



Town of Parker Community Development Department
 Development Review Division
 Attention: ~~Krista Flynt~~ **BrieAnna Simon**

Application Type: **Site Plan**
 Status: **First Referral**
 Application Name: **Douglas 234 F1 L1 B10 – Daycare Facility**
 Case/AP#: **SP20-058**
 Referral Received: November 06, 2020
 Comments Due: December 9, 2020

Application Location: Generally located at the northeast corner of Chambers Road and Hess Road

Review date: **November 10, 2020**
 Plan reviewer: **Randall L. Capra, rcapra@parkeronline.org**
 Phone: 303.805.3169

Narrative: The applicant, New Horizon Academy, is requesting a Site Plan approval for a 12,985 sq. ft. childcare facility. The site is generally located at the northeast corner of Chambers Road and Hess Road.

Code Reference: 2018 International Fire Code, 2018 International Building Code, 2017 NEC

TOWN OF PARKER FIRE/LIFE SAFETY:	R REVIEWED FOR CODE COMPLIANCE; REVISIONS REQUIRED
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- 1st Submittal – Reviewed November 10, 2020
- 2nd Submittal – Reviewed February 2, 2021 (*comments in red, italicized font*)
- 3rd Submittal – Reviewed April 27, 2021 (**comments in bold, red, italicized font**)
- 4th Submittal – Reviewed June 9, 2021 (**comments in bold, red, italicized font with a yellow highlight**)
- 5th Submittal – Reviewed November 30, 2021 (**comments in bold, red, italicized font with a gray highlight**)

UNRESOLVED ISSUES/COMMENTS

1. The applicant shall be aware that no vertical construction on this site will be allowed until such time that curb gutter and first lift of asphalt are installed; a site inspection will be required to ensure that this requirement is made prior to allowing vertical construction to commence. *Applicant did not comment on this requirement; the applicant is required to schedule a site inspection with Fire Life Safety prior to going vertical. The site will be evaluated with regard to access; first lift and curb and gutter is required to be installed. Partially satisfied; the applicant has only noted this issue and states “will be addressed at the building stage”. It is important for the comment to acknowledge that NO vertical construction (up or down) will be allowed until this issue is met. Satisfied; applicant has addressed/acknowledged with current submittal.*

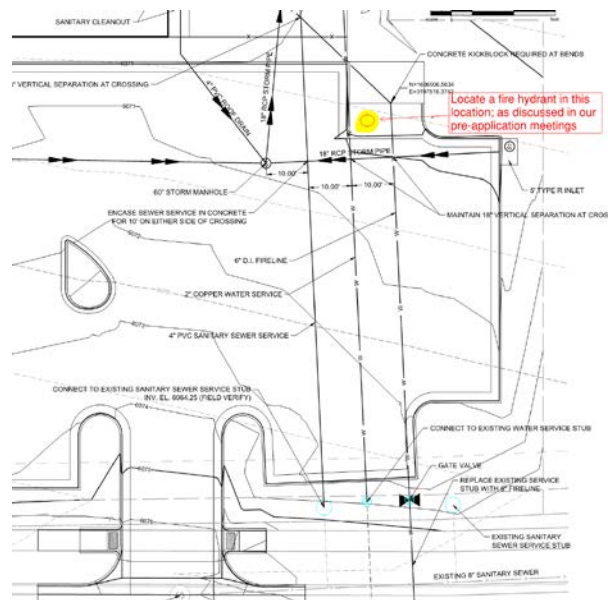
2. The applicant shall be aware that the access road hydrant distribution was not planned to address the suppression needs for all commercial properties within this subdivision; this site requires the addition of one hydrant (to be located at the s/w corner island of the building... as required per NFPA 24 Section 7.2.3... see the snap shot of the red-lined fire hydrant location shown under item 4 below: *Partially satisfied; the applicant has added the hydrant but has stubbed off of the UFL. The fire hydrant is required to tap directly into the water main (see number 4 below for more). Address this issue when resubmitting. Partially satisfied; the fire hydrant has been added and is no longer sharing the line with the required underground fire line. The applicant, however, has the domestic coming off the fire line, now. Remove the domestic from the fire line... providing a fire line that does not share the line with other lines. Address this issue when resubmitting. Satisfied; applicant has addressed/acknowledged with current submittal.*

3. Per the requirements of [18 IFC Section 503.1.1 Buildings and Facilities] approved fire apparatus access roads shall be provided for every facility, building, portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as

measured by an approved route around the exterior of the building or facility (the building is a 155+ feet long and 50.56 feet wide and cannot meet the requirement as measured from the center line of the fire apparatus as measured by an approved route from any point that a fire engine might park when responding to a call at this building). This submittal does not provide for this requirement of the code. Per the requirements of the code, the fire code official is allowed to increase the dimension of the 150 feet provided that the applicant meets Exception 1.1 of this section... "The building is equipped throughout with an approved automatic sprinkler suppression system installed in accordance with section 903.1.1, 903.1.2, or 903.3.1.3. *Satisfied; applicant has worked through access issues and the building is to be sprinklered per NFPA 13.*

