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To: **Garden City Building**

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From: **Joe Canning, PE/PLS**
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Date: 30 June 2023

Subject: **Wandering Trail Subdivision
512 East 43rd Street
SUBFY2021-0009
Parcel Number R2734521651
Plan and Final Plat Review No. 5**

Pages: 24

Media: Transmitted via E-mail

Status: **Comments 26F, 60, 64A, 64B and 64C Pending**

On behalf of Garden City, as the city engineer, we have completed our fifth review of the application for the subject project. The application proposes development of a re-subdivision of a Lot 8 and a portion of Lot 7 of Block 18 of Fairview Acres Subdivision No. 3 into four building that include twenty townhome lots and one common lot on 1.03 acres.

This is a now a full review of the plan set as a prior submittal had been stamped under a California seal. We cannot review plans items without an Idaho seal.

Comments within this review are specific to the information provided for the current submittal and for proposed infrastructure content. The review should not be considered all encompassing. Other reviews within the city and by other review agencies will occur.

Information received applicable to our review is:

1. Transmittal letter dated 16 June 2023 covering materials submitted
2. Review letter with responses dated 3 June 2023
3. FALWUA approved withdrawal request dated 21 May 2023
4. Revised completed IDEQ Wastewater Collection System Checklist stamped by Thomas Hawksworth, PE and dated 9 June 2023
5. Revised completed IDEQ Drinking Water Distribution Checklist stamped by Thomas Hawksworth, PE and dated 9 June 2023
6. Revised Final Drainage Study stamped by Thomas Hawksworth, PE and dated 12 June 2023
7. Revised Stormwater Operations and Maintenance Agreement dated by signature as 2 May 2023
8. Revised Operations and Maintenance Plan stamped by Thomas Hawksworth, PE and dated 12 June 2023
9. Revised construction plan sheets 1 through 8 stamped by Thomas Hawksworth, PE dated 15 June 2023
10. Revised construction plan sheet 9 stamped by Daniel W. Bosse, PE and dated 4 May 2023
11. Construction plan sheet L100 and L150 stamped by Willet C. Howard, LA and dated 8 March 2023

Professional of Record

Any suggestions for design modifications are not made to replace the position of the professional of record. We are simply making an observation that may impact the project or its review by city staff. The design professional may not necessarily be obligated to use the suggestion unless conformance to city requirements is an issue.

Bold Underline text within the comments below is specific to this review.

Environmental Division Drainage Comments – James Pavelek – 208.472.2949

1. Submit city an approved original Stormwater O&M agreement that has been completed, signed and notarized. **The comment response letter indicates an agreement was submitted. We did not see it in the submittal documents. Please advise.** *An O&M manual was provided, but this is not the agreement. Please provide a completed agreement.* Provided – Please see comments under O&M Agreement.
2. All drainage construction observations must be performed by the applicant's design engineer. **Acknowledged**

3. No Certificate of Occupancy shall be issued prior to completion, inspection and final approval of all stormwater structures. **Acknowledged**
4. Submit to the Garden City Environmental Division the following documentation prior to the final inspection for final approval:
 - The design engineer's drainage construction observation reports.
 - A signed, written statement from the design engineer that all drainage structures; and appurtenances were constructed in accordance to the approved plan, and that all stormwater runoff from all hard surfaces, including roof top structures, will be retained on site up to the levels required in the most current Boise Stormwater Design Manual.

Acknowledged

Environmental Division Erosion and Sediment Control Comments James Pavelek – 208.472.2949

5. Obtain an Erosion & Sediment Control Permit from the city and call for initial ESC inspection prior to commencement of ANY earthmoving activities. **The response indicates the contractor will prepare the plan and apply for the permit. No response to this comment was noted. Please provide the full plan and apply. Addressed**
6. BMP's MUST be in place and inspected by the city prior to commencement of earthwork. **Acknowledged**
7. Comply with the general conditions of the project's General Erosion Permit and the provisions of the SWPPP / Erosion Control Plan as submitted. **Acknowledged**
8. The site's Sediment Control General Permit MUST be posted at the site prior commencement of earthwork. **Acknowledged**
9. The city is required to inform the applicant that if the project site is one acre or greater and/or is part of a common development that is greater than one acre the applicant must file a Notice of Intent (NOI) with the EPA's General Construction Permit program. **Acknowledged - Please note that DEQ now runs the ESC program in Idaho. Please acknowledge. Acknowledged**

Public Works Sewer Comments – Troy Vaughn – 208.472.2949

10. Name new manhole in East 43rd Street as MH 1Sheet C400 – Install ISPWC -06-06A. **Resolved**
11. Name new manhole at Station 10+00 as MH 11-06A-01. **Resolved**

12. Sanitary sewer services will be considered as private from the point of connection with the sewer mainline to the end of the service. **Acknowledged**

City Engineer Comments

13. Please provide an approved subdivision name request from the office of the Ada County Surveyor. **Addressed**
14. Please provide an approval from the Ada County Street Name Committee for a street name or evidence a private street name is not required. **Addressed**
- 14A. **New Comment: Sheet A100 is specifically noted as “not for approval” and has not been sealed, signed and dated by the design professional. We presume it should not have been in the submittal package? Addressed**
- 14B. **New Comment: The site engineering plans have not been sealed with an Idaho engineer’s seal. Please correct this. We cannot review plans that are not sealed with an Idaho seal. No review of the plans has occurred with this review. Addressed**
- 14C. **New Comment: We note that some of the site development engineering submittal is from Blue Peak Engineering and some from C3 Civil Engineering. Please advise of the situation as this is unusual. Addressed**

O&M Agreement Comment

- 14D. New Comment: In the blank line area for the “real property described as...”, the land description provided is not complete. Please add “Fairview Acres Subdivision No. 3”. **Resolved**
15. A full review of the submitted O&M manual for the project will occur on the next submittal. Be sure to include what system failure is for each type of system. Be sure to include maintenance practices and intervals for each type of system. **The comment response letter indicates a manual was submitted. We did not see it in the submittal documents. Please advise.** *The manual/plan has been received.*

O&M Plan Comments

- 15A. *New Comment: The plan/manual includes information on the pavers, but it completely silent on the infiltration swales. Please add text on the swales.* **Addressed**
- 15B. *New Comment: Add specific text describing when each system failure occurs. This is usually stated as ponding water for X period of time. And if failure occurs, what must occur to correct the situation. Please add a time to determine failure for the swales and pavers. Such as if they have not drained in 48 hours.* **Resolved**

