

Fallout 4: Reversal

Version 1.0

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Document Revisions Table

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1.0	Initial Document	Professor Clark	9/26/2022

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Quick Summary

“Reversal” is a single player standalone side quest in *Fallout 4* [1] with the emphasis on **good backtracking design**. The level is structured in two parts. In the **first half**, the player will **infiltrate into a facility**, and, in the **second half**, the player will try to **escape**. The returning part is the backtracking, where various design techniques will be used to improve its experience. One key element in the level is the **EMP rifle**, which is acquired at the end of the infiltration part of the level. It can **unlock electric doors** and temporarily **stun** enemies.

Level Feature Overview

Category	Sub-Category	Feature List
Player	Player Weapons	<ul style="list-style-type: none"> • Start weapons <ul style="list-style-type: none"> ○ Ranged <ul style="list-style-type: none"> ▪ Assault Rifle ○ Melee <ul style="list-style-type: none"> ▪ Combat Knife • Quest weapon <ul style="list-style-type: none"> ○ EMP Rifle <ul style="list-style-type: none"> ▪ Earned halfway through the mission
	Player Skills/Abilities	<ul style="list-style-type: none"> • Cover Shooting • Stealth • Exploration • Puzzle Solving • Use EMP Rifle to disrupt enemies and open electric doors
AI	Enemies	<ul style="list-style-type: none"> • Protectron (Melee) • Eye Bot (Ranged & flying) • Sentry Bot (Boss)
	Friendlys	<ul style="list-style-type: none"> • None
Challenges	Gameplay Themes	<ul style="list-style-type: none"> • Major <ul style="list-style-type: none"> ○ Cover shooting ○ Use EMP Rifle to disrupt enemies and open electric doors ○ Learning and mastering the environment/enemy • Minor <ul style="list-style-type: none"> ○ Puzzle solving ○ Combats with verticality ○ Exploration - finding resources by unlocking new areas ○ Lockpicking (optional) ○ Stealth (optional)
	Obstacles/Hazards	<ul style="list-style-type: none"> • Inaccessible spaces
Aesthetics	Setting (visual theme)	<ul style="list-style-type: none"> • High-Tech/Vault-Tech Interior Modular Kits in <i>Fallout 4</i> • Some factory catwalks • Room with EMP rifle has a more Institute look

Level Map(s)