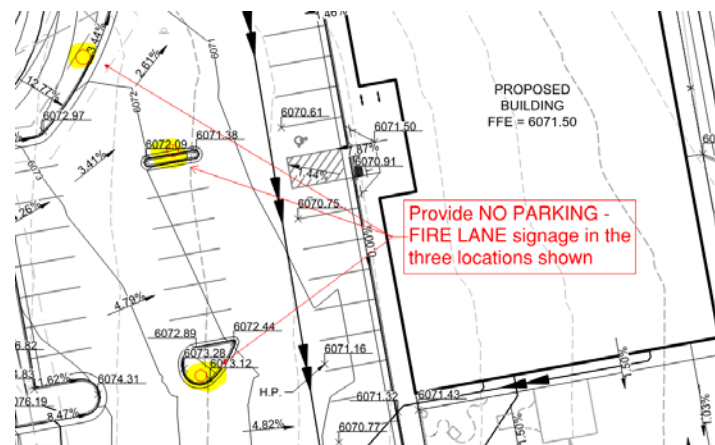
Note – This submittal does address the requirements to sprinkle the building; with respect to this project, access is provided though the occupancy type and occupant loading dictates that the building is to be sprinklered.

4. As discussed in each pre-application meeting, the applicant will need to provide interior to this site; the applicant shall provide a fire hydrant in the area just southwest of the southwest corner of the building, see below: *Not satisfied; while the applicant has added the fire hydrant, the fire hydrant and the fire line must be their own separate lines (this way, if you lose one line you don't lose the other). Resubmit addressing this issue. Note – the UFL must also show the length... as measured from the "T" at the water main to the flange in the building. Not satisfied; while the fire line has been separated from the fire hydrant, the domestic has been tied into the fire line. The fire line is that section of pipe that runs from the building to the "T" in the road. Identify the length from the "T" to the flange and remove the domestic from the fire line. Satisfied; applicant has addressed/acknowledged with current submittal.*



5. The applicant has not provided a signature block for Fire Life Safety on the utility plan set that has been authorized for use by this office; ensure that the correct FIRE LIFE SAFETY review block is used for both the cover page and the overall utility plan. A copy of this stamp can be found later on in this document; address this issue when resubmitting. *Not satisfied; the applicant shall add a signature block for Fire Life Safety to the Overall Utility Plan. Satisfied; applicant has addressed/acknowledged with current submittal.*
6. The applicant shall, in addition to notating that the UFL is a 6:" line, notate the length of the UFL as measured from the "T" on the street to the flange in the building. Address this issue when resubmitting. *Not satisfied; the applicant did not address this comment when resubmitting. Not satisfied; while the fire line has been separated from the fire hydrant, the domestic has been tied into the fire line. The fire line is that section of pipe that runs from the building to the "T" in the road. Identify the length from the "T" to the flange and remove the domestic from the fire line. Partially satisfied; applicant has addressed/acknowledged with current submittal though the applicant has not notated the length and size of the UFL on the overall utility sheets. Prior to submitting for signatures, update the plan set to address this issue. Note – The submittal indicates that the irrigation line is to be lowered to clear fire line... the applicant shall be aware that a minimum of 18" of clearance is required above/below the fire line when intersecting other utilities; the fire line is not allowed to have a joint where intersecting lines occur. Satisfied; applicant has addressed/acknowledged with current submittal.*