- 15C. *New Comment: We suggest the O&M manual is one place to add text on the city not being responsible for paver system repair should city water/sewer lines need to be excavated/repared/replaced. Addressed*
- 15D. *New Comment: A minor item, but “Vincity” map is misspelled on the map sheet in the report. Since the manual will be recorded with the O&M agreement, we suggest this be corrected. Addressed*
- 15E. *New Comment: The south swale contains an equalization pipe near the transformer. As this pipe will be surcharged with a design storm and it could be surcharged in winter, please add some text to the manual that advises the operator that special care of the pipe may be necessary to prevent flooding and damage to the pipe could occur during unusual precipitation events and freezing conditions. Is the pipe necessary? We note the information on the Equalization Pipe in Exhibit A, but the main text of the manual does not explain the purpose of the pipe, its location or possible winter event freezing conditions. Please augment the text in the bullet item starting with “The purpose of the infiltration swale at the back....”. The intent is to inform the reader of the various pieces of the storm water system. **Resolved***

City Engineer Comments - Continued

16. Comply with requirements and provide an approval from the Ada County Highway District. **Please provide when available.** *Please provide when available. Provided*
17. Please provide an approval from the North Ada County Fire and Rescue District (NACFRD). Specific requirements addressing the project’s plan are needed. Should required water fire flows to serve the project exceed the production capabilities of the city’s water system in the area, the applicant may have to modify the project, upgrade the city water system in the area or not complete the project. It is recommended the applicant begin assessing the impacts of this comment as soon as possible. **Addressed**

18. The applicant must review the original FEMA work maps (not the current adopted maps) as the city has been placed in seclusion. If the lowest floor building elevation is proposed to be below the draft BFE, a Flood Risk Acknowledgement form will be required from the landowner/developer. **The response indicates the livable space is above the draft BFE, but the lowest floor must be higher than the draft BFE. Please provide what the target draft BFE elevation is and what type of structure is proposed (what is the lowest floor?).** *The response is understandable. The question was specifically for the living units. Is the livable space floor a concrete slab or over a crawl space? City code addresses lowest floor, not livable space. With the lower garages, please provide the elevation of them and any mechanical equipment that will serve the building(s). It may be best just to provide the information usually contained within a FEMA Elevation Certificate for each unit. Addressed*
19. The project information indicates that a pressure irrigation system will be provided using surface water as a source. Please provide a design and design report for the system. **The plan appears to indicate the city water will be the irrigation water source. This is not a surface water source. If this is the case, please provide a waiver from the code requirement for use of surface water including a letter from the surface water irrigation entity that no water exists that may be used or the delivery will not meet the project needs. Additionally, the final plat notes that irrigation water will be provided by the FALWUA. Please advise.** *We note the request asks for a waiver of Idaho Code 31-3805. The city cannot waive state law – compliance is mandatory; however the city is able to waive portions of the city code. We are able to support the city code waiver request, however we note that apparently the FAWLUA will be excluding the land from the association. Said withdrawal will impact compliance with Idaho Code and the final plat. Please advise on the timing of the exclusion. Addressed – please be advised that the completion of the withdrawal may be an issue with the county surveyor during their review. Addressed*
20. Please provide an approval for any gravity irrigation changes and for the connection of the pressure irrigation system from the Fairview Acres Lateral Users Association, Inc. **See comment 19. Please provide the information from FALWUA noted in the comment response letter.** *Addressed*
21. The project seems to ignore the cross-access easement along the southerly property line. What will be a disposition of this easement? As this comment could impact proposed storm water facilities, a full review of the site storm water management plan will not yet occur. **The comment response letter indicates the easement has been vacated. Please provide that documentation.** *The response letter indicates the easement will be vacated at a later date. In the interim, will the easement holder's rights be compromised? The city cannot "approve" construction that would violate use of a known easement. Please advise. Addressed*

Drainage Report Comments

22. The storm water report is titled “preliminary”. Is it still preliminary?
Addressed
23. One of the methods proposed for storm water management is permeable pavers. Please note that city water and sewer infrastructure under or near pavers (water and sewer) will require that the HOA assumes all maintenance of pavers above the infrastructure should the city need to excavate and repair the pavers. This must be noted on the final plat and in the C,C&Rs. **The final plat does not contain the information noted in the response letter and no C,C&Rs were provided to review to see if the notice was included.** *Please advise where the HOA obligation is noted on the final plat (other than note 12 that is not adequate). The city requires the wording on the final plat.* Resolved
- 23A. **New Comment: Drainage Report – Please outline the boundaries of the drainage basins with a heavy line in the report. We cannot tell where the boundaries are.** *Addressed*
- 23B. **New Comment: Drainage Report – It seems that areas DMA 1 and DMA 2 discharge to the same storm water facility (pavers). Therefore, they should not be separated as different areas in the report.** *Addressed*
- 23D. **New Comment: Drainage Report – The composite “C” factor in the report for DMA 3 and 4 may be low if there is no freeboard in the swales. During a design storm event their surface would have a “C” of 1 when filled. Please include how the various composite “C” factors were determined.** *Addressed*
24. In the storm water report, be sure to adhere to the run-on ratios included in the Boise Storm Water Design manual for permeable pavers. **It appears that areas DMA 1 and DMA 2 essentially drain to the same paver area. They should be combined into one drainage area. We did not see a detail including the length of the paver section. From the drainage report and scaling, we believe the pavers are 8 feet wide by 106 feet long. That equates to a total paver area of 848 square feet. We have roughly calculated the run-on area to be 24,390 square feet to the pavers. That equates to a run-on ratio of around 29:1. The Boise manual recommends paver ratios from 2 to 6 to 1. The pavers appear very undersized. The question is not regarding the water storage, but about the ability of the pavers to maintain reasonable intervals between gap cleaning. Please address the run-on ratio per the design manual. Please provide how the response letter run-on ratio of 6 to 1 was determined. We roughly calculate a ratio of 11.25 to 1. **Resolved – Please note the pavers are not included in the run-on portion of the calculation. Therefore we believe the ratio should be 24,392 SF over 4,312 SF for a ratio of 5.66.****