Overview Map

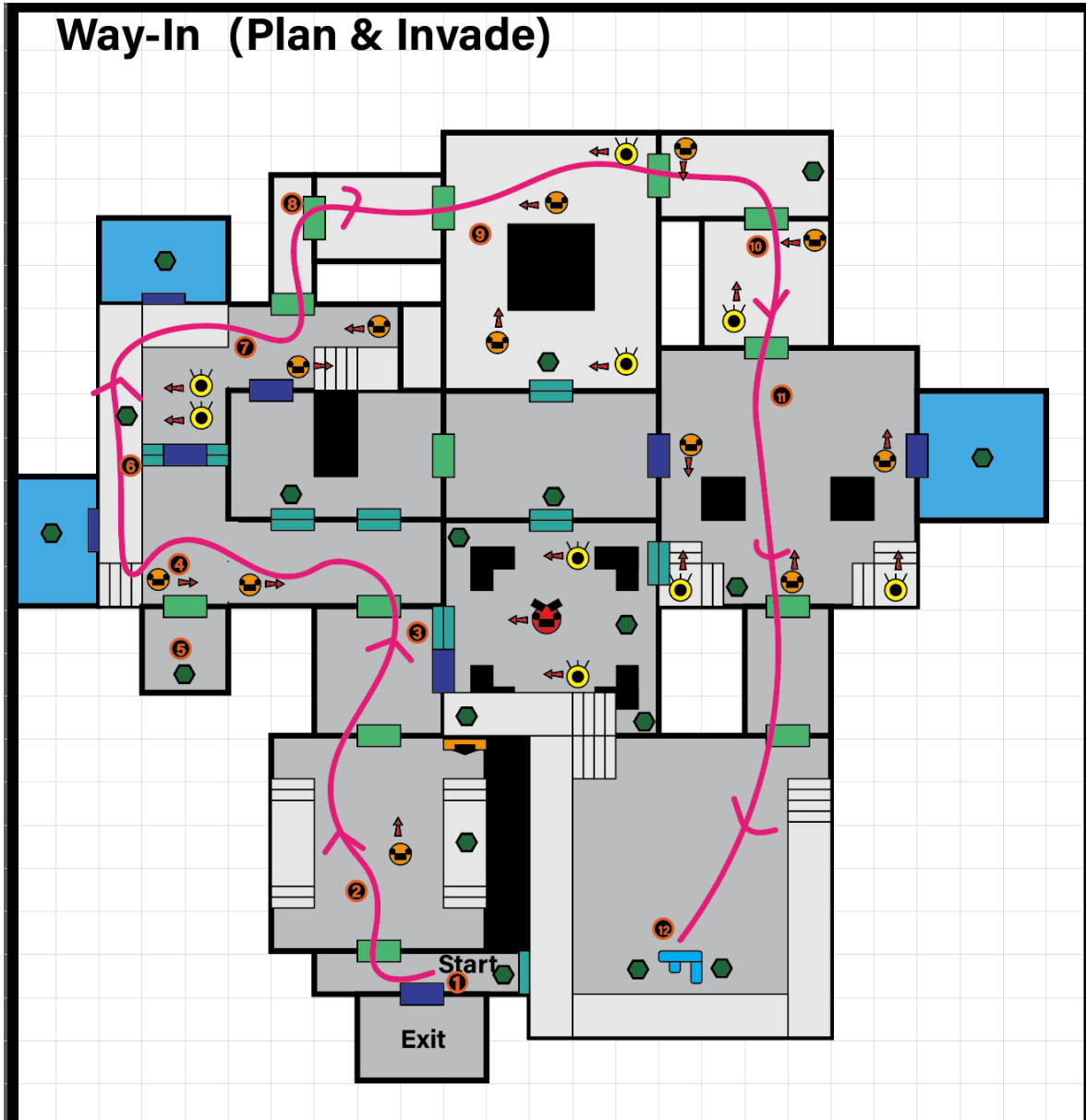


Figure 1: Overview Map (Way-In). [2]

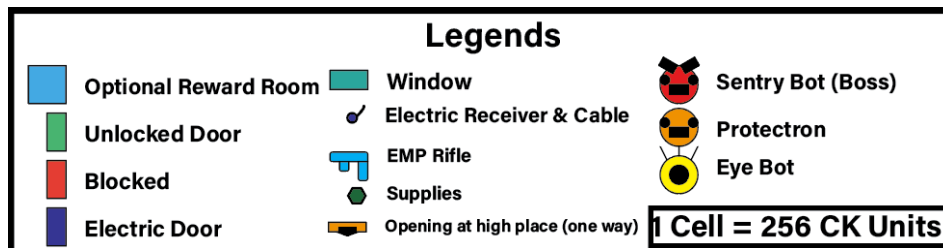


Figure 2: Legends. [2]

Map Label	Gameplay Summary
0	<ul style="list-style-type: none"> The player is on a task to retrieve the EMP rifle from a highly security facility
1	<ul style="list-style-type: none"> The player starts inside the facility, but the exit is locked At the starting point the player has a good view of the EMP rifle to locate the goal of the task in the room across the window, but there is no direct way to get there. Looking at the exit, the player finds a locked electric door The player gathers some equipment and resource and enters the next room through the door
2	<ul style="list-style-type: none"> Entering room, the player is introduced with a single protectron roaming around the room After taking down the enemy, the player observes an opening at a higher place that the player could not currently reach
3	<ul style="list-style-type: none"> In the hallway, the player gets a good preview of the final boss, sentry bot, in a 2-floor room The room is filled with high-tech and should look special as it acts like a landmark throughout the level The player may learn a bit about the final boss and the layout of the building
4	<ul style="list-style-type: none"> In the next area, the player meets 2 protectrons coming down from the stairs The player keep distance and take them out Through windows the player can find a room currently inaccessible The player will take the staircase up as the electric door on the ground floor is locked By now, the player may see a pattern with the electric doors as they look the same
5	<ul style="list-style-type: none"> Before going up the staircase, the player may find an optional room on the side with some resources and notes/narrative info explains about the EMP rifle and its ability to hack electric doors The player is mentally previewed with the EMP rifle and its special power
6	<ul style="list-style-type: none"> On the catwalk, the player is introduced with eyebot 2 eyebots are flying on the other side The player takes cover and takes them down
7	<ul style="list-style-type: none"> Proceeding forward, the player finds the staircases connecting to the ground floor is broken The player drops down to the ground Before dropping down, the player could snipe 2 protectrons at the ground floor, taking advantage of the height (introduction to vertical combat) After dropping down, there is no way for the player to get back up temporarily to reduce player mental load On the ground floor, the player may notice another electric door currently locked
8	<ul style="list-style-type: none"> The player enters the hallway and go up to the next area
9	<ul style="list-style-type: none"> In this area, the player deals with 2 protectrons and 2 eyebots The player needs to learn how to deal with them at the same time After taking some supplies, the player moves on
10	<ul style="list-style-type: none"> In the hallway, the player is ambushed first with 1 protectron and then 1 protectron and a 1 eye bot The player needs to learn how to deal with ambushes and fight in narrower spaces
11	<ul style="list-style-type: none"> In the next area, the player has the initiative and could sneak and attack the 2 roaming protectrons 1 more protectron and 2 eyebots with joining the fights from different angles as reinforcement In this area, the player takes mental notes there are two locked electric doors on both side In addition, there are some catwalks in the arena for the player to take advantage In this area, the player gets another look at the final boss room at a different angle through the window
12	<ul style="list-style-type: none"> Through the hallway, the player enters the room with EMP rifle The player takes the rifle