7. With regard to the fire sprinkler control valve room, ensure that the following is addressed: *Applicant has noted that many of these items have been addressed; all items are required with the building submittal documents. Since the interior has not been solidified at this time, it is at the applicant's risk that modifications may be required should the requirements not be met. Not satisfied; the applicant shall address this issue at this time. It is not acceptable to defer this issue to the design phase of the building as conflicts arise due to riser room location and size. This issue will be sorted out with the site plan... as required. Satisfied; applicant has addressed/acknowledged with current submittal.*
- Exterior access is required into the riser room with access into the building provided either adjacent to the riser room or through the riser room.
 - The FACP will be required to be located in the fire sprinkler control valve room; ensure that the riser room is sized to accommodate the FACP and the riser. A three-foot clearance is required in front of the FACP as well as the sprinkler riser.
 - The underground shall enter the building and turn up no further than 24 inches from foundation wall; three feet of clearance is required in front of the fire riser.
 - The FACP shall be located on an interior wall.
8. The riser room shall not be located behind a fence; ensure that this provision is addressed when resubmitting. *Satisfied; the applicant appears to have addressed this issue with current submittal*
9. The playground areas shall be separated that each of the areas has two points of egress, separate by one half of the diagonal. Gates will be required to have panic/fire egress hardware and in each play yard, gates shall open in the direction of travel; this will require that two gates will be required when separating play yards to ensure that this provision is met. *Sidewalks are required for all egress components with sidewalks provide to a dispersing area in the parking lot. Partially satisfied; the applicant has indicated that the gates have been added though the site and landscape plans do not show the gates. Address this issue when resubmitting. Note – gates must open in the required direction of travel and be separated by one half of the diagonal of each yard. Not satisfied; gate hardware is not addressed, and panic hardware fire egress hardware is required... the gate configuration is not accepted and is required to be addressed... two legal EXITS are required out of each pocket playground area. Satisfied; applicant has addressed/acknowledged with current submittal.*
10. The applicant shall provide an auto turn analysis indicating that apparatus can navigate all portions of this site; NO PARKING – FIRE LANE signage is required for any portion of the access where the 20-foot clear width requirement cannot be met. *Not satisfied; the applicant has indicated that the auto turn analysis was provided while we worked through site issues. The applicant shall be aware that the auto turn analysis shall be submitted with the site plan and shall be retained within the site plan. Address this issue when resubmitting. Satisfied; applicant addressed with current submittal*
11. The Town of Parker requires that fire apparatus access roads meet the clear-width and weight-bearing standards of the jurisdiction in which the project is located. Roadways shall be designed to support the imposed weight of fire apparatus, 30 two axle and 40 ton three axle vehicles. An unimpeded clear width of 24-feet shall be maintained at all times. As such, any location where parked vehicles would obstruct this clear width requirement will require “NO PARKING – FIRE LANE” signage. *This signage shall be red on white. Update design criteria has been provided at the end of this document; ensure compliance when resubmitting. Satisfied; the applicant has addressed with current submittal.*



GENERAL COMMENTS (as applicable)

All engineering documents submitted to the Town of Parker shall bear the wet signature and seal of the engineer or architect in responsible charge of the design.

Water distribution and site access components shall be installed and in service prior to the construction of any portion of the structure, except by special permit issued by the Fire District.

Underground fire lines

When thrust blocks are used as part of the pipe restraint system, submitted plans for permit shall provide detailed documentation that the thrust blocks satisfy all requirements of 13 NFPA 24: 10.8.2, including specific thrust block dimensions and mathematical calculations for block dimensions per guidelines provided in Annex A.10.8.2.

Underground Fire Line - Submittal Requirements

Reference: 2016 NFPA 24 [Installation of Private Fire Service Mains and Their Appurtenances](#)

A separate permit is required and will be issued pending review of a detailed submittal which must include the following: [15 IFC 901.2]

4.1.1 Working plans shall be submitted for approval to the authority having jurisdiction before any equipment is installed or replaced.

4.1.2 Deviation from approved plans shall require permission of the authority having jurisdiction.

4.1.3 Working plans shall be drawn to an indicated scale on sheets of uniform size, with a plan of each floor as applicable, and shall include the following items that pertain to the design of the system: *Not satisfied; applicant has stated that all issues are addressed... THRUST BLOCK CALCULATIONS specific to the site and soil conditions have not been provided... water district thrust block (generic tables) will not be allowed for the underground fire line submittal. Address this issue accurately when resubmitting.*

- (1) Name of owner
- (2) Location, including street address
- (3) Point of compass
- (4) A graphic representation of the scale used on all plans
- (5) Name and address of contractor
- (6) Size and location of all water supplies
- (7) The following items that pertain to private fire service mains:
 - (a) Size
 - (b) Length
 - (c) Location
 - (d) Material (ductile-iron, PVC., etc.)
 - (e) Point of connection to city main
 - (f) Sizes, types, and locations of valves, depth at which the top of the pipe is laid below grade
 - (g) Method of restraint (Meg-a-Lug or similar)

4.1.4 The working plan submittal shall include the manufacturer's installation instructions for any specially listed equipment, including descriptions, applications, and limitations for any devices, piping, or fittings. Submittals must include installation specifications for thrust blocks, corrosion protection, restraint system, bedding, detail of pipe under the building up to, and including, the flange. When it is intended that a different contractor will extend the fire line from a stopping point outside the building, to the inside flange, a second submittal and permit is required.