- 24A. **New Comment: Drainage Report / Landscape Plan – There appears to be a use conflict for the land between the drainage report and the landscape plan. The landscape plan notes that trees will be 10 feet from drainage swales, but there does not appear to be room to do so. Please advise. Resolved**
25. Any facility that *infiltrates* storm water must be at least ten feet from building foundations unless a letter from the project’s structural engineer approves a closer proximity. Please verify the setback is met. **Please verify the swales are at least 10 feet from buildings. It appears they may be less? Resolved**
26. Please resubmit the geotechnical report for filing with the submittal. **Addressed**
- 26A. **New Comment: Geotechnical Report – The design professional signed the report, but it is not sealed. Please have the design professional seal the report. Resolved**
- 26B. **New Comment: - Geotechnical Report / Drainage Report – A minor item, but the geotechnical report summarizes its depth to groundwater as expected to be greater than 6 feet from existing ground. The drainage report in geotechnical section notes the groundwater at 6.6 to 7.5 feet. Please amend the drainage report to match the 6 feet. The drainage report still includes 6.6 to 7.5 feet. Please advise. In addition to the depth to water, please add the groundwater elevation to the report. The report describes a high water as 2641.00. It appears that native ground is approximately 2647.5. With a depth to water of 6.0 feet, that results in a water elevation of 2641.5. This does not result in any design changes being necessary, but please describe in more detail how the 2641.00 was determined. The city must be sure that an EPA audit of project plans/documents will not result in errors. If the water elevation is per our calculations, the elevations shown on sheet 8 in details A and B will need to be changed. Addressed**
- 26C. *New Comment: The drainage report contains a section titled “Run-On” on page 4. Please review the existing buildings along the south property line and how their roofs drain. Please clarify if the curb is 8-inches or 6-inches. The comment response, storm drainage study and plan sheet 5 A-A Section indicate it is 8-inches; plan sheet 5 grading at left side of sheet (2648.69TC/2648.19FS) and the letter from Brye Patch Properties, LLC note a 6-inch curb. We want to be sure what is intended. Resolved*
- 26D. *New Comment: The north and south drainage swales are different lengths due to the transformer along the south property line. But the calcs for DMA2 and DMA3 include a swale length of 290 feet for each one. Please revise or explain. Resolved*

- 26E. New Comment: The report is under a California seal. Please change it to an Idaho seal, sign and date. **Resolved**
- 26F. New Comment: We regret not noticing this before, but upon comparing the drainage basin map with the construction plans, we noticed that there are additional **Pave Drain** areas in the northwest and southwest corner of the property and some of the site drains to them. The basin map and calculations need to be updated to add what appears to be two more drainage basins. It would be helpful to add a definitive boundary line to the various basins on the basin map. This appears to also impact the area of **Pave Drain** in the primary entry, if the designer wishes, this may allow a reduction of the area of the **Pave Drain** in that area.

City Engineer Comments - Continued

27. Be sure to include the elevation (not depth) of the seasonal high groundwater on the construction plans in details for the storm water facilities. **Plans have not been reviewed – see comment 14B.** *The note referenced in the response letter states 6.6 to 7.5 feet, but the geotech report notes 6 feet. And please add the elevation of the groundwater not just the depth. This should be in both the drainage report and details A and B on sheet 8 of the construction plans. Please see comment 26B.* **Resolved**
28. Please verify the direction of building roof drainage. The storm water basin map would seem to indicate the “ridge” is located at the “rear” of the building. Is this correct? **Please see comment 23A.** *Addressed*
29. Two storm water facilities and a parking area are located in the sanitary sewer easement along the westerly property line. Please verify with the city of Boise Public Works that said encroachment will be allowed. **Addressed**
30. Please provide enough information on the site grading plan to assure storm water will be retained on the site and that said facilities will integrate well with perimeter off-site grades. **Plans have not been reviewed – see comment 14B.** *Addressed*
31. The existing ground near the swale along the southerly property line appears to fall approximately one foot. As the water depth in this swale is ten inches deep, please verify its bottom is flat and will still “fit” in the area shown with the maximum 3:1 side slopes. **Plans have not been reviewed – see comment 14B.** *Resolved*

32. The storm water report notes design infiltration rates of 4-inches per hour, but the vegetated swale on sheet 8 shows no mechanism to access the soils that will infiltrate at that rate. Is the swale covered in sod? If so, the infiltration rate could be near zero. We normally see sand drainage windows in swales covered with a light layer of cobble to assure infiltration occurs. **Please see comment 24A and will planning staff approve an all cobble swale?** *Addressed, however note 4.2 on sheet L150 states that planter beds will be covered with 18-inches of topsoil. This appears to conflict with Detail A on sheet 8. Please advise. The landscape plan sheet we have (L100 dated 8 March 2023) contains several notes that state “No trees allowed within 10 feet of drainage swales.” Per the plan sheets, it appears that the swales will conflict with this note. Please advise.* **Resolved**
33. The drawdown times reported in the storm water report do not seem to use the surface area of the swale (or its drainage window). Please advise. **Please see comment 32.** *Addressed, but comment 32 still may be an issue. Addressed*
34. Please verify the elevations shown on the grading plan are NAVD88. They appear to be off by approximately 650 feet. A Benchmark is listed on sheet one of the plans at 1999.06. **Plans have not been reviewed – see comment 14B.** *Addressed*
35. Please assure the landscaping plan includes the storm water facilities and how they will be landscaped. Please provide the current plan. **The landscape plan we received does not address ground cover very well. Plantings noted are shrubs and trees. Please provide more detail.** *Please see comment 32. Resolved*

Final Plat Comments

36. The final plat must include easements specifically referencing Garden City for water/sewer and appurtenances for all public infrastructure. We see no mention of a blanket easement on Lot 1. **Plat note 5 does not specifically name Garden City. Please revise the plat.** *Resolved*
37. Please include irrigation (gravity and pressure) easements where needed. **Note 7 addresses the irrigation water provider (however from prior comments it seems FALWUA water is not used), but does not provide irrigation easements. Please advise.** *Resolved*
- 37A. New Comment: Final Plat – Note 11 has a typo for “TE”.** *Resolved*
- 37B. New Comment: Final Plat – Please change “N. River Trail Lane” to “N. Greentrail Lane” per the county street name committee review.** *Resolved*

- 37C. **New Comment: Final Plat – As the plat does include a private road, please add the private work reservation statement in the Certificate of Owners. Resolved**
- 37D. **New Comment: Final Plat – Please change the date to 2023 on sheet one. Resolved**
- 37E. *New Comment: Final Plat - Please confirm that the existing Idaho Power easement is compatible with the project's drainage system. The purpose of this comment is to be sure joint trench is aware of the storm water system. Addressed*
38. Will the project utilize a Restricted Build Agreement (RBA) process? Due to the density and proposed improvements, an RBA may be necessary. Please note that construction or storage of combustible materials on the site will not be allowed until adequate fire suppression water and access is provided as required by the NACFRD. **Addressed – no RBA.**
39. Unless an RBA is executed, the final plat will not be signed by the city until all infrastructure is installed, record construction plans with construction observation reports and QC testing is provided and the systems are accepted for maintenance. **Acknowledged**
40. With an executed RBA, timing of connections of structures to city water and sewer may only occur after the system has been tested, inspected, record plans provided (if possible) and accepted by the city for connection. **Acknowledged**
41. Should the applicant desire the city to perform a QLPE review of the water/sewer extensions, costs of said review would be borne by the applicant. Please advise if a QLPE review is requested. If so, please provide completed and signed DEQ checklists. **The applicant does request a QLPE review. None of the checklists were sealed, dated or signed. Please do so. Addressed – please see follow-up comments.**

