE FLOW TEST

HYDRANT FLOW TEST SUMMARY REPORT

PROJECT LOCATION: 7979 E Camelback Rd, Scottsdale, AZ 85251 (#C57909)

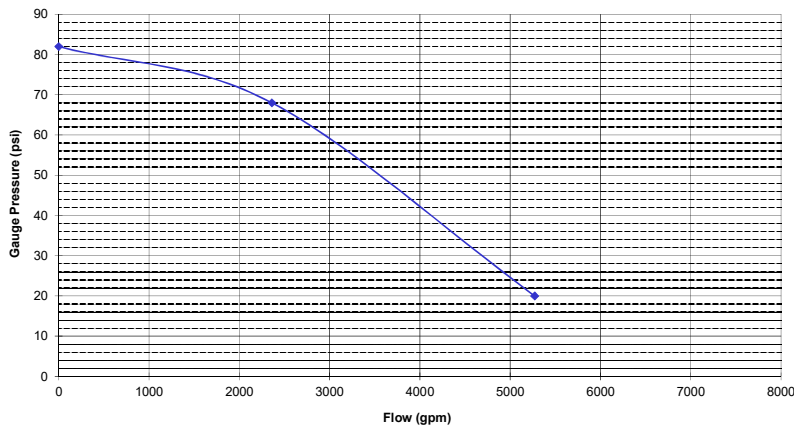
WITNESSED BY: Ray Padilla - City of Scottsdale

DATE: 04/16/19

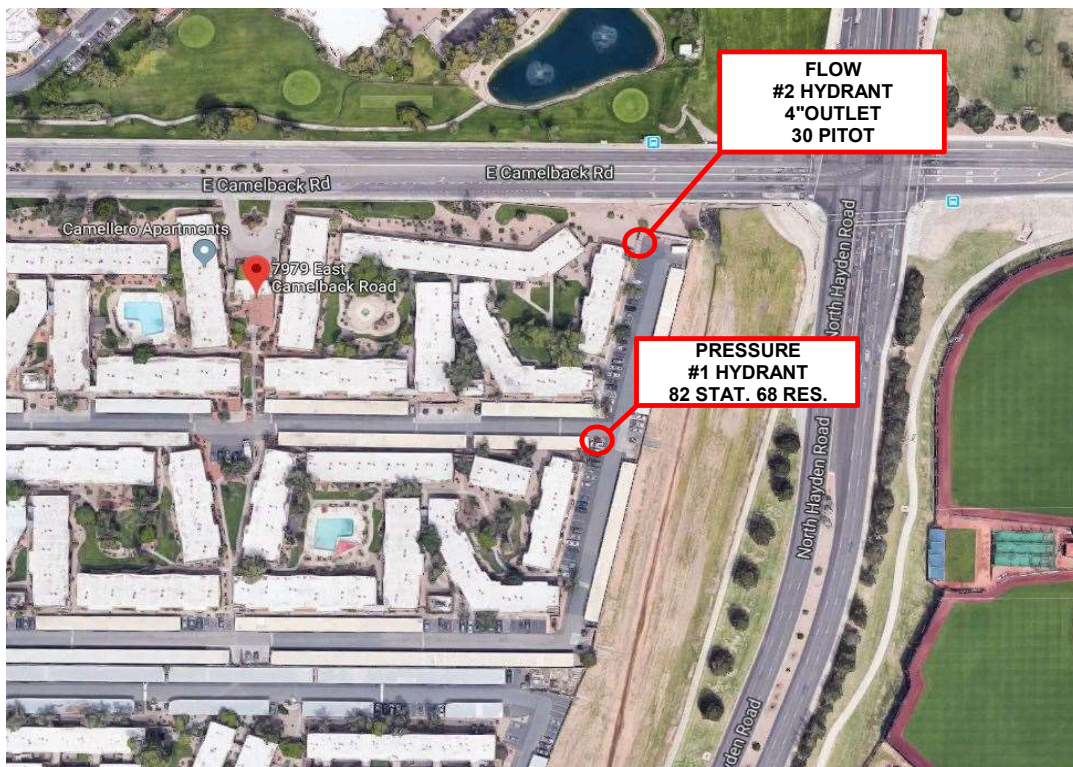
TIME: 7:00AM

Observed Test Data								
Hydrant Designation	Hydrant Number	Flow Opening	*Static Pressure	*Residual Pressure	Pitot Pressure	**Coefficient	Coefficient Steamer use .83	Flow (GPM)
Pressure; R	Hydrant #1		82	68				
Flow, F1	Hydrant #2	4			30	0.95	0.95	2360
Flow, F2	Hydrant #2							0
TOTAL:								2360

Note: If steamer connection was used for the flow test (without stream straightener), An additional Coefficient must be used with a factor of .83. *Static and residual pressures must be adjusted for elevation change (+0.0 FT.) to site. **Use .95 Coefficient when stream straightener is utilized



Available flow @ 20 PSI
5271 GPM



ACCEPTED BY: _____

DATE: _____



Hazen Williams equation

$$V = 1.318 * k * C * (D/4)^{0.63} * S^{0.54}$$

$$S = h_L / L$$

$$Q = 3.1416 * V * D^2 / 4$$

$$Q = h_L^{0.54} * 0.4322 * D^{2.63} / (L^{0.54} * C)$$

good, use as supply curve in modeling

**TABLE 2: FIRE FLOW TEST 1
AVAILABLE FIRE FLOW**

Fire Flow Test		Corrected Fire Flow Test	
Static Pressure	82	Static Pressure	72
Dynamic Pressure	68	Dynamic Pressure	56
Flow	2,360	Flow	2,124
Minimum Pressure	30	Minimum Pressure	30
Available Flow @ 30psi	4,793	Available Flow @ 30psi	3,577

APPENDIX D
HYDRAULIC MODEL RESULTS
FOR MDD + FF

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EXHIBIT 2: WATER MODEL LAYOUT
PROJECT: GENTRY ON THE GREEN PHASE 1A
CITY OF SCOTTSDALE, ARIZONA

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PM. R. GEORGES
DR. M. MENDEZ
JOB NO. 19001704
FILE NO.

PHASE I MAX DAY PLUS FIRE FLOW SCENARIO

LEGEND
6-in W [Red line]
8-in W [Blue line]
12-in W [Cyan line]

Water Resources strong preference is for upsizing water main, not installing parallel infrastructure.

There is no pipe in our system here. P-23 is 6-inch in your model. Utility plan confusing. Clarify.

what is being done with this line?, utility plan does not say

Show existing as dashed

Existing 12" in Hayden?