All tees, plugs, reducers, valves, and hydrant branches shall be restrained against movement by thrust blocks [10.8.2] or restrained joint systems [10.8.3]. When thrust blocks are used as part of the pipe restraint system, submitted plans shall provide detailed documentation that the thrust blocks satisfy all requirements of Section 10.8.2, including specific thrust block dimensions and mathematical calculations for block dimensions per guidelines provided in Annex A.10.8.2.

Any individual or company who physically works on or installs any part of a fire suppression system, including underground supply lines, from public water lines to system risers and backflow preventers, **must** be registered with the Colorado Division of Fire Safety. [Dept of Public Safety, Division of Fire Safety, Fire Suppression Program 8 CCR 1507-11:3.1.2] Documentation of valid annual registration may be required with plan submittal.

The following website for the Colorado Division of Fire Safety will provide registration instructions.

<http://dfs.state.co.us/SuppAppsProclnsp.htm>

All submittals must display a wet stamp and original signature by a Colorado licensed professional engineer or NICET III, or higher, in fire suppression systems. [Dept. of Public Safety, Division of Fire Safety, Fire Suppression Program 8 CCR 1507

FIRE CODE REVIEW BLOCK

All fire hydrants shall be installed according to water utility standards. The number and locations of the fire hydrants as shown on the Overall Utility Plan are correct as specified by the Town of Parker, Community Development Department.

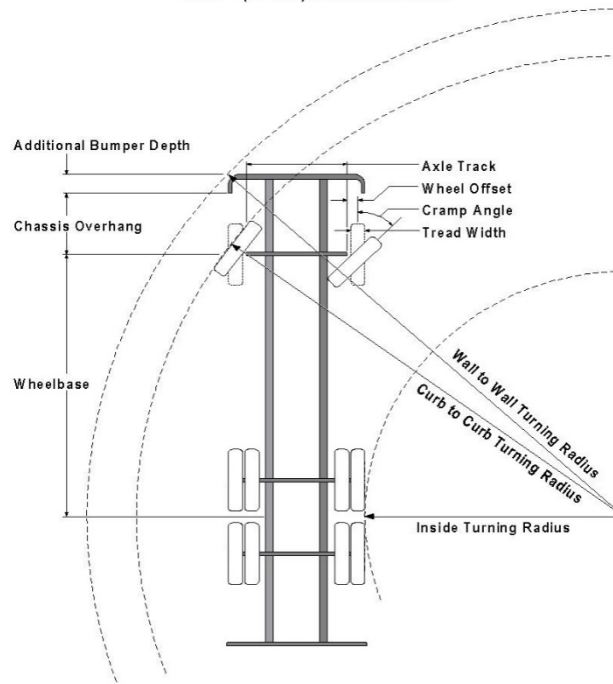
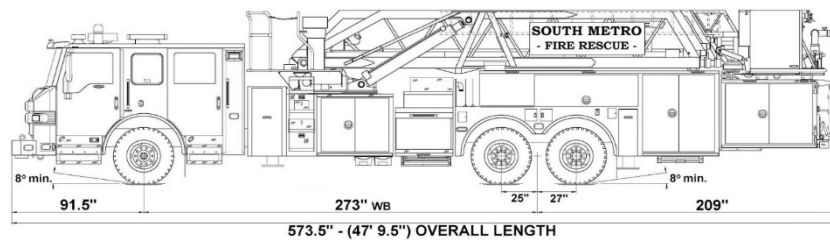
Fire Code Official or Designated Representative

Date

(NOTE - Underground Fire Line (UFL) submittal documents must meet the requirements of NFPA 24 when submitting for review.)

FIRE ACCESS ROAD DESIGN CRITERIA

VEHICLE SPECIFICATIONS are provided for the largest apparatus in use by South Metro Fire Rescue. Fire Apparatus Access Roads shall be capable of accommodating this apparatus.



Vehicle Specifications

Length: 47' 9.5"

Width: 8' 5" - (10' 1" mirror to mirror)

Height: 10' 9"

Wheelbase: 273 in.

Design load: 80,000 pounds

Inside Cramp Angle: 40°

Axle Track: 83"

Wheel Offset: 5.3"

Tread Width: 13.5"

Turning Radii:

Inside Turn: 26 ft. 1 in.

Curb to curb: 41 ft. 11 in.

Wall to wall: 46 ft. 8 in.

Where objects are present adjacent to the fire apparatus access road, particularly on turns and turn arounds which require backing, a reasonable safety margin shall be provided to prevent potential damage to the property and to the fire apparatus.

PRIVATE ROADS that provide access to more than two dwellings or one or more commercial buildings shall be constructed to meet the roadway standards approved by the South Metro Fire Rescue Authority for fire apparatus access. Private roads that do not meet the roadway standard may be accepted provided that alternative methods and materials are incorporated into the subdivision that addresses the fire and life safety of the citizens.