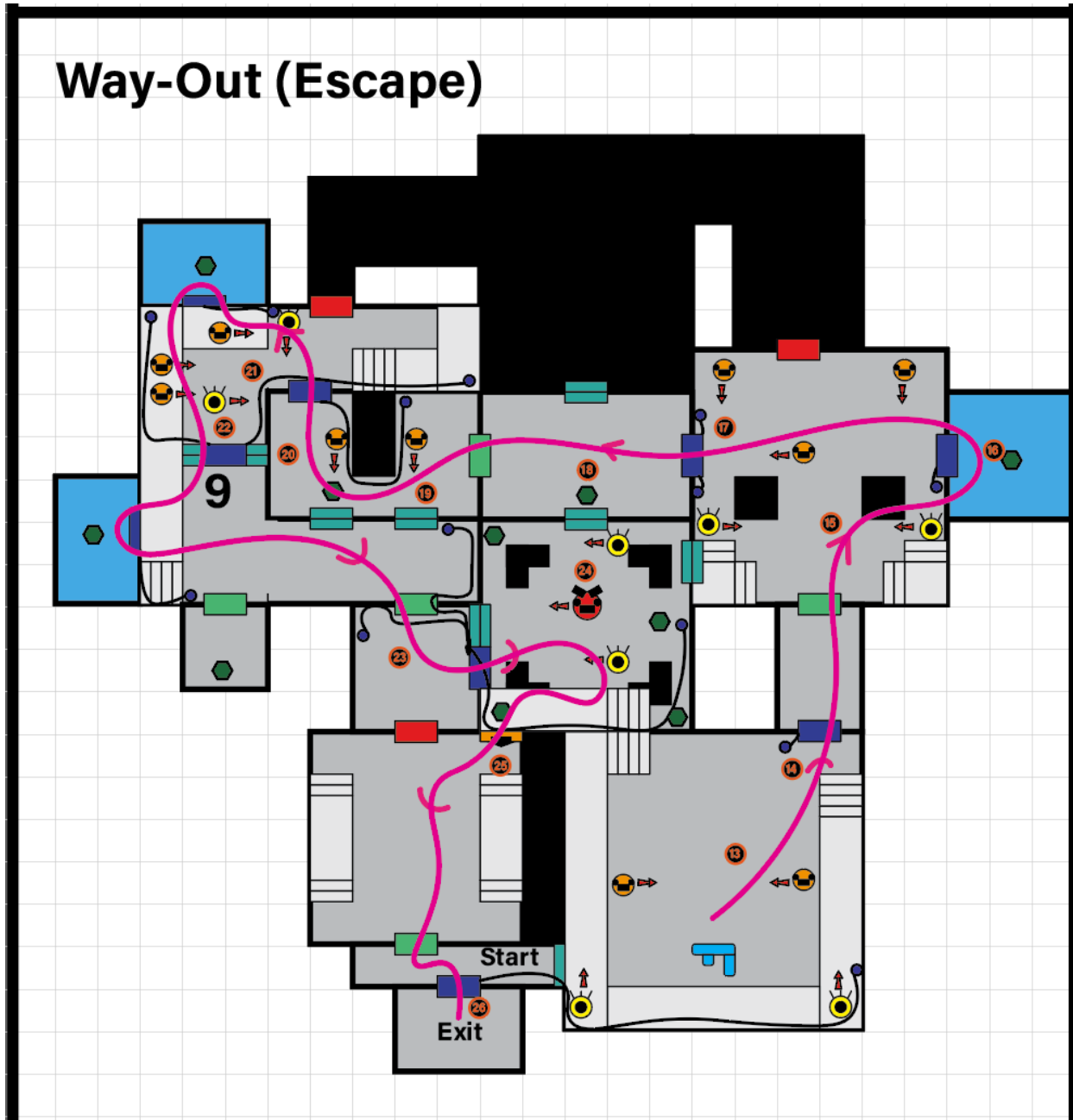


Figure 3: Overview Map (Way-Out). [2]