Construction Plan Comments

42. On sheet 7, the sewer line must be run at a slope of at least 0.60%. **Plans have not been reviewed – see comment 14B.** *For last reach runs the minimum slope per IDEQ is 0.60%. Also see comment 57. Resolved*
43. On sheet 7, please add the footage of 8-inch pipe on the pipe length shown on the plan. **Plans have not been reviewed – see comment 14B.** *For calculating the pipe slope, the length should be reduced by 4 feet – 2 feet for each manhole. Please revise. Addressed*
44. On sheet 7, there appears to be an extra text line that calls out the sewer pipe at approximately Station 11+15. **Plans have not been reviewed – see comment 14B. Resolved**

45. On sheet 7, please add the inverts at the end of all sewer services. **Plans have not been reviewed – see comment 14B.** *The response letter notes the inverts have been added (presumably on sheet 7?). Please advise where they are.* Addressed
46. On sheet 7, it appears there will be numerous vertical separation issues with the water main, sewer main, water service lines and sewer service lines, Please show the conflicts on the profile and how they will be addressed. We suspect the water main line and water services may have to be lowered. We note sewer note 2 and construction note 3, but more detail is required. **Plans have not been reviewed – see comment 14B.** *We appreciate the water services being shown; but in this case, please include the water line main in the profile as the contractor will have to locate it with special attention to the sewer main and sewer service crossings.* Resolved
47. On sheet 7, construction note 8 requires a minimum of 18-inches of separation. It would appear that there absolutely will be a vertical conflict between the proposed sewer main and the existing water line. Please address the issue more directly. **Plans have not been reviewed – see comment 14B.** *Addressed, however to provide the best submittal to IDEQ with the QLPE review, please add a reference to ISPWC SD-407 in sewer note 2 and in water note 3. Where has the reference been added to sheet 7?* Resolved
48. On sheet 7, construction note 5 needs to include the manhole diameter. **Plans have not been reviewed – see comment 14B.** *Addressed*
49. *New Comment: Sheet 1 – Project Note 3 needs to be updated.* Resolved
- 49A. New Comment: Sheet 1 – Project Note 4 contains a reference to Southwest District Health. The call to Southwest is not correct. We are not sure why Note 4 is even necessary. The final plat is required to carry notes regarding sanitary restrictions. Please advise. **Resolved**
50. *New Comment: Sheet 2 – The Garden City standard notes have been updated. Please see the attached.* Resolved
- 50A. New Comment: Sheet 5 – Construction keynote 8 – we note the A-A Section on the sheet, but it is not an adequate detail of the curb. Please dimension the curb and specify it is concrete. We presume the reveal is 8-inches on both sides? **Resolved**
51. *New Comment: Sheets 5 and 6 – Please add “FS” to the legend.* Resolved

52. *New Comment Sheets 5 and 6 – The bottom of the south drainage swale appears to not have a constant bottom elevation with elevations of 2646.50 to 2647.00. This will impact the volume notably since the design water depth is 0.83 feet. Please advise. Resolved*
53. *New Comment: Sheet 6 – Does the retaining wall meet the minimum clearance requirements of Idaho Power from the transformer? Addressed*
54. *New Comment: Sheet 7 – The end of the sewer line is has less than 3 feet of cover (± 2.85 feet). The city notes require at least 3 feet of cover. This issue needs to be discussed with city staff to address. We are not sure the ductile iron pipe referenced in the Garden City standard notes is the best solution in this case. Addressed*
55. *New Comment: Sheet 7 – Construction Note 2 – Could double service water lines be used? This would reduce the water service line crossings of the sewer main. This should be discussed with city staff. Resolved*
56. *New Comment: Sheet 7 – The starting manhole in 43rd Street needs to have a 0.10 foot rise from the existing invert to the new invert to the west. The invert listed as “E” should be “W” at 2644.00? Resolved*
57. *New Comment: Sheet 7 – The end manhole must have an invert out of at least 2645.58 to maintain at least 0.60% slope downstream. Resolved*
- 57A. New Comment: Sheet 7 – Please add a north arrow to the sheet. **Resolved**
- 57B. New Comment: Sheet 7 – Please delete the sanitary sewer service from the upstream manhole and place it approximately 5 feet from the manhole. **Resolved**
- 57C. New Comment: Sheet 7 – The plan contains conflicting information on the new water line in the project. Construction keynote 1 notes an 8-inch hot tap. The profile view indicates 6-inch water line. With the fire hydrant at the end of the line, the mainline will need to be 8-inch diameter. The line to the fire hydrant from the mainline needs to be 6-inch. **Resolved**
- 57D. New Comment: Sheet 7 – Please depict the fire hydrant isolation valve and call out the fitting at the mainline. **Resolved**
- 57E. New Comment: Sheet 7 – The reference to thrust blocks to meet NFPA 24 needs to be changed to meet the ISPWC. **Resolved**
- 57E. New Comment: Sheet 7 – Construction keynote 5. Please change the call for the manhole from being “over” the existing line to require the mainline to be cut with the new manhole set in the removed pipe area. Flow control will be necessary. **Resolved**

- 57F. New Comment: Sheet 8 – The sheet is sealed with a California seal. Please change it to an Idaho seal. **Resolved**
58. *New Comment: Sheet 8, Detail A – The minimum 18-inches of filter sand needs to extend full depth under the bottom of the swale. The detail indicates the depth is approximately 11 inches at the bottom. Resolved*
59. *New Comment: Sheet 8, Detail A - Please specify the type of permeable fabric at least by weight and to be non-woven. Resolved*
60. *New Comment: Sheet 8, Detail A - We suggest the fabric not be placed on top of or under the filter sand as it may clog prematurely. The response letter indicates the detail has been revised, but it has not been. The same issue is noted in Detail B. Also sheet L150 is the same issue. Please address. **As the professional of record and your recommendation, this comment is addressed; however, please at least specify the type and weight of fabric.***
61. *New Comment: Sheet 8, Details A and B – Please add the elevation of the expected seasonal high groundwater. Resolved, however see comment 26B. **Addressed***
62. *New Comment: Sheet 8, Detail B – Please specify the fabric. Resolved*
63. *New Comment: Sheet 8, Detail C – Is the “V-Gutter” the item called out of sheets 5 and 6 as Keynote 5? The name is different. Resolved*
64. *New Comment: Sheet 8, Detail C – Is the gutter material concrete? And how thick? Resolved*
- 64A. New Comment: Sheet 7, Construction Note 4 – The call to ISPWC SD-404 in not correct as the Storz adaptor must be added, Please revise the note to refer to Waterline Note 5 on sheet 2.**
- 64B. New Comment: Sheet 8, Details A and B – Regarding the impermeable liner, please add a note on how to handle seams. We typically see a comment on overlapping the seams by several feet.**
- 64C. New Comment: Sheets 5 and 6, Keynote 6 and Sheet 8, Unspecified Detail for Pave Drain – It isn’t clear what edge treatment is proposed for the Pave Drain. The detail on sheet 8 includes a reference to an optional curb edge. Sheets 5 and 6 do not address an edge. The Pave Drain installation manual recommends some form of edge restraint. We usually see a concrete ribbon curb used. Please advise.**