What is the plan with the existing 6" line? Nothing shown in utility plan. Make model and utility plan consistent.

This connection is not shown on utility plan

Exist. 6" per utility plan

Show each building as a node and label the building type, indicate demand, and show how each building is proposed to connect to the network

Flow test was done here. Pump should be here

New lines or existing Parkway Ave 6" lines? Clarify

This should be new 8" per utility plan

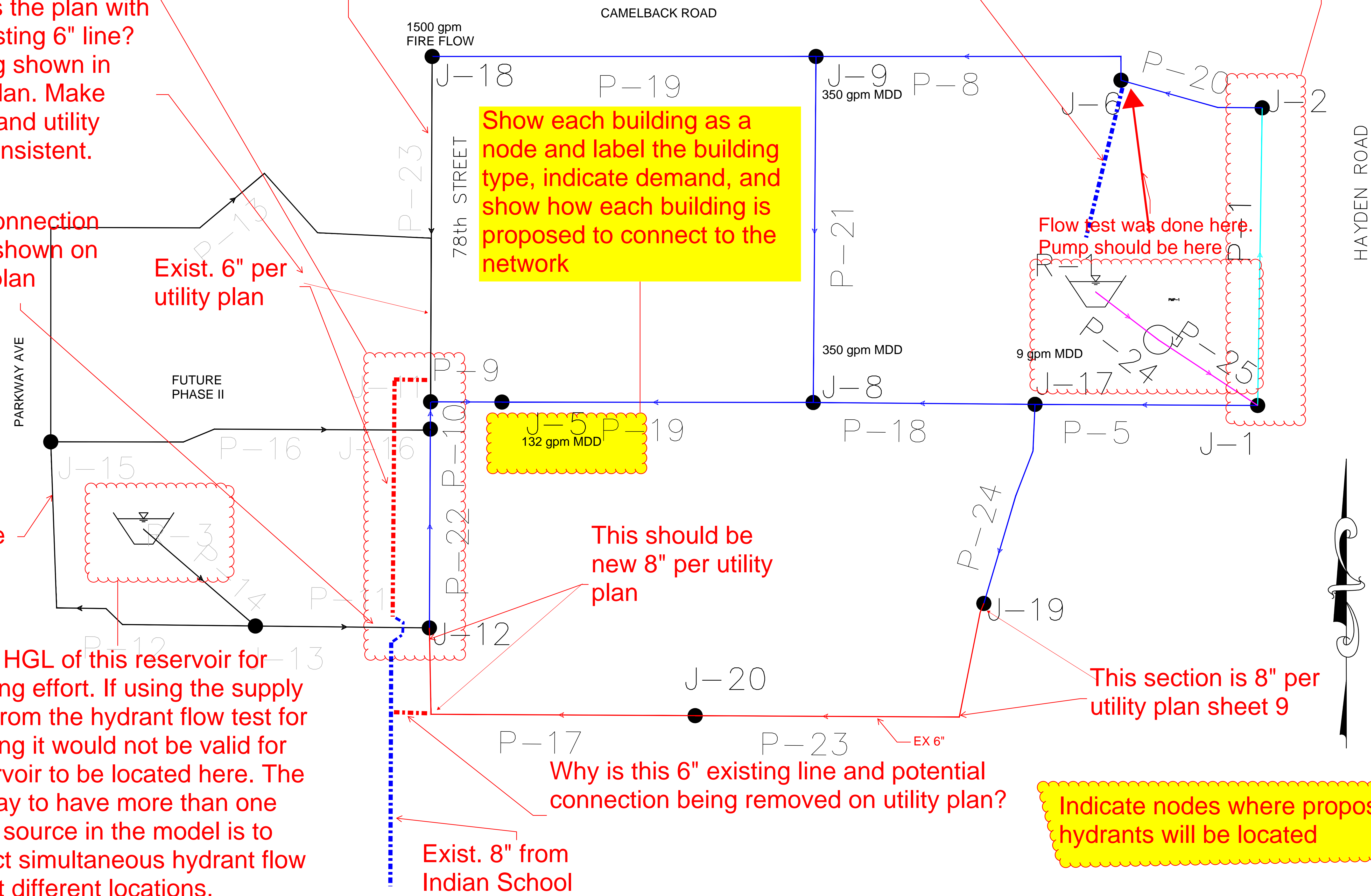
Define HGL of this reservoir for modeling effort. If using the supply curve from the hydrant flow test for modeling it would not be valid for a reservoir to be located here. The only way to have more than one supply source in the model is to conduct simultaneous hydrant flow tests at different locations.

Why is this 6" existing line and potential connection being removed on utility plan?

This section is 8" per utility plan sheet 9

Indicate nodes where proposed hydrants will be located

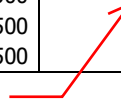
Exist. 8" from Indian School



Fire Flow Node FlexTable: Fire Flow Report

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Calculated Zone Lower Limit) (psi)	Junction w/ Minimum Pressure (Zone)
J-1	True	1,500	2,000	1,500	2,000	30	44	40	J-18
J-2	True	1,500	2,000	1,500	2,000	30	40	39	J-18
J-5	True	1,500	1,726	1,632	1,858	30	31	30	J-16
J-6	True	1,500	1,679	1,500	1,679	30	44	41	J-18
J-8	True	1,500	1,850	1,850	2,200	30	36	34	J-16
J-9	True	1,500	1,939	1,850	2,289	30	33	30	J-18
J-11	True	1,500	1,689	1,500	1,689	30	32	30	J-16
J-12	True	1,500	1,677	1,500	1,677	30	30	31	J-16
J-13	False	1,500	(N/A)	(N/A)	(N/A)	30	(N/A)	(N/A)	(N/A)
J-15	False	1,500	(N/A)	(N/A)	(N/A)	30	(N/A)	(N/A)	(N/A)
J-16	True	1,500	1,675	1,500	1,675	30	30	32	J-11
J-17	True	1,500	1,603	1,509	1,612	30	43	42	J-16
J-18	True	1,500	1,511	1,500	1,511	30	30	43	J-16
J-19	True	1,500	1,615	1,500	1,615	30	40	40	J-16
J-20	True	1,500	1,540	1,500	1,540	30	30	38	J-16

worst case scenario



FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	1,249.00	0	1,369.06	52
J-2	1,252.00	0	1,367.46	50
J-5	1,251.00	132	1,354.33	45
J-6	1,248.00	0	1,361.85	49
J-8	1,247.47	350	1,354.23	46
J-9	1,247.74	350	1,349.13	44
J-11	1,250.00	0	1,354.46	45
J-12	1,249.00	0	1,354.86	46
J-13	1,253.00	(N/A)	(N/A)	(N/A)
J-15	1,253.95	(N/A)	(N/A)	(N/A)
J-16	1,254.00	0	1,354.51	43
J-17	1,250.24	9	1,360.17	48
J-18	1,255.00	1,500	1,325.25	30
J-19	1,246.84	0	1,359.81	49
J-20	1,250.00	0	1,357.06	46

FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Manning's n	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Length (User Defined) (ft)
P-1	479	J-1	J-2	12.0	Ductile Iron	0.012	1,161	3.29	0.003	0
P-5	358	J-17	J-1	8.0	Ductile Iron	0.012	-1,180	7.53	0.025	0
P-8	528	J-6	J-9	8.0	Ductile Iron	0.012	1,161	7.41	0.024	0
P-9	115	J-5	J-11	8.0	Ductile Iron	0.012	-220	1.40	0.001	0
P-10	44	J-11	J-16	8.0	Ductile Iron	0.012	-220	1.40	0.001	0
P-11	280	J-12	J-13	6.0	Asbestos Cement	0.012	(N/A)	(N/A)	(N/A)	0
P-12	597	J-13	J-15	6.0	Asbestos Cement	0.012	(N/A)	(N/A)	(N/A)	0
P-13	1,294	J-15	J-11	6.0	Asbestos Cement	0.012	(N/A)	(N/A)	(N/A)	0
P-14	238	R-3	J-13	16.0	Ductile Iron	0.012	(N/A)	(N/A)	(N/A)	36,000
P-16	615	J-15	J-16	6.0	Asbestos Cement	0.012	(N/A)	(N/A)	(N/A)	0
P-17	563	J-12	J-20	6.0	Asbestos Cement	0.012	-220	2.49	0.004	0
P-18	357	J-8	J-17	8.0	Ductile Iron	0.012	-951	6.07	0.017	0
P-19	500	J-5	J-8	8.0	Ductile Iron	0.012	88	0.56	0.000	0
P-19	617	J-9	J-18	8.0	Ductile Iron	0.012	1,500	9.57	0.039	0
P-20	233	J-2	J-6	8.0	Ductile Iron	0.012	1,161	7.41	0.024	0
P-21	556	J-9	J-8	8.0	Ductile Iron	0.012	-689	4.40	0.009	0
P-22	320	J-16	J-12	8.0	Ductile Iron	0.012	-220	1.40	0.001	0
P-23	612	J-20	J-19	6.0	Ductile Iron	0.012	-220	2.49	0.004	0
P-24	333	J-17	J-19	8.0	Ductile Iron	0.012	220	1.40	0.001	0
P-24	126	R-1	PMP-1	16.0	Ductile Iron	0.012	2,341	3.74	0.003	1
P-25	192	PMP-1	J-1	16.0	Ductile Iron	0.012	2,341	3.74	0.003	1
P-26	555	J-18	J-11	8.0	Ductile Iron	0.012	(N/A)	(N/A)	(N/A)	0

FlexTable: Pump Table

Label	Elevation (ft)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	1,247.00	1,247.00	1,369.06	2,341	122.07



7/19/19

Michele L Hammond
John Berry/ Michele Hammond - Berry Riddell
6750 E. Camelback Road Suite 1
Scottsdale, AZ 85251

RE: 3-GP-2019 & 11-ZN-2019
Gentry on the Green
H4775 (Key Code)

Dear Ms. Hammond:

The Planning & Development Services Division has completed the review of the above referenced development application submitted on 5/16/19 (3-GP-2019) and 6/12/19 (11-ZN-2019). The following **1st Review Comments** represent the review performed by our team, and is intended to provide you with guidance for compliance with city codes, policies, and guidelines related to this application.

2001 General Plan:

1. The major General Plan amendment narrative briefly (page 11) addresses the criteria associated with the Administration of the General Plan Section of the 2001 General Plan (pages 20-23 of the General Plan). With the next submittal, please respond clearly identifying all four criteria utilized in evaluating an amendment and specifically state all criteria that trigger a major amendment for this application.
2. Page 14 of the applicant's narrative states that, "the only requested modification is to increase the maximum PUD property size from 25 acres to 42 acres to accommodate both phases of the proposed development plan into one application." Please note that the gross acreage of the site is 41.5 acres – as noted on Page 11 associated with the major General Plan amendment.
3. Page 15 of the major General Plan amendment narrative briefly mentions Scottsdale's Guiding Principles but does not qualify how the request responds to them. Upon resubmittal please respond to the following principles: *Enhance Neighborhoods, Support Economic Vitality, Advance Transportation and Value Scottsdale's Unique Lifestyle & Character*.
4. Please respond to Goal 4, bullet 3 of the Character and Design Element specific to this site falling within the Suburban Streetscape Type, illustrating compatibility in the use of landscape material between pedestrians and transportation routes through the Greenbelt and Camelback Road frontage. Please also respond to Goal 4, bullet 12, of the Character and Design Element – and Goal 1, bullets 14 and 18 of the Open Space and Recreation Element, clarifying on both the site plan and landscape plan if there is any proposal related

to landscaping within the public right-of-way along Hayden Road. Existing “Aleppo Pines” along Hayden Road frontage should be preserved to maintained through this proposal.