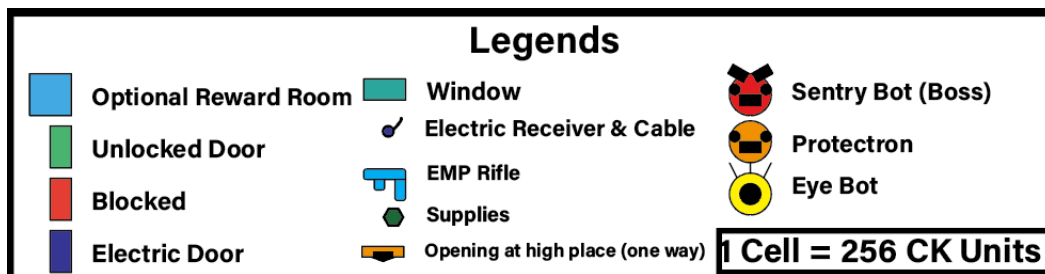


Figure 4: Legends. [2]

Map Label	Gameplay Summary
13	<ul style="list-style-type: none"> After taking the weapon, an alarm is triggered, 2 protectrons and 2 eyebots coming out from different angles to ambush the player The player equips the EMP rifle and learns to use it against those previously learned enemies
14	<ul style="list-style-type: none"> After defeating the enemies, the player found the returning path is now locked with the electric door After finding and reading the instruction about the EMP rifle, the player shoots the electric receiver on the door to unlock it The player is essentially locked in the room until learned how to use the rifle to leave the room
15	<ul style="list-style-type: none"> Passing the hallway, the player returns to the room with pillars Now 1 protectron is already roaming around 2 protectrons and 2 eyebots coming out from other rooms as reinforcement The player takes advantage with the EMP rifle
16	<ul style="list-style-type: none"> After clearing the enemies, the player may find the previous entering path is now blocked The player finds the electric doors on both sides Now knowing that the EMP rifle can unlock those doors, the player will try it out Opening the room on the side, the player finds resources and some narrative notes, the player may form an association between the locked side room and rewards
17	<ul style="list-style-type: none"> When the player tries to shoot the electric door on the left, the player did not find an electric receiver but only a cable The player follows the cable around the room to find the receiver, the player shoots at it to open the door
18	<ul style="list-style-type: none"> The player now enters a hallway that was previously unavailable The player gets a new angle to look at the final boss room
19	<ul style="list-style-type: none"> Continuing move forward, the player enters a small room with 2 protectrons The player needs to be aware of the ambush and navigate in narrow spaces Through the window the player can find places previously been through
20	<ul style="list-style-type: none"> After finding and shooting the receiver behind a bookcase, the player comes out the room
21	<ul style="list-style-type: none"> Exiting the room, the player returned to the place with the broken staircase The player is greeted with 3 protectrons shooting from above and 2 eyebots rushing down The player takes cover for the vertical combat
22	<ul style="list-style-type: none"> Completing the encounter, the player may unlock the optional room for some rewards Unlocking the electric door separating two spaces, the player makes way back to the starting room
23	<ul style="list-style-type: none"> In the hallway, the player finds the door to the first room is now blocked The player has to shoot and unlock the electric door to the boss room
24	<ul style="list-style-type: none"> In the boss fight against sentry bot, there are 2 eyebots harassing the player, and the player needs to move around the space and use catwalks to take cover and avoid hits
25	<ul style="list-style-type: none"> After defeating the final enemy, the player takes the catwalk and through the opening previously found in the first room, the player drops down to the starting room
26	<ul style="list-style-type: none"> Moving forward, the player returns to the electric door of the exit The player finds and shoots the receiver and unlock the exit and completes the level

New Skills/Gameplay Mechanics

- **EMP Rifle**
 - **Acquirement**
 - The player gets the weapon at the end of the infiltration part of the level
 - **Combat**
 - Medium range/behave similar to a laser rifle but with less magazine size
 - Briefly stuns the enemy with the first shot every 5 seconds
 - Good for keep distance with the enemy
 - The player needs to strategize on whether to keep shooting or pulse for a moment for a stun
 - **Exploration**
 - This weapon can disrupt electric door's receiver to hack the door open
 - The player needs to utilize this weapon to unlock new path or finding additional resources during the backtracking phase
 - Electric receiver puzzle
 - Each electric door is connected to a receiver. However, not all door's receiver is right next to the door. The player needs to follow the cable to find and shoot the receiver
 - It's possible for a door to have multiple receivers, then the player needs to shoot all receivers in a given time limit before the shoot expires
 - To do so, the player may need to find a good place and angle to do the shooting