IDEQ Checklist Comments

65. *New Comment: General Checklist – Please fill in all the boxes within the “12. Certifications” section. Resolved*

66. *New Comment: General Checklist – Section 15 - Please add 2020 for the version of the ISPWC. Resolved*
67. *New Comment: General Checklist – Section 16 under Pressurized Irrigation – The construction plans do not appear to include a pressurized irrigation distribution system. There is only an irrigation water service shown. We would suggest that this entire section be left blank as it usually applies to pressurized irrigation systems using surface water and since the irrigation distribution system is not shown. Resolved*
68. *New Comment: Wastewater Collection System Checklist – Many of the items do not contain any response to either “Yes”, “No” or “NA”. Please complete the form. Please change items 26, 27 to and 44 to “Yes”. Additionally, the checklist items 39 and 69 have created new comments on the plan sheet. **Addressed***
- 68A. *New Comment: Please add the station of sanitary sewer services and their length to plan sheet 7. **Resolved***
- 68B. *New Comment: Per wastewater checklist item 69 (se IDAPA 58.01.08.07.a.ii.1), the minimum horizontal separation of potable services and non-potable services is 6 feet between walls of the pipe. Several of the sewer services and water services appear to be less than the minimum required 6 feet between walls of the pipe. Please address. **Resolved***
69. *New Comment: Wastewater Collection System Checklist – item 9 – we note that the minimum slope for the last reach in this case is less than 0.6%. It needs to meet that requirement or we cannot review the plans under a QLPE process. Resolved*
70. *New Comment: Drinking Water Distribution System Checklist – Many of the items do not contain any response to either “Yes”, “No” or “NA”. Please complete the form. Some items may need to be “NA” as the city has control of the item. Please change items 19 (fire hydrant suffices), 34 and 35 to “Yes”. Item 31 should be “NA”. **Resolved***
71. *New Comment: Drinking Water Distribution System Checklist – Items 31, 32, IX and X need to be filled in. Addressed – please see comment 70 for changes. **Resolved***
72. *New Comment: Drinking Water Distribution System Checklist – Items 59, 60, 61 and 62 need to be filled in. Resolved*

C,C&R Comments

73. *New Comment: Section 3.29 – Private Road – Does the road declaration include a description of the city not repairing the paver system? Addressed*

74. *New Comment: Section 5.26 – Storm Drainage – This section should include the HOA’s responsibility to replace/repair the paver drainage system should the city excavate/repair/replace water/sewer facilities under or near them. Addressed*
75. *New Comment: The document needs to include language that sewer services under or near the pavers (to their end connections) are private and will not be maintained by the city. Addressed*
76. *New Comment: Section 5.26 – Storm Drainage – This section contains language regarding the ACHD. Is this necessary? The project is contains a private road and a private storm water system. Addressed*

Please provide a comment response letter to remaining/new comments and revised information to city hall.

Garden City

Standard Construction Notes for Projects That Contain Public Water, Public Sewer, Non-ACHD Drainage, Private Roads and/or Permeable Pavers

August 2022

Notes Applicable to All Construction

1. Compliance with the Idaho Department of Environmental Quality (IDEQ) requirements for protection from erosion by storm water is required for this project. A Responsible Party (RP) shall be responsible to comply with the IDEQ requirements. If the owner has not designated a RP, the contractor shall be required to provide a RP. The RP is required to prepare, file and comply with the Storm Water Pollution Prevention Plan (SWPPP) for this project. The RP is responsible to file a Notice of Intent (NOI) to construct with IDEQ. IDEQ must officially accept the NOI prior to beginning any site disturbance activities. The SWPPP is a document/plan that is required to be updated and amended to best fit the site as construction occurs. The RP is responsible to keep the plan current. At completion of all construction activities and after the project site is stabilized for erosion control, the RP is required to prepare and submit a Notice of Termination of the SWPPP with IDEQ.

-or, for sites under one acre-

2. The contractor shall comply with the City of Garden City's approved Erosion and Sediment Control Plan (ESCP) for this project. A Responsible Party (RP) shall be responsible to comply with the ESCP requirements. If the owner has not designated a RP, the contractor shall be required to provide a RP. The RP is required to comply with the City of Garden City's ordinance for control for erosion from this construction site. The ESCP is a document/plan that is required to be updated and amended to best fit the site as construction occurs. The RP is responsible to keep the plan current. At completion of all construction activities and after the project site is stabilized for erosion control, the ESCP is terminated.
3. All construction, materials, appurtenances and testing shall comply with the requirements of the 2020 edition of the Idaho Standards for Public Works Construction (ISPWC), unless specifically modified by these construction documents.
4. The contractor, all applicable sub-contractors, developer/owner, utility company representatives, a Garden City Department of Public Works representative and an Ada County Highway District representative shall attend a pre-construction conference prior to commencement of construction.

5. The contractor shall obtain a construction permit from the Ada County Highway District at least 24 hours prior to commencing construction of any of the improvements shown hereon located within public right-of-way.
6. Construction inspection shall be performed by the project engineer, the Ada County Highway District and/or the Garden City Department of Public Works. Inspection by the Garden City Department of Public Works will be for Department purposes only to spot check work compliance with the city's requirements. It is the project engineer's responsibility to assure compliance with the project plans and specifications.
7. The contractor shall verify site conditions and dimensions prior to beginning work. Any deviations, omissions or errors shall be presented to the project engineer for resolution. Any changes to the plans and specifications shall be submitted to and approved by the Garden City Department of Public Works prior to implementation of the change. Said change may also need to be submitted to the Idaho Department of Environmental Quality for approval.
8. The contractor shall contact Digline (811) and other appropriate utility providers for utility locations at least 72 hours prior to beginning any excavation.
9. Any waters created by dewatering shall not be permitted to directly discharge to any existing surface water facility. Prior to discharging to waters of the state of Idaho, the contractor shall secure a short-term activity exemption from the applicable regional office of the Idaho Department of Environmental Quality.
10. Horizontal and vertical separation of potable and non-potable pipelines shall meet the requirements of ISPWC Section 405 and ISPWC Drawing No. 407.