5. Please also provide a response how the proposed zoning district map amendment will be consistent with Character and Design Element: Goal 4 - Bullet 2; Goal 5 - Bullets 11 and 12; Goal 7 - Bullet 4.
6. Page 2 of the applicant narrative briefly mentions a “voluntary contribution” to public art. Upon resubmittal please clarify if this contribution will be made to Scottsdale Public Art as a monetary contribution or public art piece contribution. Additionally and if appropriate, please speak to the value of the contribution and the impact it is expected to make either on or offsite to the subject site. To this end, please respond to Goal 5 of the Character and Design Element and any applicable bullets, that will respond to how this proposal will build upon the community’s image and lifestyle by maximizing the potential of public art to enrich the daily lives of people that live in or visit Scottsdale.
7. Please respond to Goal 6 of the Character and Design Element which recognizes the value and visual significance that landscaping has upon the character of the community and maintain standards that result in substantial mature landscaping that reinforces the character of the city. The response should identify how the proposed landscaping plan will be equal to or better at implementing this goal.
8. Please respond to Goal 4, and applicable supporting bullets, of the Land Use Element which seeks to maintain a balance of land uses that support a high quality of life, and establish a diverse mixture of housing and leisure opportunities and the economic base needed to secure resources to support the community. Please include objectives of the Southern Scottsdale Character Area Plan in the response and state how a Mixed-use Neighborhood land use designation will equally or better implement the objectives than an Urban Neighborhood land use designation.
9. Please respond to Goal 5, bullet 8, of the Land Use Element addressing why the sought request is appropriate for this location of the city – in terms of encouraging alternative modes of transportation.
10. Please respond to Goal 7, bullets 1, 2, and 5, of the Land Use Element in describing how the proposed redevelopment will sensitively integrate, now as a designated Mixed-use Neighborhoods land use designation, into the surrounding physical and natural environments, the neighborhood setting, and the neighborhood itself.
11. Please respond to Goal 9, bullets 3 and 4, of the Land Use Element addressing how the proposed redevelopment will provide for uses that will - create a high level of synergy while respecting the character of existing adjacent neighborhoods.
12. Please respond to Goal 1, along with any applicable bullets, of the Economic Vitality Element, in addressing how the proposed redevelopment will sustain and strengthen Scottsdale’s position as a premier and international and national tourism destination and resort community.
13. Page 6 of the applicant’s narrative describes the bicycle tourism industry; however, it does not identify the source for the information about the number of races that exist both locally and at a statewide level. With a resubmittal, please expand the discussion to include more specific information to Scottsdale that is sourced; please consider sourcing Experience Scottsdale and Scottsdale Tourism Department. To this end, please respond to Goal 4, bullet

- 4 of the Economic Vitality Element that will address how the proposed redevelopment furthers compatibility with Scottsdale's economy.
14. Please respond to Goal 5, bullets 3, 5, and 6, of the Economic Vitality Element, addressing how the location of the non-residential development responds to the surrounding neighborhood. Please respond to this request in consideration of both the proposed site plan as well as the alternate site plan showing the grocery store option along North 78th Street.
 15. Please note the response provided for Goal 7 of the Economic Vitality Element is repeated in two locations; see pages 23 and 25.
 16. Please respond to Goal 3, bullets 1, 3 and 5, of the Housing Element, addressing how the proposed development, now as a Mixed-Use Neighborhood land use designation, will meet the socioeconomic needs of people who live and work near this location of the city. To this end, please also include a response to Goal 4, bullet 1, 4, and 6 of the Housing Element, which seeks to encourage the development of work force housing in new development, near commercial, and near transit areas.
 17. Please respond to Goal 10, along with any applicable bullets, of the Preservation and Environmental Planning Element, addressing how the proposed development may, if at all, utilize green building alternatives that support sustainable desert living.
 - a. Please note, Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource. More information on this initiative can be found at:
<https://sustainability.asu.edu/sustainable-cities/resources/lid-handbook/>
 18. Page 28 of the applicant's narrative states in response to Goals of the Growth Area Element, that "the proposed development will tie into existing infrastructure and systems will be upgraded where deemed appropriate." Please clarify that any public infrastructure that will need to be upgraded as a result of this development proposal will be paid for by the developer.
 19. Please respond to Goal 1, bullet 3, of the Community Mobility Element, addressing how the proposed development, will enhance the unique character of Scottsdale through the design of the sites frontage to North Hayden Road.
 20. Please respond to Goal 11 and any applicable bullets, of the Community Mobility Element, addressing how the proposed development, as a Mixed-Use Neighborhood land use designation, will provide an opportunity for building "community" through neighborhood mobility.
 21. As a response to Goal 1 of the Community Involvement Element, with a resubmittal, please provide an updated Citizen Involvement Report that describes the key issues that have been identified through the public involvement process.

Southern Scottsdale Character Area Plan:

The subject property is, within boundary of, of the Southern Scottsdale Character Area Plan (SSCAP). This plan can be located at:

<https://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Planning/character-area/southern-scottsdale/southern-scottsdale-character-area-plan-final-adopted.pdf>

22. Please respond to Goal LU3, Policy 3.5, of the Land Use Element, demonstrating how the proposed development, as a Mixed-use Neighborhood land use designation, and having requested modification to increase the maximum PUD property size from 25 acres to 42 acres to accommodate both phases of the proposed development, will bring greater participation from the private sector in public amenities along Southern Scottsdale Corridors;
 - a. Page 7 and 9 of the applicant's narrative has conflicting statements regarding the landscape area and the sites frontage to the Greenbelt. Specifically, Page 7 cites, "As part of the Gentry on the Green's development, the adjoining Greenbelt channel will be landscaped and maintained." Page 9 cites, "If allowed, the Greenbelt channel will be improved as part of this project, so it can be enjoyed by residents, visitors, and even motorists as they travel on Hayden Road." With a resubmittal, please clarify in the narrative response, and following discussion with Scottsdale's Real Estate, Parks and Recreation, and Stormwater Departments what conditions of approval exist for both the proposed Greenbelt improvements and long-term maintenance obligations for those areas of the Greenbelt identified in the submittal.
23. Please respond to Goal LU8, Policies LU81., 8.2, and 8.3, of the Land Use Element, addressing how the proposed development supports a dynamic range of land uses adjacent to Indian Bend Wash (Greenbelt) that promote, enhance, and engage this primary open space amenity.
24. Please respond to Goal EV2, Policy EV2.3, of the Economic Vitality Element, in consideration of the alternate site plan showing the grocery store option along North 78th Street. Please submit a market analysis that demonstrates the viability of a smaller-scale grocery store that can rely on a smaller customer base and floor space. Please also consider the operations of a traditional grocery store with any site plan considerations and make possible modifications that may be necessary in order to achieve a small grocer on this site. (i.e. Grocery carts).
25. Please respond to Goal H1, Policies H1.1, 1.4 and 1.5, of the Housing Element, addressing how the proposed development is supporting (if at all) the development of workforce housing.
26. Please note the response provided for Goal 2 of the Housing Element is repeated in two locations; see pages 41 and 42.
27. Please respond to Goal H4, Policies H.3 and H.4, of the Housing Element, addressing how the proposed development, now as a Mixed-use Neighborhood land use designation, is supporting the option for older residents to remain in their neighborhood and "age in place".
28. Please respond to Goal CM1, Policy 1.7, of the Community Mobility Element, addressing how this proposal will promote "complete streets" to encourage multi-modal opportunities on Southern Scottsdale's arterials streets. (East Camelback and North Hayden Roads)
29. Please respond to the Goal CM4, Policies CM4.1 and CM4.2, of the Community Mobility Element, addressing how this proposal will advance the role of pedestrian and bicycle

mobility and connectivity within Southern Scottsdale. Specifically, address the existing bus stop facilities the subject site has at 2 locations where there is no shelter (East Camelback Road), and the one facility along the east edge (North Hayden Road).