Hook(s)/Gameplay Highlights

- **EMP Rifle**
 - The weapon comes as a reward to the player at the end of the first part of the quest
 - The weapon provides additional strategy during combat
 - The weapon's door hacking ability encourages player to keep a mind about the locations in the building and to explore them when possible
 - The weapon's interaction with the electric receiver creates some potentially simple but interesting puzzle to change up the pace
- **Verticality**
 - There are plenty vertical combats in the level
 - Eyebot can fly around, inviting the player to use different strategies
 - There are catwalks that the player sometimes can take advantage of but also beware of when enemies have the height advantage
 - Broken staircase and opening at a higher place create interesting spaces for the player to move through and create different experience when visiting them from different places
- **Sense of Mastery**
 - The level is built around backtracking, which means the player will visit the same spaces multiple times and sometimes fight the same type of enemies
 - However, with creative enemy placement, interesting gameplay space, and the addition of EMP rifle, the player can gradually mastery the weapon, the enemies and the environment, yet they are still challenged in different so that they do not feel the encounters or paths are repetitive
- **Engaging Backtracking experience**
 - The level revolves around backtracking
 - To enhance the backtracking experience, multiple techniques are used
 - Player gets a new weapon that changes up the gameplay
 - Creating strategies for combat
 - Allowing the player to explore previously inaccessible area
 - Inviting the player to experience unique puzzles
 - Player has the chance to preview what's to come next
 - Building up player's anticipation
 - Player is encouraged to become more familiar with the structure of the building, and gradually master it
 - Player will experience different types of encounters and enemy placement during backtracking
 - The encounters should feel different but challenging enough so that the player can master it
 - Player gets to take a different path in previously visited gameplay space, creating new perspective and experience

Context

- **“Reversal”** is a single player standalone side quest in **Fallout 4**. The player takes on the quest to infiltrate into a high-tech facility guarded with robots to retrieve a special weapon – EMP rifle – and then escape the facility with it
- The infiltration part introduces the player with different enemy types and preview the player with the boss. The player learns more about the structure of the building through the exploration
- The escape part engages the player with a twist in combat, the EMP rifle gives the player ability to temporarily stun enemies. In exploration, the player can unlock electric doors with the weapon. In addition, the door hacking involves in some simple puzzle, where the player needs to follow the cable to find and shoots an electric receiver to unlock the door
- The player starts inside the facility, and is able to leave to facility through the exit using the EMP rifle to complete the quest

Backstory

- The high-tech facility has developed a special weapon prototype that is able to hack electric devices and disrupt signals.
- The rivalry corporate sees this new prototype as a threat to their future business and decided to hire someone to sabotage their development and take control over the prototype

Aftermath

- The quest is completed as the player successfully retrieved the weapon, caused a mayhem, and left the facility. The hirer is satisfied, and player is rewarded handsomely.

Development Schedule

Deliverables	Date
Whitebox	10/17/2022
Initial Gameplay	11/7/2022
Survey Draft	11/14/2022
Gameplay Complete	12/5/2022
Aesthetics	2/6/2023
Launch	2/20/2023

Aesthetic References

Overall Aesthetics

- The overall ascetics should be somewhere between a facility and a laboratory
- Most structure model should be from Fallout 4 High-Tech\Vault-Tech modular pieces
- There should be some catwalks
- There should be lot of crates, shelves, and machines



Figure 5: Overall High-Tech Aesthetics. [3]



Figure 6: Vault-Tech Aesthetics. [4]

- There should be something memorable in the center of certain room, like a reactor, making it identifiable from others



Figure 7: Central Piece Aesthetics. [5]

- Certain areas that more open should takes the look of a factory and have some catwalks on the sides



Figure 8: Catwalk Aesthetics. [6]

- The room with the EMP Rifle should look more advanced to draw player's attention at the start. Looks a bit more like Institute.



Figure 9: EMP Rifle Room Aesthetics. [6]

- Optional side rooms should look somewhere between a lab and an office



Figure 10: Optional Room Aesthetics. [8]

References

[Cover Image] Pinterest. Accessed on: Sep. 18, 2022. [Online]. Available:

<https://i.pinimg.com/564x/90/f3/c2/90f3c2b9fca4f1efa215f680ba2114e1.jpg>

[1] *Fallout 4*, Bethesda Game Studios, 2015.

[2] Wu, Tianze. Map created with Adobe Illustrator.

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