Sanitary Sewer Notes

11. All sewer pipe and fittings with cover greater than 3 feet, shall be Polyvinyl Chloride (PVC) conforming to the requirements of ASTM D-3034, SDR-35 for sizes 4-inch through 15-inch; ASTM F-679, SDR-35, T-1 wall for sizes 18-inch through 27-inch; or ASTM F-794, T-46 for sizes 18-inch through 36-inch. The minimum cover for all PVC sewer lines shall be 3 feet. Sewer pipe and fittings with cover less than 3 feet shall be Ductile Iron (DI) conforming to ANSI A-21.51 or AWWA C-151, minimum Class 50.
12. Sanitary sewer manholes shall be constructed of reinforced precast concrete per the ISPWC with a maximum of 12 inches of concrete grade rings, a 24-inch diameter cast iron ring and cover and a concrete collar per ISPWC drawings SD-501, SD-505, SD-507, SD-508, SD-509. Manholes shall not have steps. The sewer contractor shall field verify that no more than 12-inches of grade rings are necessary to adjust the manhole to final grade. Grade rings, ring and covers shall be provided by the sewer contractor. Manhole cones shall be eccentric for all manholes 4 feet and deeper. The vertical wall of the cone shall be placed upstream and rotated 45°. Concentric cones shall be used for manholes less than 4 feet deep.

13. Manufactured compression boots shall be used in manholes where pipelines enter and leave the manhole.
14. Sewer service lines shall be ISPWC type "A" or "B" and constructed and marked per ISPWC Drawing SD-511A. Services shall not be deeper than 5 feet at the property line, unless specifically approved by the city. Services shall extend horizontally 10 feet beyond the property line. Service lines shall include an inspection cleanout placed directly adjacent to and inside public street right-of-way or the sewer easement line. The cleanout shall conform to SD-506A & SD-506B (bolt down cover option) with the riser being the same size as the service line.
15. Service line connections to new mainlines shall use a full-service tee. Service line connections to existing mainlines that are concrete or a concrete derivative shall use a tapping saddle. Service connections to existing mainlines that are not concrete or a concrete derivative shall use an Inserta-Tee or a prior approved equal.
16. All sewer mains and services shall be bedded per the requirements of Type I bedding, except that bedding material shall be select ¾-inch maximum crushed gravel chips. All bedding shall be thoroughly shovel-sliced under the pipe.
17. Groundwater levels shall be maintained below the trench bottom at all times during construction. Groundwater shall not be permitted to enter the pipeline system during construction. As soon as possible the contractor shall install a removable watertight plug in the new pipeline at the point of connection to the existing sewer system.
18. Sewers shall be cleaned and tested after all utilities are installed and prior to paving. Material cleaned from the construction shall not be permitted to discharge to the downstream receiving pipeline. All installed sewer pipes shall be tested in accordance with Division 500 of the ISPWC. A representative of the city must be present must observe the testing. Mainline pipeline testing shall include air pressure, deflection and closed-circuit television (CCTV) visual inspection. Service line testing shall include air pressure and closed-circuit television (CCTV). The CCTV report shall be in the form of a VHS videotape or DVD and a written log. Manholes shall be vacuum or hydrostatically tested for leakage. The sewer system shall not accept any flows until the city issues an initial acceptance of the system.
19. The contractor shall guarantee all work for a period of at least a one-year following the city's initial acceptance.

Waterline Notes

20. All water mains shall be Polyvinyl Chloride (PVC) conforming to the requirements of AWWA C-900, Class 235, DR-18. All fittings shall be mechanical joint or flanged ductile iron conforming to the requirements of AWWA C-110. All plastic

pipe shall be installed with a #12 direct burial tracer wire placed along the north and east side of the main. The tracer wire will not be extended up in to or along valve boxes, but shall continue along the mainline, uninterrupted. Minimum burial depths for water mains shall be 4 feet from finish grade to the top of the pipe.

21. Individual or dual water service connections 1-inch or smaller shall be Polyethylene pipe conforming to AWWA C-901, Class 200, DR-7.3. Services shall be constructed conforming to the Garden City standard drawing. Service pipelines shall be a minimum 1-inch, unless otherwise noted.
22. Individual water service connections larger than 1-inch shall be Polyethylene pipe conforming to AWWA C-901, Class 200, DR-7.3. Services shall be constructed conforming to the ISPWC SD-402. Service pipelines shall be a minimum 2-inch, unless otherwise noted.
23. Water valves shall be resilient-seat gate valves conforming to AWWA C-509 or AWWA C-515. All water valves shall be installed with a standard 5-1/4 inch diameter, two piece adjustable cast iron valve box, Tyler/Union series 6855, or equal. The cast iron cover shall be marked with the word "Water" as an integral part of the cover.
24. Fire hydrants shall conform to AWWA C-502 and ISPWC Drawing SD-404. The pumper nozzle outlet shall be equipped with a "Storz" adapter.
25. All water mains and services shall be bedded per the requirements of Type I bedding, except that bedding material shall be select 3/4-inch maximum crushed gravel chips for water mains and 3/8-inch maximum crushed gravel chips for service lines. All bedding shall be thoroughly shovel-sliced under the pipe.
26. All installed water lines shall be tested for leakage in accordance with Section 401.3.6 of the ISPWC following installation of all utilities and prior to paving. Each meter setter shall be opened to be sure that the service corporation stop is open and the service is functional prior to paving. A representative of the city must be present must observe the testing. All installed water lines shall be flushed, disinfected and tested for bacteria in accordance with Section 401.3.9 of the ISPWC. The water system shall not be opened to the city system until the city issues an initial acceptance of the system.
27. The contractor shall guarantee all work for a period of at least a one-year following the city's initial acceptance.

Drainage Notes

28. All inspections shall require a 24-hour notice prior to the requested inspection time. Call the inspection hot line at 208-472-2920.
29. Prior to any earthwork a 24-hour notice to begin construction is required. Call Inspection hot line at 208-472-2920.

30. Drainage inspections shall be conducted at any given time or upon request, during construction, verifying compliance with the city requirements and construction activities are followed as per the approved plans.
31. All drainage construction observations must be performed by the applicant's design engineer.
 - a) Submit to the Garden City Environmental Division the following documentation prior signature of the city on a final subdivision plat or prior to the final inspection for a Certificate of Occupancy, whichever occurs first:
 - i) The design engineer's drainage construction observation reports.
 - ii) A signed, written statement from the design engineer that all drainage structures and appurtenances were constructed in accordance to the approved plans.
32. The drainage system and any filter fabric shall not be covered prior to inspection. Call the inspection hot line at 208-472-2920.
33. The size and location of the drainage system shall correspond with the approved drainage system plan and shall be inspected.
34. Final inspection of the storm drainage system shall be conducted following the paving and final landscaping.
35. All drainage conveyance access points shall be stenciled or marked with identifying statement for the public "Do Not Dump – System Drains to Groundwater" or "River", whichever is relevant to the system disposal design.
36. Traffic rated manhole lids shall be used.
37. All parking lot grades shall be at least 1% for asphaltic-concrete and 0.4% for concrete.