30. Please respond to Goal CM6, Policy CM6.2, of the Community Mobility Element, addressing how this proposal will mitigate the impacts of vehicular traffic on adjacent residential neighborhoods – specifically, North 78th Street – and with Phase 2, North Parkway Avenue.
31. Please response to Goal CD5 - Policy 5.1 and 5.6; Goal CD10 - Policies 10.1, and 10.2. of the Character and Design Element.

Zoning Ordinance and Scottsdale Revise Code Significant Issues

The following code and ordinance related issues have been identified in the first review of this application, and shall be addressed in the resubmittal of the revised application material. Addressing these items is critical to scheduling the application for public hearing, and may affect the City Staff's recommendation. Please address the following:

Zoning:

32. The submitted application includes a request to utilize the Planned Shared Development Overlay (PSD) district on the subject property. With the resubmittal, please include a parcel diagram and development agreement identifying the proposed terms of the PSD including but not limited to parcel boundaries and transfer of development rights, in accordance with the requirements of Zoning Ordinance Section 6.1406.B.1 & 6.1406.C.1.
33. The submitted development plan states the only Planned Unit Development (PUD) standard proposed to be amended is the maximum development area standard. However, it appears the proposed building setbacks (specifically “average setback” as required in Section 5.5005.E. Table A) may need to be amended. With the resubmittal, please provide the average setback calculations in accordance with the Average Setback Diagram (Section 5.5005.E.2.) and update the legislative draft of amended developments standards accordingly. Please note: It is difficult to achieve an average setback at an “exact” number (i.e. 40'). It may be beneficial to propose a range for the average setback requirement (i.e. 35' – 40'). Please provide justification for each requested amended development standard.
34. Please revise the “Building Height Plan” within the development plan to identify the actual proposed building heights, rather than number of stories, demonstrating compliance with Zoning Ordinance Section 5.5005.C. In addition, please specify the proposed building heights for Phase 2.
35. Please revise the “Parking Plan” within the development plan to specify the parking calculations (required and provided) for each of the proposed land uses in the project, in accordance with the requirements of Zoning Ordinance Section 9.103. Please consider including a parking calculation for guests and units that may house multiple occupants. In addition, please expand the parking plan to include Phase 2.
36. Please revise the “Open Space Plan” within the development plan to include the open space calculations (required and provided), in accordance with Zoning Ordinance Section 5.5005.I.2.
37. Please revise the development plan to include “typical” building sections adjacent to each perimeter street condition demonstrating compliance with the Building Envelope

requirements of Zoning Ordinance Section 5.5005.F. Please ensure the sections include the back of the planned curb line, including the planned curb line for bus bays, deceleration lands and turn lanes, and the appropriate dimensions for the minimum setback.

38. Please revise the development plan to include additional plans and/or narrative in response to the Private outdoor living space requirements of Zoning Ordinance Section 5.5005.I.1.
39. Please revise the development plan to include Phase 2 details on the vehicular circulation plan, bicycle circulation plan, master plan, site plan, shaded walkways plan, and building heights plan, in accordance with the Plan & Report Requirements for Development Applications.
40. Please revise the Transitions Plan to illustrate the transition that is proposed along the southern edge of Phase One and Phase Two, in accordance with the Plan & Report Requirements for Development Applications.

Circulation:

41. In accordance with Section 47-36 of the Scottsdale Revised Code, please revise the development plan to include an additional five (5) feet right-of-way dedication for East Camelback Road, for a total half-street width of forty-five (45) feet. This dedication will be required prior to building permit issuance.
42. In accordance with Section 47-36 of the Scottsdale Revised Code, please revise the development plan to include an additional ten (10) feet right-of-way dedication for each side of North 78th Street, for a total right-of-way width of eighty (80) feet. This dedication will be required prior to building permit issuance.

Please note: Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource when planning improvements adjacent to and within the City's right-of-way.

Fire:

43. Please revise the development plan to demonstrate access roads extend to within 300' of all portions of the building, in accordance with Fire Ord 4283 503.1.1.
44. Please revise the development plan to demonstrate minimum drive widths of 24', in accordance with Fire Ord 4283 503.2.1.
45. Please revise the development plan to demonstrate unobstructed vertical clearance minimum 13'6" for all fire lanes, in accordance with Fire Ord. 4283, 503.2.1.
46. Please revise the development plan to designate Fire Lanes for all Commercial / Multi-Family (24' min.), in accordance with Fire Ord. 4283, 503.3.
47. "Key switch/pre-emption sensor" is required for commercial/Multi-family/Gated communities, in accordance with Fire Ord. 4283, 503.6.1.
48. Please revise the development plan to demonstrate Hydrant spacing, existing and proposed, in accordance with Fire Ord. 4283, 507.5.1.2.
49. Please revise the development plan to demonstrate the location of the Fire Department Connection, in accordance with Fire Ord. 4283, 912.

Drainage:

50. Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource. Although the submitted drainage report for the project has been accepted, it may be beneficial to follow-up with the stormwater reviewer if LID techniques will be implemented into the development.

Water and Waste Water:

51. Please submit the revised Water and Waste Water Design Report(s) with the original red-lined copy of the report with the rest of the resubmittal material identified in Attachment A.

Archaeology:

52. Based on Scottsdale Revised Code, Chapter 46, Article VI, Protection of Archaeological Resources, Section 46-132 - Surveys of archaeological sites and exemptions, this development proposal will be exempt from the requirement to provide an archaeological resources survey and report. Regardless of the exemption, any development on the property is subject to the requirements of Scottsdale Revised Code, Chapter 46, Article VI, Protection of Archaeological Resources, Section 46-134 - Discoveries of archaeological resources during construction.

Significant Policy Related Issues

The following policy related issues have been identified in the first review of this application. While these issues may not be critical to scheduling the application for public hearing, they may affect the City Staff's recommendation pertaining to the application and should be addressed with the resubmittal of the revised application material. Please address the following:

Site Design:

53. Along the Indian Bend Wash frontage there appears to be a conflict between the Bicycle Circulation Plan, the Shaded Walkways Plan and the Fire Lanes Plan. Please provide information and illustrations that will explain the concepts that will facilitate coordination between the bicycle, shaded walkway, and emergency access elements of this Development Plan.
54. Please revise the "Building Height Plan" to provide more 2 Story and 3 Story on the Camelback Road frontage, the Indian Bend Wash frontage, the 78th Street frontages, and the Parkway Avenue frontage of Phase one and Phase Two, to more appropriately transition the building mass to the adjacent streets and neighborhoods.
55. In accordance with the City of Scottsdale Design Standards and Policies Manual Chapter 5 Section 1.901 and Section 1.902.E internal site circulation must have quality traffic flow in order to ensure public safety. Higher levels of pedestrian traffic in and around the "observation zone", then may be found in other areas of the paseo, is anticipated. Consequently, the proposed location of the bike pathway between the "observation zone" and the splash pad may create pedestrian safety concerns. Please revise the location of either the bike pathway or the "observation zone" within the "Landscape" Master Plan (Page 74).