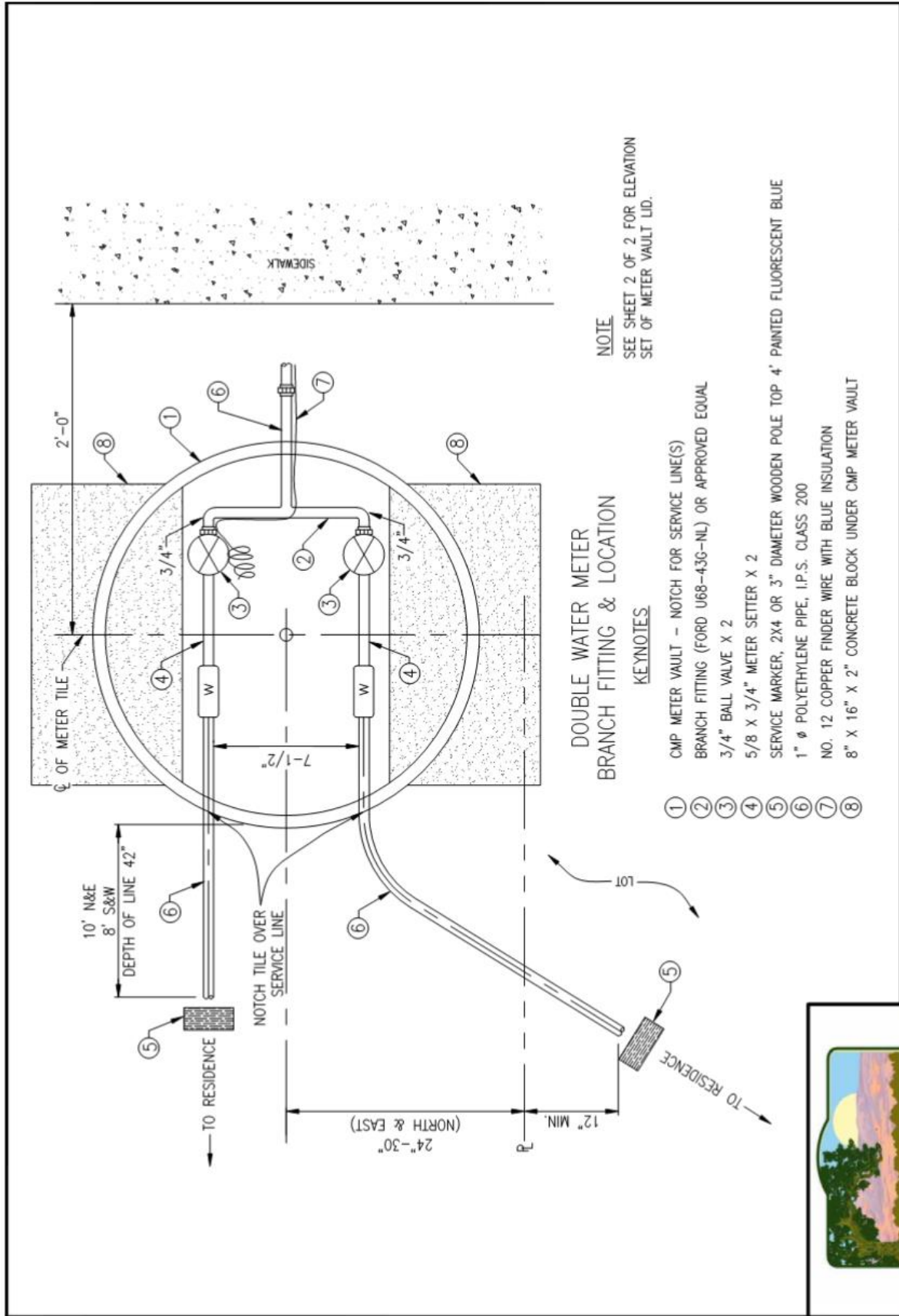
Roadway Construction Notes

38. Manhole grade rings, cast iron rings and covers shall be provided by the sewer contractor. The road contractor shall install the sewer grade rings, cast iron rings, covers and concrete collars to finish grade. Water valve boxes and covers shall be provided by the water contractor. The road contractor shall install the water valve boxes covers and concrete collars to finish grade.

Permeable Paver Notes (when applicable)

39. Garden City will not repair permeable paver surfaces or their base sections when city infrastructure (water mains, water services, sewer mains and sewer manholes) is located beneath them. The city will maintain the water/sewer facilities noted, but will not repair the storm drain facilities above them. Said repair is the responsibility of the private party owning/operating/maintaining the storm drain facilities.

40. Sanitary sewer services from the connection to the mainline to the point of use will be private under permeable pavers. Ownership and repair of said private services will be the responsibility of the private party owning operating and maintaining the storm drain facilities.
41. Permeable paver ownership/maintenance responsibilities shall be stated in an appropriate document (i.e. maintenance agreement, Covenants, Conditions and Restrictions, Final Plat).
42. All water main lines under and within ten (10) feet of permeable pavers shall be ductile iron pipe.



NOTE
SEE SHEET 2 OF 2 FOR ELEVATION
SET OF METER VAULT LID.

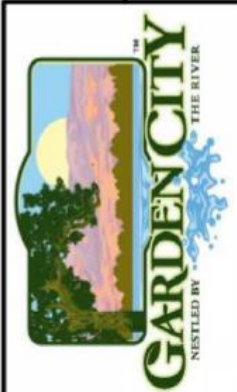
**DOUBLE WATER METER
BRANCH FITTING & LOCATION**

KEYNOTES

- ① CMP METER VAULT – NOTCH FOR SERVICE LINE(S)
- ② BRANCH FITTING (FORD U68-43G-NL) OR APPROVED EQUAL
- ③ 3/4" BALL VALVE X 2
- ④ 5/8 X 3/4" METER SETTER X 2
- ⑤ SERVICE MARKER, 2X4 OR 3" DIAMETER WOODEN POLE TOP 4' PAINTED FLUORESCENT BLUE
- ⑥ 1" Ø POLYETHYLENE PIPE, I.P.S. CLASS 200
- ⑦ NO. 12 COPPER FINDER WIRE WITH BLUE INSULATION
- ⑧ 8" X 16" X 2" CONCRETE BLOCK UNDER CMP METER VAULT

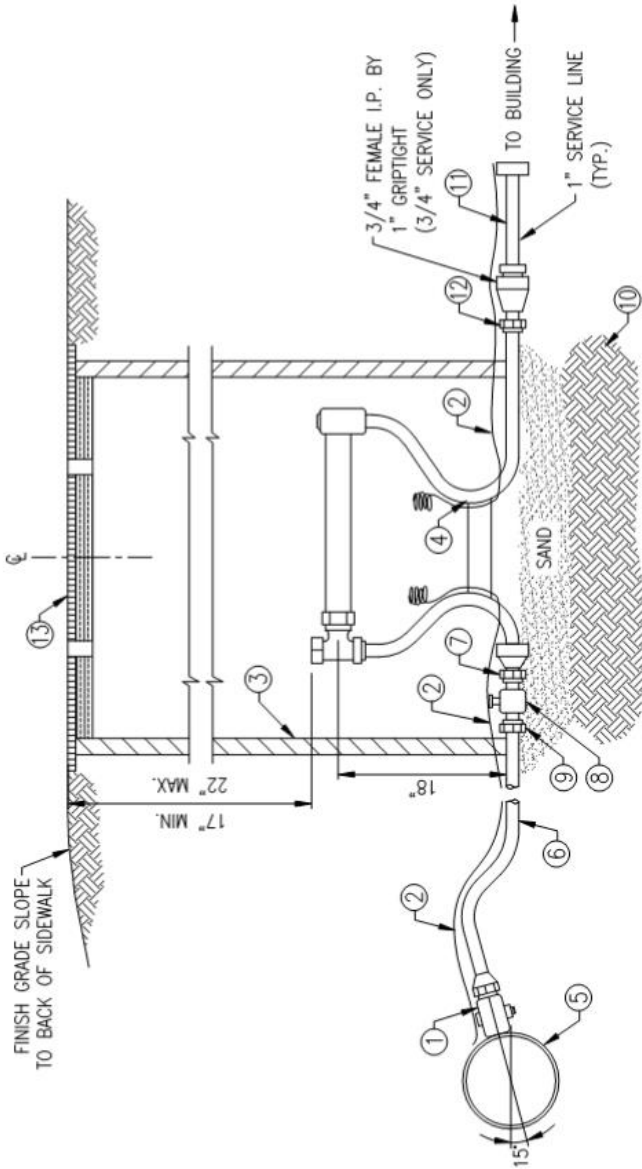
JANUARY 2017
DWG. NO. GC-W-100
1 OF 2

Garden City 5/8" x 3/4" Single or Double Water Service Connection
NOT TO SCALE



NOTES

1. NO GALVANIZED PIPE OR YELLOW BRASS FITTINGS SHALL BE USED. THE CITY REQUIRES THAT ALL WATER METERS AND WATERWORKS BRASS BE ANSI/NSF 61 CERTIFIED AND MEET EPA NO LEAD REQUIREMENTS.
2. SERVICE PIPE SHALL BE 1" ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE PIPE CONFORMING TO ASTM D 2239, SDR 7, CLASS 200 IN IRON PIPE SIZE. STIFFENERS MUST BE USED WITH POLYETHYLENE PIPE.
3. SADDLE COUPLINGS SHALL BE USED FOR CONNECTION OF ALL SERVICE LINES DIRECT TAP TO PVC MAIN. ALL SERVICE SADDLES SHALL BE EPOXY COATED OR NYLON AND CONSIST OF A STAINLESS STEEL BAND AND MUELLER THREADS, TYPE IP.
4. NO SERVICE CONNECTION SHALL BE MADE WITHIN EIGHTEEN (18") INCHES OF THE PIPE ENDS. MULTIPLE CONNECTIONS MADE ON THE SAME JOINT OF PIPE SHALL BE STAGGERED ON THE CIRCUMFERENCE AND SEPARATED BY A MINIMUM OF EIGHTEEN (18") INCHES.
5. METER VAULTS LOCATED IN CONCRETE DRIVEWAYS SHALL BE CENTERED IN A 4' X 4' SQUARE OF CONCRETE. SEPARATED FROM THE REST OF THE DRIVEWAY CONCRETE BY EXPANSION JOINT MATERIAL.
6. FINDER WIRE SHALL BE TAPED TO SERVICE LINES AT 5' MAXIMUM SPACING. TAPE TO SERVICE NOT MORE THAN 6" FROM ANGLE STOP (WITH 10 MIL WATERPROOF TAPE).



KEYNOTES

- ① BALL CORPORATION STOPS (1") APPROVED: FORD FB1101-4-G-NL OR APPROVED EQUAL
- ② NO. 12 COPPER FINDER WIRE WITH BLUE INSULATION
- ③ 21" DIA. X 36" CMP VAULT, NOTCH FOR SERVICE LINES. CMP SHALL BE PLACED ON CONCRETE BLOCKS (2 EA). SEE SHEET 1 OF 2 FOR LOCATION
- ④ 5/8" X 3/4" METER SETTER WITH LOCKABLE KEY VALVE APPROVED: FORD VBHC92-18W-81-33J-NL
- ⑤ WATER MAIN
- ⑥ 1" SERVICE LINE (TYPICAL) NO SPLICING ALLOWED
- ⑦ MALE SWIVEL END
- ⑧ FULL OPENING BALL VALVE APPROVED: FORD B11-333-NL
- ⑨ CURB STOP ADAPTER APPROVED: FORD C86-34-G-NL
- ⑩ FIRM UNDISTURBED EARTH
- ⑪ EXTEND 10' FROM METER VAULT AND PROVIDE TEMPORARY PLUG (THREADED IN HIGH GROUNDWATER AREAS)
- ⑫ DOUBLE PURPOSE COUPLING (PROPERTY LINE)
- ⑬ LID SHALL CONTAIN ONE OR TWO FACTORY DRILLED TOUCH READ HOLES FOR SINGLE OR DOUBLE METERS. THE METER CAN SHALL BE 21-INCH DIAMETER CMP (CUT TO MATCH LID ELEVATION TO FINISH GRADE AND THE CAN NOTCHED AT BOTTOM FOR SERVICE LINES) AND THE CAN LID SHALL BE A D&L FOUNDRY B6018 FOR NON-TRAFFIC AREAS OR A D&L FOUNDRY B6018 FOR TRAFFIC AREAS. SERVICE PIPELINES SHALL BE A MINIMUM 1-INCH, UNLESS OTHERWISE NOTED, WITH MINIMUM 5/8" X 3/4" METER SETTERS.



Garden City 5/8" x 3/4" Single or Double Water Service Connection

NOT TO SCALE

JANUARY 2017
 DWG. NO. GC-W-100
 2 OF 2