56. Please revise the “Hardscape Plan” within the development plan (Page 71) so the type of hardscape proposed within area “B”, is in compliance with the City of Scottsdale Design Standards and Policies Manual Chapter 2 Section 1.310. Please consider a more stable paver for all main pedestrian access points from public right of ways.
57. Please provide the following information regarding provision of refuse for the development, in accordance with the Design Standards & Policies Manual Section 2-1.309.
- a. Locate and position the enclosure(s), update site plan accordingly:
 1. Approach pad so that the refuse truck route to and from the public street has a minimum unobstructed vertical clearance of thirteen (13) feet six (6) inches (fourteen 14 feet is recommended), and unobstructed minimum vertical clearance above the approach pad and refuse enclosure of twenty-five (25) feet (The vertical clearances are subject to modification based on enclosure container size, location and positioning as determined by the Sanitation Director, or designee.)
 2. In a location that is easily accessible for collection, and does not require the refuse truck to “backtrack”;
 3. A maximum 100 feet distance for building service exit to refuse enclosure;
 4. So that collection vehicles do not back up more than thirty-five (35) feet;
 5. So that path of travel for the refuse truck accommodates a minimum vehicle of turning radius of 45 feet, and vehicle length of 40 feet.
 - b. Design the refuse enclosure(s) and approach pad to be level, with a maximum of a two (2) percent slope. Do not place the enclosure(s):
 1. Between the on-site buildings and adjacent lower density residential uses unless there is no reasonable alternative. In these situations, orient the enclosure toward the interior of the property;
 2. Next to drainage ways or basins, unless there is no reasonable alternative;
 3. Between the street and the front of the building unless there is no reasonable alternative; or,
 4. At the end of a dead-end parking aisle.
 - c. Required Number of Non-Residential, Mixed-Use, and Multi-Family Residential Refuse and Recycling Enclosures. Update site plan accordingly:
 1. Non-Residential, Mixed-Use, and Multi-Family Residential developments shall provide the refuse enclosures such that 1 commercial refuse container is provided for every 20 residential units and 1 commercial refuse container is provided for every 20,000 square feet of non-residential space.
 - d. Compactors may be used as an alternative to refuse or recycling containers. To determine adequacy + site location of compactors, if proposed, please provide the following on a site/refuse plan, compactor:
 1. Type

2. Capacity - State on site plan compactor capacity conversion equating to requirements provided above.
3. Location
 - i. Place the refuse compactor container and approach pad so that the refuse truck route to and from the public street has a minimum unobstructed vertical clearance of thirteen (13) feet six (6) inches (fourteen 14 feet is recommended), and unobstructed minimum vertical clearance above the concrete approach slab and refuse compactor container storage area concrete slab of twenty-five (25) feet.
 - ii. Place the refuse compactor container in a location that does not require the bin to be maneuvered or relocated from the bin's storage location to be loaded on to the refuse truck.
 - iii. Provide a refuse compactor container approach area that has a minimum width of fourteen (14) feet and length of sixty (60) feet in front of the container.
 - iv. Demonstrate path of travel for refuse truck accommodates a minimum vehicle turning radius of 45', and vehicle length of 40'.

58. Although it is not a requirement, recycling is an amenity found to be desired by Scottsdale Residents. Please clarify whether or not recycling containers will be provided as an amenity for the development.

TIMA:

59. The submitted Traffic Impact Mitigation Analysis (TIMA), is limited to the \pm 26.5-acre Phase 1 portion of the development, however, was submitted as part of a zoning case for a \pm 42-acre site including both phases of development. There appear to be substantial traffic impacts based on the Phase 1 data alone, which may be exacerbated by the additional development proposed within Phase 2. Although development of Phase 2 may be several years out and design fluid, development assumptions should be made for Phase 2 and incorporated into the TIMA. Please revise the TIMA to include analysis for the entire application area, in accordance with the Design Standards & Policies Manual Section 5-1.

60. The submitted TIMA indicates that Phase 1 only of the project will add 11.9 seconds of average delay per vehicle at Hayden/Camelback, PM peak hour (LOS D \rightarrow LOS E) and 89.7 seconds of delay (LOS C \rightarrow F) specifically to the SB right movement See DSPM 5-1.801 B1. Phase 1 only of the project will also add over 4,000 vehicles per day to 78th Street which has a capacity of 5,000 vehicles per day. There is concern regarding the additional impacts Phase 2 may create on top of the Phase 1 impacts explored in this TIMA. Please consider additional improvements to mitigate these impacts, including but not limited to the following:

DSPM Section 5-1.801.

- a. New access to Hayden Road. Consideration for partial or full access.
- b. With shift of Driveway A on Camelback Road to the west, consider possibility for full access.

- c. Add a protected phase on Camelback Road left turns to 78th Street to assist with increased traffic and potential U-turns.
 - d. Widen of Camelback Road's eastbound approach to Haden Road to add dedicated bike lane, wider sidewalk.
 - e. Evaluate extending Montecito Ave from Parkway Ave to 78th St and/or Hayden Rd.
61. The submitted TIMA is missing the following intersections: Hayden Road & Indian School Road, Miller Road & Indian School Road, and Hayden Road & Chaparral Road. The study intersections were agreed upon in a 3/19/19 meeting with the traffic engineer. Please revise the TIMA to include analysis for these intersections, in accordance with the Design Standards & Policies Manual Section 5-1.202.

Please note: Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource.

62. The submitted TIMA indicates that the site is intended to be a "bicycle centric development" and has a "goal of becoming a valley-wide hub for bicycling." Some aspects of the proposed site, adjacent roadways conflict with this goal. Please consider the following components of the plan as they relate to bicycle circulation:

DSPM Section 5-1705.

- a. Angled parking shown on site plan is less conducive to bikes than the existing parallel parking. Consider adding bike lanes.
 - b. The eastbound bike lane on Camelback Road terminates east of Driveway 1 prior to Hayden Road as it becomes a right turn lane (with sharrow). Consider widening Camelback Road to provide a dedicated bike lane and a wider sidewalk meeting current standards.
 - c. It may be appropriate to construct a multi-use path from the east side of Driveway A across the wash to connect to the existing underpass path on the west side of Hayden Road.
 - d. Align the future Paseo of Phase 2 78th Street with the Phase 1 Paseo and consolidate crosswalks. Evaluate crossing treatments with at least 600-foot spacing from other crosswalks.
 - e. Align the future Paseo of Phase 2 at Parkway Avenue Montecito Avenue – Montecito Avenue provides a signalized crossing at Miller Road. Evaluate crossing treatments.
63. The proposed site plan depicts off-site changes that are not discussed in the TIMA, such as paths on city owned land, and modification to the intersection of 78th Street and Glenrosa Avenue. Proposals to change offsite infrastructure should be clearly stated in the TIMA, and any transportation impacts evaluated if applicable, in accordance with the Design Standards & Policies Manual Section 5-1.800. Please also include the proposed cross section of 78th Street.
64. Please revise the TIMA, Page 7, Right Turn lane Warrant (and other locations) to use Scottsdale's criteria found in DSPM 5-3.123 E (Auxiliary Lanes) and DSPM 5-3.206

(Deceleration Lanes), rather than MCDOT criteria. Current projections would appear to warrant the turn lane at Driveway A.

65. Please revise the TIMA, Page 19 and 20, Collision History - in your review of collisions, to include recommendations for Camelback Road and Miller Road (potentially high angle-type collisions) or Hayden Road and Camelback Road (collision rate over 1 per million entering vehicles)
66. Please revise TIMA, Page 31 inlay and associated narrative – to clarify whether the text and analysis is suggesting that there will be demand for public parking (not resident or retail/restaurant patrons) to enjoy the public amenities/wash area. If so, this should be considered for parking needs and potential consideration for easement(s) for access. The inlay also indicates improvements on city owned land. DSPM 5-1.704.B
67. Please revise TIMA Pages 33 & 34 – to clarify the 25% mode choice reduction, which is unusually large. Please justify the reduction with data to support it. Are shops & eateries along path of green belt? DSPM 5-1.502.B.

Fire:

68. Please note: Divided entrances and drive thru bypass lanes shall be 20' wide min, in accordance with the Design Standards & Policies Manual Section 2-1.303(2).
69. Please revise the development plan to demonstrate fire lane surface will support 83,000 lbs. GVW to include any bridge/culvert crossing, in accordance with the Design Standards & Policies Manual Section 2-1.303(3).
70. Please revise the development plan to demonstrate COMMERCIAL turning radii (25' inner/49' Outside /55' Bucket Swing), in accordance with the Design Standards & Policies Manual Section 2-1.303(5).
71. Please revise the development plan to provide turn-around for emergency vehicles at end of dead-end over 300', in accordance with the Design Standards & Policies Manual Section 2-1.303(8).
72. Please revise the development plan to demonstrate the location of the Fire Riser room, in accordance with the Design Standards & Policies Manual Section 6-1.504(1).

Circulation:

73. Scottsdale is progressively attempting to install in capital projects, and request from private development applications, Low Impact Development (LID) and Green Infrastructure (GI) as a method of stormwater control, water harvesting, and cleansing for the first flush requirements of the City's Floodplain Ordinance. Recognizing the sites proximal location to the Greenbelt, a major stormwater corridor, please consider utilization of this resource.
74. Please revise the development plan to include construction of an eastbound right-turn lane on Camelback Road approaching 78th Street, in accordance with the Design Standards & Policies Manual Section 5-3.206.
75. Please revise the development plan to include construction of an eastbound right-turn lane on Camelback Road approaching the proposed site driveway, in accordance with the Design Standards & Policies Manual Section 5-3.206.

76. Please revise the development plan to include construction of a westbound right-turn lane on Indian School Road approaching 78th Street, in accordance with the Design Standards & Policies Manual Section 5-3.206.
77. Please revise the development plan to include construction of a minimum 8-foot wide sidewalk along the site's 78th Street frontage, unless bike lanes are provided on-street, in accordance with the Design Standards & Policies Manual Section 5-3.110.
78. Please revise the development plan to include construction of a minimum 8-foot wide sidewalk along the site's Camelback Road frontage, separated from the back of curb where possible, in accordance with the Design Standards & Policies Manual Section 5-3.110.
79. Please revise the development plan to include construction of a minimum 6-foot wide accessible pedestrian route from the main entry of the development to each abutting public/private street that provides a pedestrian sidewalk/multi-use trail, in accordance with the Design Standards & Policies Manual Section 5-3.110.
80. On the shaded sidewalks exhibit, please clarify what types of shade (architectural or landscape) will be provided on sidewalks for the areas identified on the plan, in accordance with the Plan & Report Requirements for Development Applications.
81. Please revise the Phasing Plan within the development plan to include the public improvements along both sides of N. 78th Street, to be constructed along with Phase 1A.

Other:

82. Please revise the Development Plan so that the response to the Scottsdale Sensitive Design Principles (SSDP) descriptive and explanative information is provided in the responses. Instead of rephrasing the principles, please provide brief directive responses that clarify how the principles will be implemented. Please revise the response to SSDP 2 to provide comments regarding major vistas, the response to SSDP 3 to provide comments regarding existing landscaping, and the response to SSDP 5 to provide comments regarding the public realm and the pedestrian and bicycle comments need to be relocated to support SSDP 6.
83. Please revise the development plan to include discussion regarding improvements within the Indian Bend Wash area between the subject property and N. Hayden Road, including but not limited to desired improvements and responsibility for construction.

Considerations

The following considerations have been identified in the first review of this application. While these considerations are not critical to scheduling the application for public hearing, they may improve the quality and may reduce the delays in obtaining a decision regarding the proposed development. Please consider addressing the following:

Site Design:

84. The development plan (p. 127) discusses a voluntary public art contribution of \$1 per square foot of building area. Please clarify whether the owner is willing to have this contribution stipulated with the zoning approval.
85. The development plan "Design Principles and Guidelines – Architecture" discuss "buildings should be designed according to "green" design guidelines." Please consider requiring development conformance with the International Green Construction Code (IGCC).

Infrastructure:

86. To help address a critical City ITS (intelligent transportation systems) need in this area, consider installing one 2-inch conduit within the Camelback Road right-of-way.

Circulation:

87. Please consider revising the development plan to align the Paseo in Phase 1 with the Paseo in Phase 2, allowing for better connectivity between the two phases of development. In addition, please provide description and graphic details of how this at grade crossing between the two phases will be designed.

Technical Corrections

The following technical ordinance or policy related corrections have been identified in the first review of the project. While these items are not as critical to scheduling the case for public hearing, they will likely affect a decision on the final plans submittal (construction and improvement documents) and should be addressed as soon as possible. Correcting these items before the hearing may also help clarify questions regarding these plans. Please address the following:

Site:

88. Please revise the Transitions Plan to illustrate the transition that is proposed along the south edge of Phase One and Phase Two, in accordance with the Plan & Report Requirements for Development Applications.

89. Please provide Conceptual Elevations that are drawn at a larger scale and without landscape in front of the buildings, in accordance with the Plan & Report Requirements for Development Applications.

Building Elevations:

90. The dimensions on the building elevations within the development plan are not legible. Please provide a higher quality image so that the building heights can be read within the document.

Landscape Design:

91. Please revise the typical landscape plan illustrations in the development plan to include labels and street names, as applicable, to distinguish between the different landscape concepts within the contextual character of the development and surrounding area.

TIMA:

92. Please provide revisions and/or clarifications as necessary regarding the technical review items from the TIMA as described below:

- a. Camelback Road and Hayden Road, Page 16 plus figures and analyses – The intersection currently provides only 1 westbound left turn lane, not 2 (changed in 2018).
- b. Page 31 inlay – Please change color of grocery or change color indicating public amenity so that they are not misinterpreted.
- c. Figure 9 – site traffic volumes appear to not correspond with projected trips. The most prominent is ingress during AM peak hour → Tables 8 & 10 indicate 83

inbound vehicles, yet a summation of ingress vehicular volume on Figure 9 suggests 160 inbound vehicles. Verify AM & PM ins/outs and make corrections if necessary.

- d. Figure 10 – figure is labeled as “Year 2029 Site Traffic Volumes” but the figure appears to show Phase 1 South site traffic volumes. Include all both portions of Phase 1 site traffic volumes.
- e. Figure 12 – show intersections 1, 7, 8 & 9. volumes appear to be reduced from Figure 11 to Figure 13 that are not shown in Figure 12.
- f. Figure 18 – show intersections 1, 6 & 11. volumes appear to be reduced from Figure 17 to Figure 19 that are not shown in Figure 18.
- g. Figure 18 – figure is labeled as “Year 2029 Existing Site Volumes” but the figure appears to show only the estimated volumes associated with Glen at Old Town Communities (not also Visconti at Camelback). Include trips from Visconti at Camelback. Additional figures may be provided in the appendix if desired.
- h. Some minor errors and/or typos and areas for clarification noticed during review that do not necessarily affect the analysis and/or recommendations. With the updated TIMA, please review the following:
 - (1) Page 1, 1st sentence – “Parking Master Plan” written versus “Traffic Impact and Mitigation Analysis”?
 - (2) Page 1, last sentence – Please clarify if this means construction of the grocery may be delayed to a later phase or if it may a different land use. Consider clarification in this location and/or other locations in TIMA
 - (3) Page 17, last sentence before Bicycle Facilities – The Indian Bend Wash Greenbelt is adjacent to Hayden Road, not 1 mile east of the site. Please also indicate that the low-flow portion of the wash is on City owned land located between/adjacent to the site and Hayden Road.
 - (4) Page 17, Bicycle facilities, first sentence – “between Hayden Road and Miller Road and beyond” is repeated.
 - (5) Figure 7 – should the intersection 13, SBL PM peak LOS be “D” not “E”? Similarly, should the applicable bullet on page 28 be deleted?
 - (6) Page 28, last bullet – missing LOS (E?)
 - (7) Page 34, 1st sentence of last paragraph – “Section 0” reference error?
 - (8) Figure 10 – Driveway B appears to have unusual utilization differences between the AM and PM peak hour and directions. This may be okay with given land uses, parking utilization, and trips from north sub-phase.

Please resubmit the revised application requirements and additional/supplemental information identified in Attachment A, Resubmittal Checklist, and a written summary response addressing the comments/corrections identified above as soon as possible for further review. The City will then review the revisions to determine if the application is to be scheduled for a hearing date, or if additional modifications, corrections, or additional/supplemental information is necessary.

PLEASE CALL 480-312-7767 TO SCHEDULE A RESUBMITTAL MEETING WITH ME PRIOR TO YOUR PLANNED RESUBMITTAL DATE. DO NOT DROP OFF ANY RESUBMITTAL MATERIAL WITHOUT A SCHEDULED MEETING. THIS WILL HELP MAKE SURE I'M AVAILABLE TO REVIEW YOUR RESUBMITTAL AND PREVENT ANY UNNECESSARY DELAYS. RESUBMITTAL MATERIAL THAT IS DROPPED OFF MAY NOT BE ACCEPTED AND RETURNED TO THE APPLICANT.

In order to keep this request on schedule for the required public meetings in accordance with the Major General Plan Amendment, please submit the revised material identified in Attachment A in accordance with the schedule below:

Resubmit no later than **8/19/19** for the 10/23/19 Planning Commission hearing, in accordance with the General Plan calendar and Arizona Revised Statutes.

These **1st Review Comments** are valid for a period of 180 days from the date on this letter. The Zoning Administrator may consider an application withdrawn if a revised submittal has not been received within 180 days of the date of this letter (Section 1.305. of the Zoning Ordinance).

If you have any questions, or need further assistance please contact me at 480-312-2258 or at bcluff@ScottsdaleAZ.gov.

Sincerely,



Bryan Cluff
Senior Planner
(11-ZN-2019)



Adam Yaron
Project Coordination Liaison
(3-GP-2019)

cc: Owner

ATTACHMENT A
Resubmittal Checklist

Case Number: **3-GP-2019 & 11-ZN-2019**

Please provide the following documents, in the quantities indicated, with the resubmittal (all plans larger than 8 ½ x11 shall be folded):

Digital submittals shall include one copy of each item identified below.

- One copy: COVER LETTER – Respond to all the issues identified in the first review comment letter.
- One copy: Revised Development Plan
- Three copies of the Revised Traffic Impact Mitigation Analysis (TIMA)

Development Plan Exhibits (each exhibit as a separate file):

Color 1 24" x 36" 11" x 17" 8 ½" x 11"

Grading & Drainage Plan:

Color 1 24" x 36" 11" x 17" 8 ½" x 11"

Other Supplemental Materials:

Technical Reports: Please include one (1) digital copy with each report

- 3 copies of Revised Water Design Report:
- 3 copies of Revised Waste Water Design Report:

Resubmit the revised Drainage Reports, Water and Waste Water Report and/or Storm Water Waiver application to your Project Coordinator with any prior City mark-up documents.